



TRƯỜNG ĐẠI HỌC KINH TẾ - ĐẠI HỌC QUỐC GIA HÀ NỘI  
VNU UNIVERSITY OF ECONOMICS & BUSINESS



HỌC VIỆN QUỐC TẾ NGƯỜI TIÊU DÙNG TÀI CHÍNH  
INTERNATIONAL ACADEMY OF FINANCIAL CONSUMERS



HỌC VIỆN NGÂN HÀNG  
BANKING ACADEMY OF VIETNAM

GLOBAL FORUM FOR FINANCIAL CONSUMERS - FINANCIAL CONSUMER PROTECTION AND SUSTAINABLE DEVELOPMENT  
2022 IAFICO ANNUAL CONFERENCE  
KỶ YẾU HỘI THẢO THƯỜNG NIÊN IAFICO 2022  
DIỄN ĐÀN TOÀN CẦU CHO NGƯỜI TIÊU DÙNG TÀI CHÍNH - BẢO VỆ NGƯỜI TIÊU DÙNG TÀI CHÍNH VÀ PHÁT TRIỂN BỀN VỮNG

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SÁCH KHÔNG BÁN



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NHÀ XUẤT BẢN VĂN HÓA DÂN TỘC  
CULTURE OF VIETNAMESE ETHNIC GROUPS PUBLISHING HOUSE

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## PREFACE

The International Academy for Financial Consumers (IAFICO) is a professional academic organization established by finance, accounting, and economics scholars throughout Asia-Pacific, and is focused on the internationalization of financial consumer research and the protection of financial consumers. The IAFICO is aimed at serving as a global platform for sharing information, knowledge of financial products and services, regulations and supervision, institutions and culture, education, and training in order to reasonably serve financial consumer's interests and well-being. Moreover, the Academy also purports to facilitate long-term financial development from impartial perspectives. Headquartered in Seoul, South Korea, the Academy was established in December 2014 by a dozen of professors interested in finance and financial consumer issues. The Academy has held five conferences since its foundation year, showing huge interests and support from a myriad of universities in the world. The IAFICO was in essence founded to conduct research on financial consumers from a global perspective. The Academy observes and studies consumers through financial services provided by banks, stock brokers, insurers, credit cards, etc. Across countries, the Academy has been comparing consumers, products, services, distribution channels, providers, rules and laws, and other institutional structure. The consumers may share commonalities or could differ from one another. Likewise, some experiences may be portable to other countries, and some countries may have impeccable products or institutions that other countries should emulate.

The Academy's Vision and Mission:

The Academy yearns to be a global platform for sharing information, knowledge of financial products and services, regulations and supervision, institutions and culture, education and training to reasonably serve financial consumer's interests and well-being, and long-term financial development from impartial perspectives.

And its Mission: Sharing relevant information, either success or failure, on financial development; Discussing financial issues in an impartial way from financial consumer's perspectives; Finding long and short-term solutions to economic and social developments; Providing recommendations to measure and manage common issues across countries in a collective way.

As part of its actions to fulfil its mission and vision, the IAFICO holds an Annual Conference to showcase, discuss, and propose recommendations on various topics.

The 9<sup>th</sup> Annual Global Forum for Financial Consumers (GFFC-2022) on **Financial consumer protection and sustainable development** will be co-organized by the University of Economics and Business - Vietnam National University Hanoi and Banking Academy of Vietnam on August 4<sup>th</sup> and 5<sup>th</sup> 2022 in Hanoi, Vietnam. The aim of GFFC-2022 is to establish an informative forum for academics, policymakers, and professionals from a diverse set of countries in order to share knowledge, experiences, and practical solutions of Financial consumer protection toward sustainable development. Given the essential roles of the demand and supply side of financial consumer protection, a well-defined framework for financial consumer protection would contribute to the accessibility of financial services, and enable financial consumers to make well-informed decisions to maximize their benefits and balance with sustainable development goals.

**The IAFICO and GFFC-2022**

## Conference Venue

Aug 4<sup>th</sup>, 2022

**Vietnam National University - University of Economics and Business**

144 Xuan Thuy St., Cau Giay Dist., Hanoi



Aug 5<sup>th</sup>, 2022

**Banking Academy of Vietnam**

12 Chua Boc St., Dong Da Dist., Hanoi



## Steering Committee

1	Assoc.Prof.Dr. Nguyen Anh Thu	Vice Rector of VNU University of Economics and Business
2	Assoc.Prof.Dr. Do Thi Kim Hao	Vice President in Charge of Banking Academy of Vietnam

## Organizing and Secretary Committee

1	Assoc.Prof.Dr. Pham Thi Hoang Anh	Director of Banking Research Institute, Banking Academy of Vietnam
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3	Dr. Dinh Thi Thanh Van	Assoc. Dean of Faculty of Finance and Banking, VNU University of Economics and Business
4	Dr. Nguyen Thi Huong Lien	Assoc. Dean of Faculty of Accounting and Auditing, VNU University of Economics and Business
5	Dr. Tran The Nu	Assoc. Dean of Faculty of Accounting and Auditing, VNU University of Economics and Business
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10	Dr. Pham Duc Anh	Banking Research Institute, Banking Academy of Vietnam
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14	Vu The Binh, MA	Faculty of Accounting and Auditing, VNU University of Economics and Business
15	Nguyen Viet Hung, MA	Faculty of Accounting and Auditing, VNU University of Economics and Business
16	Mai Thu Ha, MA	Faculty of Accounting and Auditing, VNU University of Economics and Business
17	Lai Thi Minh Trang, MA	Faculty of Accounting and Auditing, VNU University of Economics and Business
18	Le Thi Thuy Linh, MA	Faculty of Accounting and Auditing, VNU University of Economics and Business
19	Pham The Thanh, MSc	Faculty of Finance and Banking, VNU University of Economics and Business
20	Luu Hanh Nguyen, MSc	Faculty of Finance and Banking, VNU University of Economics and Business

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1	Dr. Pham Manh Hung	Head of Research & Advisory Department, Banking Research Institute, Banking Academy of Vietnam
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3	Dr. Bui Phuong Chi	Faculty of Accounting and Auditing, VNU University of Economics and Business
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8	Le Thi HuongTra, MSc	Banking Research Institute, Banking Academy of Vietnam
9	Nguyen Le Thao Huong, MSc	Banking Research Institute, Banking Academy of Vietnam

## Scientific Committee

1	Dr. Nguyen Thi Hong Thuy	Dean of Faculty of Accounting and Auditing, VNU University of Economics and Business
2	Assoc.Prof.Dr. Tran Thi Thanh Tu	Vietnam National University
3	Dr. Pham Manh Hung	Head of Research & Advisory Department, Banking Research Institute, Banking Academy of Vietnam
4	Dr. Le Hai Trung	Vice Head of Banking Faculty, Banking Academy of Vietnam
5	Dr. Pham Thu Thuy	Vice Head of Banking Faculty, Banking Academy of Vietnam
6	Dr. Hoang Thi Thu Hien	Lecturer of Banking Faculty, Banking Academy of Vietnam
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8	Dr. Nguyen Thi Huong Lien	Assoc. Dean of Faculty of Accounting and Auditing, VNU University of Economics and Business
9	Dr. Tran The Nu	Assoc. Dean of Faculty of Accounting and Auditing, VNU University of Economics and Business
10	Dr. Bui Phuong Chi	Faculty of Finance and Banking, VNU University of Economics and Business
11	Dr. Luu Ngoc Hiep	Assoc. Dean of Faculty of Finance and Banking, VNU University of Economics and Business
12	Dr. To Lan Phuong	Faculty of Finance and Banking, VNU University of Economics and Business
13	Dr. Le Hong Thai	Faculty of Finance and Banking, VNU University of Economics and Business
14	Phung Thi Thanh Huong, MSc	Faculty of Finance and Banking, VNU University of Economics and Business
15	Asst.Prof.Dr. Kanitsorn Terdpaopong	Rangsit University, Thailand

# PROGRAM

## PROGRAM OVERVIEW

Day 1	August 4 <sup>th</sup> , 2022 (Thursday) - On-site at VNU - University of Economics and Business
8:30 - 8:50	<b>Opening Ceremony (Opening Remark &amp; Keynote Speeches)</b> <ul style="list-style-type: none"> <li>Opening Remark <b>Prof. Man Cho</b>, KDI School of Public Policy and Management &amp; Chairperson of IAFICO</li> <li>Welcome speech from VNU University of Economics and Business <b>Assoc.Prof.Dr. Nguyen Truc Le</b>, Rector VNU University of Economics and Business</li> </ul>
8:50 - 9:15	Keynote Speech (1): <b>Janis Pappalardo</b> , CFP Bureau, US [Online]
9:15 - 9:40	Keynote Speech (2): <b>Prof. Sharon Tennyson</b> , Cornell University, US [On-site]
9:40 - 10:05	Keynote Speech (3): <b>Prof. Brenda Cude</b> , University of George, US [Pre-recording]
10:05 - 12:00	Plenary Session
12:00 - 13:30	Lunch Break
13:30 - 15:00	Concurrent Sessions
15:20 - 17:00	Panel Discussion Session (1): Business ethics and self-regulation
Day 2	August 5 <sup>th</sup> , 2022 (Friday) - On-site at Banking Academy
8:30 - 8:50	<b>Opening Ceremony (Opening Remark &amp; Keynote Speeches)</b> <ul style="list-style-type: none"> <li>Opening Remark <b>Prof. Nguyen Kim Anh</b>, Vice Governor of State Bank of Vietnam</li> <li>Welcome speech from VNU University of Economics and Business <b>Prof. Do Thi Kim Hao</b>, Vice President of Banking Academy of Vietnam</li> </ul>
8:50 - 9:15	Keynote Speech (4): <b>Prof. Adele Atkinsons</b> (University of Birmingham, UK) On-site
9:15 - 9:40	Keynote Speech (5): <b>Dr. Can Van Luc</b> , National Fiscal and Monetary Policy Advisory Council, Bank for Investment and Development, Vietnam
9:40 - 10:05	Keynote Speech (6): <b>Dr. Pham Bao Khanh</b> , Vice Chairman of Deposit Insurance of Vietnam
10:05 - 10:30	Discussion
10:30 - 12:00	Panel Discussion Session (2): Alternative Ways to Enhance Financial Literacy and Financial Education
12:00 - 13:30	Lunch Break
13:30 - 15:00	Concurrent Sessions
15:10 - 16:40	Panel Discussion Session (3): Pension and Financial Planning
16:40 - 17:00	IAFICO General Council Meeting



## PROGRAM DETAILS

Day 1 August 4 <sup>th</sup> , 2022 (Thursday) - On-site at VNU - University of Economics and Business	
8:00 - 8:30	<b>Registration - Room 801</b>
	<b>Opening Ceremony (Opening Remark &amp; Keynote Speeches)</b> <i>Link zoom: <a href="https://zoom.us/j/6301340299?pwd=ajZqTjhBTXQyYUICbnlHMVM1ZWl0dz09">https://zoom.us/j/6301340299?pwd=ajZqTjhBTXQyYUICbnlHMVM1ZWl0dz09</a></i> <i>Meeting ID: 630 134 0299 Passcode: hvnh2020</i>
8:30 - 8:50	<ul style="list-style-type: none"> <li>Opening Remark</li> </ul> <b>Prof. Man Cho</b> , KDI School of Public Policy and Management & Chairperson of IAFICO <ul style="list-style-type: none"> <li>Welcome speech from VNU University of Economics and Business</li> </ul> <b>Assoc. Prof. Dr. Nguyen Truc Le</b> , Rector VNU University of Economics and Business
8:50 - 9:15	<b>Keynote Speech 1</b> <b>Janis Pappalardo</b> , CFP Bureau, US [Online]
9:15 - 9:40	<b>Keynote Speech 2</b> <b>Prof. Sharon Tennyson</b> , Cornell University, US [On-site]
9:40 - 10:05	<b>Keynote Speech 3</b> <b>Prof. Brenda Cude</b> , University of George, US [Pre-recording]
	<b>Plenary Session</b>
10:05 - 12:00	<b>Chairperson:</b> <ul style="list-style-type: none"> <li><b>Prof. Man Cho</b>, IAFICO and KDI, Korea</li> </ul> <b>Participants:</b> <ul style="list-style-type: none"> <li><b>Prof. Vickie Batjelsmit</b>, Colorado State University, United States</li> <li><b>Mrs. Nguyen Thi Hai Binh</b>, Acting Director General of Financial Supervisory Policy Coordination and Research Department, National Financial Supervisory Commission</li> <li><b>Prof. Muhammad Ziaulhaq Mamun</b>, East West University, Bangladesh</li> <li><b>Prof. Madamba Jeanette</b>, University of the Philippines Los Baños, Philippines</li> <li><b>Prof. Chul Choi</b>, Sook Myung University, Korea</li> </ul>
12:00 - 13:30	<b>Lunch Break</b>
13:30 - 15:00	<b>Concurrent Sessions</b>
13:30 - 15:00	<b>Session 1: Financial Education and Financial Well-Being (Part A) - Room 511</b> <i>Link zoom: <a href="https://zoom.us/j/4893717023?pwd=U2ZLeGs0UUJBWWhOblpyNzBZOFIBUT09">https://zoom.us/j/4893717023?pwd=U2ZLeGs0UUJBWWhOblpyNzBZOFIBUT09</a></i> <i>Meeting ID: 489 371 7023 Passcode: hvnh2020</i> <b>Chairperson: Choi Chul</b> , Sookmyung University, KR <ul style="list-style-type: none"> <li><b>How to Avoid Recurrence of Another Luna-Terra Crisis?</b> <b>Gijin Yang</b>, Jeonbuk National University</li> <li><b>Stabilize Market Sentiment to Protect Investors in the Vietnamese Stock Market</b> <b>Anh Tram Luong - ThanhTrung Le - Huong Thi Thu Phung</b>, VNU University of Economics &amp; Business (Onsite)</li> <li><b>Behavioral Heuristics in Stock Investing of Students in Hanoi</b> <b>Ngo QuynhAnh - Vu Thi Loan</b>, VNU University of Economics &amp; Business (On-site)</li> <li><b>What Explains the Gender Gap in Private Pensions in Korea?</b> <b>Hae Kyung Yang</b>, Konkuk University, <b>Frances Woolley</b>, Carleton University, <b>Sharon Tennyson</b>, Cornell University (On-site)</li> </ul> <b>Discussants</b> <b>Vu Thi Loan</b> , Vietnam National University <b>Gijin Yang</b> , Jeonbuk, National University, Korea
13:30 - 15:00	<b>Session 2: Financial Consumer Protection during COVID 19 pandemic - Room 509</b> <i>Link zoom: <a href="https://us05web.zoom.us/j/8415661012?pwd=a24rWXFvTWRRWSlhTnlGxVnhFMG5pUT09">https://us05web.zoom.us/j/8415661012?pwd=a24rWXFvTWRRWSlhTnlGxVnhFMG5pUT09</a></i> <i>Meeting ID: 841 566 1012 Passcode: hvnh2020</i> <b>Chairperson: Adele Atkinsons</b> , University of Birmingham, UK

	<ul style="list-style-type: none"> <li>• <b>Digital Finance and Consumer Protection in the Time of COVID-19: International Experiences and Policy Recommendations to the Government of Vietnam</b> Nguyen ThiVinh, <i>Monetary &amp; Financial Stability Department, State Bank of Vietnam (On-site)</i></li> <li>• <b>Bank Provisioning Practice During the Pandemic: Evidence from the COVID-19 Outbreak</b> Tram Anh Nguyen, <i>Institute of Economics &amp; Strategic Management, Phu Ha Nguyen - Hiep Ngoc Luu - Trang Nguyen Ha Cu - Phuong Anh Nguyen, VNU University of Economics &amp; Business (On-site)</i></li> <li>• <b>Sustainable Development and Social Insurance: Factor Affecting Intention to Participate in Voluntary Social Pension in Hanoi - Vietnam</b> Huong Thu Thi Phung, <i>VNU University of Economics &amp; Business, Pham Thi Hoang Anh, Banking Academy of Vietnam, Luong Tram Anh, VNU University of Economics and Business (On-site)</i></li> </ul> <p><b>Discussants</b> Luu Ngoc Hiep, <i>VNU University of Economics &amp; Business</i> Huong Thu Thi Phung, <i>VNU University of Economics &amp; Business</i></p>
13:30 - 15:00	<p align="center"><b>Session 3: Legal Framework of Financial Consumer Protections (Part A) - Room 301</b> <i>Link zoom: <a href="https://us05web.zoom.us/j/9172905638?pwd=V3h4Qm9TTzJQeEtxdWZSTZCjJWZz09">https://us05web.zoom.us/j/9172905638?pwd=V3h4Qm9TTzJQeEtxdWZSTZCjJWZz09</a></i> <b>Meeting ID: 917 290 5638</b>      <b>Passcode: hvnh2020</b></p> <p><b>Chairperson: Le Hai Trung, Banking Academy of Vietnam</b></p> <ul style="list-style-type: none"> <li>• <b>Institutional Consideration for Improving the Soundness of Insurance Companies in Korea: Focusing on an Internal Model Using Health Grades and Insurance Premium Differentiation</b> Moonyun Hwang, <i>Sungkyunkwan University, Korea (Online)</i></li> <li>• <b>Can your Insurance Premium be Reduced, if Your Risk Gets Lowered, Thanks to Digitalization? Focusing on Law and Practice in Europe and Korea</b> Hongjoo Jung, <i>Sungkyunkwan University, Korea (Online)</i></li> <li>• <b>MNCs as Financial Consumers: Legal Regulations on Keepwell Transfer Pricing</b> Maji Rhee, <i>Waseda University (Online)</i></li> <li>• <b>Financial Impact of COVID-19 on the Livelihood of Urban Poor: A Study on Dhaka Metropolis SlumDwellers of Bangladesh</b> Muhammad Ziaulhaq Mamun - <i>FatemaTujJohra, East West University, Banglades (Online)</i></li> </ul> <p><b>Discussants</b> Maji Rhee, <i>Waseda University</i> Le Hai Trung, <i>Banking Academy of Vietnam</i> Moonyun Hwang, <i>Sungkyunkwan University, Korea</i></p>
13:30 - 15:00	<p align="center"><b>Session 4: Financial Consumer Protection in Vietnam (Part A) - Room 305</b> <i>Link zoom: <a href="https://us05web.zoom.us/j/7693599976?pwd=OWNkeWlRlUWFuRnRSWWF5cTh0S1M0dz09">https://us05web.zoom.us/j/7693599976?pwd=OWNkeWlRlUWFuRnRSWWF5cTh0S1M0dz09</a></i> <b>Meeting ID: 769 359 9976</b>      <b>Passcode: hvnh2020</b></p> <p><b>Co-chairpersons: Tran The Nu and Do Kieu Oanh, VNU University of Economics &amp; Business</b></p> <ul style="list-style-type: none"> <li>• <b>Factors Affecting the Timeliness of Financial Statements Disclosure of Listed Companies on Vietnam Stock Market</b> Nguyen Thi Hong Thuy - Do Hoang Lan - Le Thi Thuy Linh, <i>VNU University of Economics &amp; Business (Onsite)</i></li> <li>• <b>Factors Affecting Financial Independence in Young People</b> Trinh Thi Phan Lan - Nguyen Phuong Duyen - Tran Minh Hang, <i>VNU University of Economics &amp; Business (On-site)</i></li> <li>• <b>Factors Affecting Vietnamese People Susceptible to Crypto Ponzi Schemes</b> Thanh Nguyen Thi Nhung - Nguyen Tuan An - To Thi Nguyet Ha - Le Ta Hong Thanh, <i>VNU University of Economics &amp; Business (On-site)</i></li> <li>• <b>The Effect of KOLs on Cosmetic Purchase Behavior</b> Nguyen Thi Thanh Hai - Phung Thanh Huyen - Nguyen Thi Hong Nhung - Nguyen Thi Thuy, <i>VNU University of Economics &amp; Business (On-site)</i></li> </ul> <p><b>Discussants</b> Nguyen Thi Thanh Hai, <i>VNU University of Economics &amp; Business</i> Nguyen Thi Hong Thuy, <i>VNU University of Economics &amp; Business</i> Trinh Thi Phan Lan, <i>VNU University of Economics &amp; Business</i></p>

	<b>Panel Discussion Session (1): Business ethics and self-regulation - Room 801</b> <b>Link zoom: <a href="https://zoom.us/j/6301340299?pwd=ajZqTjhBTXQyYUICbnlHMVM1ZWlOdz09">https://zoom.us/j/6301340299?pwd=ajZqTjhBTXQyYUICbnlHMVM1ZWlOdz09</a></b> <b>Meeting ID: 630 134 0299      Passcode: hvnh2020</b>
15:20 - 17:00	<b>Chairperson:</b> <ul style="list-style-type: none"> <li>• Prof. Sang Ho Kim, Gwangju Institute of Technology, Korea</li> </ul> <b>Participants:</b> <ul style="list-style-type: none"> <li>• Prof. KanitsornTerdpaopong, Rangsit University, Thailand</li> <li>• Dr. Huh You Kyung, New York University, US</li> <li>• Prof. Nguyen Thi Hong Thuy, VNU University of Economics &amp; Business</li> <li>• Prof. Andy Schulow, University of Wollongong, Australia</li> <li>• Mrs. Lang Trinh Mai Huong, State Audit of Vietnam</li> </ul>
<b>Day 2 August 5<sup>th</sup>, 2022 (Friday) - On-site at Banking Academy</b>	
8:00 - 8:30	<b>Opening Ceremony (Opening Remark &amp; Keynote Speeches) - Conference Hall 310, Building A1</b> <b>Link zoom: <a href="https://zoom.us/j/6301340299?pwd=ajZqTjhBTXQyYUICbnlHMVM1ZWlOdz09">https://zoom.us/j/6301340299?pwd=ajZqTjhBTXQyYUICbnlHMVM1ZWlOdz09</a></b> <b>Meeting ID: 630 134 0299      Passcode: hvnh2020</b>
8:30 - 8:50	<b>Opening Ceremony (Opening Remark &amp; Keynote Speeches)</b> <ul style="list-style-type: none"> <li>• Opening Remark</li> </ul> <b>Prof. Nguyen Kim Anh</b> , Vice Governor of State Bank of Vietnam <ul style="list-style-type: none"> <li>• Welcome Speech from VNU University of Economics and Business</li> </ul> <b>Prof. Do Thi Kim Hao</b> , Vice President of Banking Academy of Vietnam
8:50 - 9:15	<b>Keynote Speech 4</b>
	<b>Prof. Adele Atkinsons</b> , University of Birmingham, UK [On-site]
9:15 - 9:40	<b>Keynote Speech 5</b>
	<b>Dr. Can Van Luc</b> , National Fiscal and Monetary Policy Advisory Council, Bank for Investment and Development, Vietnam [On-site]
9:40 - 10:05	<b>Keynote Speech 6</b>
	<b>Dr. Pham Bao Khanh</b> , Vice Chairman of Deposit Insurance of Vietnam [On-site]
10:05 - 10:30	<b>Discussion</b>
	<b>Panel Discussion Session (2): Alternative ways to enhance financial literacy and financial education</b>
10:30 - 12:00	<b>Chairperson:</b> <ul style="list-style-type: none"> <li>• Prof. Sharon Tennyson, Cornell University, United States</li> </ul> <b>Participants:</b> <ul style="list-style-type: none"> <li>• Prof. Nicolinli Gianni, University of Rome, Italy</li> <li>• Ms. Lyn Haralson, Consumer Financial Protection Bureau (CFPB), United States</li> <li>• Prof. RofikohRokhim, University of Indonesia, Indonesia</li> <li>• Prof. Pham Thi Hoang Anh, Banking Academy of Vietnam</li> <li>• Prof. Sung Sook Kim, Kyemyung University, Korea</li> </ul>
12:00 - 13:30	<b>Lunch Break - Room 204, Building D2</b>
13:30 - 15:00	<b>Concurrent Sessions</b>
13:30 - 15:00	<b>Session 5: Financial Education and Financial Well-Being (Part B) - Room 501, Building D2</b> <b>Link zoom: <a href="https://zoom.us/j/4893717023?pwd=U2ZLeGs0UUJBWWhOblpyNzBZOFIBUT09">https://zoom.us/j/4893717023?pwd=U2ZLeGs0UUJBWWhOblpyNzBZOFIBUT09</a></b> <b>Meeting ID: 489 371 7023      Passcode: hvnh2020</b> <b>Chairperson: Choi Chul</b> , Sookmyung University, Korea <ul style="list-style-type: none"> <li>• <b>Factors Affecting the Decision to Use Gen Z's Payment in Kind</b> Lan Phuong To - Hoang Linh Ngo, VNU University of Economics &amp; Business, Bao Ngoc Hoang, Vietnam Trade Union University (Online)</li> <li>• <b>Factors Affecting Customers' Decision to Buy Xiaomi Phones in Hanoi City</b> Tran The Nu - Nguyen Thi My Duyen - Nham Thi Dieu Linh, VNU University of Economics &amp; Business (On-site)</li> <li>• <b>Research of Factors Affecting Capital Structure of Pharmaceutical Enterprise on the Vietnam Stock Exchange</b></li> </ul>

	<p><b>Pham Ngoc Quang - Chu Cam Tu - Khuat Hong Ngoc - Phuong Thuy Linh, VNU University of Economics &amp; Business (On-site)</b></p> <ul style="list-style-type: none"> <li><b>Factors Influencing Consumers' Decision to Buy Cars in Hanoi City</b>  <b>Nguyen Thi Hai Ha -Phung Thi Thuy Hong - Phan Ngoc Anh - Nguyen Khanh Nguyen, VNU University of Economics &amp; Business (On-site)</b></li> </ul> <p><b>Discussants</b></p> <p><b>Bui Huy Trung, Banking Academy of Vietnam</b>  <b>Nguyen Bich Ngoc, Banking Academy of Vietnam</b>  <b>Nguyen Thi Cam Giang, Banking Academy of Vietnam</b>  <b>Nguyen Thi Lam Anh, Banking Academy of Vietnam</b></p>
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# WHAT EXPLAINS THE GENDER GAP IN PRIVATE PENSIONS IN KOREA?

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## **Abstract**

Korea is one of the world's fastest aging countries. In 2020, the elderly population was 15.7 percent of total population and is expected to increase to 20.3 percent by 2025 and 43.9 percent by 2060 (Statistics Korea, 2020). On the other hand, the elderly poverty rate is over 40 percent, the highest among OECD countries (OECD, 2019)

Aging population coupled with high poverty rate of the elderly raises the issue of financial security of the elderly in Korea. With rapid aging and elderly poverty, the current pension system faces a sustainability issue. Korea has a three-pillar pension system with public, private workplace based, and voluntary personal pensions. Since their inception in 1994, the demand for personal pensions has been low compared to other countries. Recently, the enrollment rate has been dropping. Currently, only 20 percent of the economically active population is enrolled in a personal pension plan (Kim, 2020).

Why then is the demand for personal pensions low in Korea? There are some key differences between Korean personal pensions and voluntary tax-preferred savings plans in other countries. The tax treatment of personal pension contributions is less generous than the treatment of, say, 401(K) deductions, especially for higher income earners, and the investment opportunities within personal pensions are more limited. The plans are often more like insurance plans, with set contributions and benefits, than a pure investment vehicle. Kim (2020) argues that these low incentives for enrollment, low tax benefits, high fees, and low yield explain the relatively low rate of personal pension take-up in Korea. Researchers also have studied demand-side factors such as income, education, age, and occupation. Recently, subjective factors such as subjective life expectancy, subjective views on health and retirement have also become areas of research interest (Son et al., 2021).

Previous literature reports adverse selection in the demand for personal pensions. When one expects to live longer compared to the statistical life, the person is more likely to purchase personal pension (Friedman and Warshawky, 1990; Finkelstein and Poterba, 2002, 2004; Doyle et al., 2004; McCarthy and Mitchell, 2010; Hosseini 2015; Kim et al., 2011; Lee, 2020). However, empirical evidence suggests this is not the case for women. Empirical studies report women's subjective life expectancy is negatively related with the demand for personal pension (Lee, 2020). Those women who expect to live longer are less likely to purchase personal pension, whereas men who expect to live longer are more likely to purchase personal pension.

According to Statistics Korea, women on average live 6 to 7 years longer than men. In general, wives are younger than husbands which implies that women are likely to live on average 10 years or more by themselves (Garnick, 2016; Lee, 2020). The poverty rate among elderly Korean women is much higher than that among men - 49% for women versus 37.1% for men, and this higher poverty rate can be attributed both to longer life expectancies and lower earnings-related pensions (Kang et al., 2022). Hence, women may need to prepare financially for their widowhood. A personal pension is one way to supplement expected pension income - yet the enrolment rate in personal pensions is lower for women than for men.

This presents us with two puzzles. The first is the well-known annuity puzzle. Given that annuity is a more rational choice for individuals in an aging society (Yaari, 1965), why do relatively few people in Korea have an annuity<sup>1</sup>? The second is the gender gap in personal pension coverage. Why do women not have personal pensions given their life expectancy is longer than men? Our research is motivated by this second puzzle.

The gender gap in personal pension could be driven by many differences among men and women. Women are in general disadvantaged in the labor market which may constrain their capacity to contribute to a personal pension (OECD, 2021). Differences in financial literacy could also explain women's lower propensity to plan in this way, but a recent national survey of financial literacy by the Bank of Korea reports that financial literacy of men and women are almost identical (Bank of Korea, 2021). The gender gap in the demand for personal pension could also be driven by different perception of longevity risk by gender. Since personal pension is voluntary, people make choice based on their subjective life expectancy rather than the statistical life expectancy (O'Dea and Sturrock, 2021). If women's subjective longevity expectations are not in line with actual life expectancy, they may not plan sufficiently for retirement. The difference could also be related to decision-making norms. If married women have less control over household financial decisions or are expected to put others' needs above their own,

We analyze the 2016 to 2020 waves of National Survey of Tax and Benefits (NASTAB) of Korea to analyze these questions. NASTAB is an annual panel survey with nationally representative adults of working age. We exploit the rich information included in the data such as employment, income, enrollment to pensions and insurances, tax deduction and subjective measures such as subjective life expectancy. We can calculate how much one over or underestimates their life expectancy by comparing subjective and statistical life expectancies.

We first describe subjective life expectancies of men and women and their misperceptions in life expectancy. We then investigate factors related with subjective life expectancy for men and women. We test whether subjective life expectancy and misperception in one's life expectancy are related with the demand for personal pension.

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1 Even though personal pension is not necessarily an annuity, around 70 percent of personal pensions are sold by insurance companies and majority are offered as annuities at the beginning of the contract (Financial Supervisory Service, 2022).

Our initial results indicate during our study period that as statistical life expectancy increases, subjective life expectancies for both men and women have also increased. On average both men and women expect to live to 86 years, which means men overestimate by 3.8 years and women underestimate by 1.7 years their life expectancy.

As reported in Table 1, we find that age is closely related with subjective life expectancy. Consistent with previous literature, older age groups, age 70 and older, are optimistic about their longevity. While younger age groups, age 50 and younger, are pessimistic about their longevity. For women, those who are less educated, lower net worth, less healthy, smoker, and with more children express lower subjective life expectancy. Whereas women who are homeowners, in better health, and living in rural areas have higher subjective life expectancies. For men, some but not all factors associated with subjective life expectancy are the same as for women. For example, lower net worth, health, smoking, homeownership, and living in rural areas are significant and have the same signs for men as for women. However, the number of children is not significantly associated with men's subjective life expectancy, and married men express significantly higher expected longevity.

**Table 1. Random effects GLS estimates of subjective life expectancy**

	<b>Women (N = 18,240)</b>	<b>Men (N = 21,528)</b>
Age: 40s	-0.798***	-0.682***
	(0.216)	(0.193)
Age: 50s	-0.477**	-0.671***
	(0.233)	(0.195)
Age: 60s	-0.210	-0.257
	(0.267)	(0.224)
Age: 70s	2.206***	1.724***
	(0.293)	(0.271)
Age: 80s	5.906***	5.274***
	(0.329)	(0.317)
High school graduate	-0.402**	-0.016
	(0.183)	(0.191)
College or more	-0.363	0.220
	(0.232)	(0.213)
Ln(household income)	0.243***	0.066
	(0.083)	(0.087)
Net worth 1 <sup>st</sup> quintile	-0.633***	-0.512**
	(0.188)	(0.201)
Net worth 2 <sup>nd</sup> quintile	-0.255*	-0.239

	<b>Women (N = 18,240)</b>	<b>Men (N = 21,528)</b>
	(0.153)	(0.156)
Net worth 4 <sup>th</sup> quintile	0.050	0.318**
	(0.146)	(0.135)
Net worth 5 <sup>th</sup> quintile	-0.055	0.245
	(0.166)	(0.150)
Own house	0.234*	0.227*
	(0.137)	(0.130)
Married	0.016	0.478***
	(0.141)	(0.183)
No. of children	-0.168**	0.064
	(0.082)	(0.075)
Health: poor	-3.042***	-3.911***
	(0.276)	(0.366)
Health: fair	-1.521***	-1.847***
	(0.147)	(0.177)
Health: very good	1.363***	1.538***
	(0.116)	(0.117)
Health: excellent	2.763***	2.650***
	(0.218)	(0.178)
Smoker	-1.340***	-0.479***
	(0.510)	(0.119)
Rural	0.395**	0.407**
	(0.195)	(0.196)

Note: wave dummies are included in all models; Robust standard errors in parentheses; \*\*\* p<.01, \*\* p<.05, \* p<.1

Baseline model results reported in Table 2 indicate that for both men and women, subjective life is a significant factor for demand for personal pension. Consistent with the prior literature, for women subjective life expectancy is negatively related whereas for men subjective life expectancy is positive related with the demand for personal pension. We test extended models including expected years of widowhood, parents age and inheritance possibility, dependence on family members, financial literacy - but addition of these variables does not change the signs or significances of subjective longevity expectations. We further test whether response bias in subjective life expectancy may lead to the unexpected results, by relating the difference in subjective life expectancy and (average) objective life expectancy to demand for personal pension.

**Table 2. Random effects GLS estimates of demand for personal pension**

	<b>Women (N = 8,534)</b>	<b>Men (N = 11,855)</b>
Subjective life exp.	-0.001*	0.001*
	(0.001)	(0.001)
Age: 35-40	0.005	0.046**
	(0.021)	(0.019)
Age: 40-45	0.007	0.049**
	(0.022)	(0.019)
Age: 45-50	0.009	0.029
	(0.022)	(0.019)
Age: 50-55	-0.015	0.030
	(0.022)	(0.019)
Age: 55-60	-0.030	0.001
	(0.023)	(0.020)
High school graduate	0.040**	0.014
	(0.017)	(0.019)
College or more	0.068***	0.061***
	(0.018)	(0.020)
No. of children	-0.018***	-0.022***
	(0.006)	(0.005)
Work full time	0.032***	0.068***
	(0.010)	(0.011)
Self-employed	0.020*	-0.004
	(0.012)	(0.011)
Own house	0.018*	0.020**
	(0.010)	(0.009)
Ln(household income)	0.062***	0.080***
	(0.009)	(0.007)
Net worth: 1 <sup>st</sup> quintile	-0.023*	-0.046***
	(0.013)	(0.012)
Net worth: 2 <sup>nd</sup> quintile	-0.021*	-0.039***
	(0.012)	(0.010)
Net worth: 4 <sup>th</sup> quintile	0.029***	0.034***
	(0.011)	(0.009)
Net worth: 5 <sup>th</sup> quintile	0.089***	0.101***
	(0.013)	(0.012)
Rural	0.002	0.027*
	(0.017)	(0.015)
Health: poor	-0.067*	-0.011
	(0.035)	(0.050)
Health: fair	0.005	0.027
	(0.019)	(0.017)
Health: very good	-0.022**	0.001
	(0.009)	(0.009)
Health: excellent	-0.004	-0.000
	(0.015)	(0.011)
Have public pension	0.046***	0.025**
	(0.010)	(0.010)

Note: wave dummies are included in all models; Robust standard errors in parentheses;

\*\*\* p<.01, \*\* p<.05, \* p<.1



To better understand whether gender-based decision-making norms are related to personal pension demand, in the remainder of the paper we compare pension demand of single women and married women and explore factors approximating for relative decision-making power of married women in the household. There is a large literature on intra-household decision-making and resource allocation, and this literature generally supports the conclusion that household decisions tend to reflect the preferences of family members with greater bargaining power (for a survey see Eswaran, 2014). A variety of factors including family members' relative income, occupation, education or potential earnings, may determine bargaining power (for a discussion see Yang, Tennyson and Woolley, 2022). Similarly, it is recognized that social norms and social perceptions, and gender relations beyond the household, may affect intra-household bargaining (for elaboration see Agarwal, 1997). Our analysis, currently in progress, develops a variety of constructs to examine the impact of decision-making norms on private pension enrolment in Korea.

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# THE IMPACT OF ALTERNATIVE DATA IN THE MARKET FOR CONSUMER CREDIT

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## **Abstract**

With the development of ‘big data’ and AI technology, the economic benefit of data utilization is growing. This paper examines how the emergence of ‘big data’ technology contributes to resolving the information asymmetry problem in the credit market in Korea. In particular, the credit information sharing system (CISS) was established to solve the information asymmetry problem between creditors and debtors in the credit market, which has been utilized in the market place; As ‘big data’ is built in various fields due to the development of digital technology, it is also being used as an alternative information for evaluating credit risks of financial consumers. In fact, big data constructed in various fields such as telecommunication, commerce, real estate, payment, and etc. is confirmed to be useful in credit risk assessment. Using a household-level micro data, this paper finds that the predictive power of credit risk model is greatly improved when nonfinancial alternative information was used in addition to the conventional consumer credit scores that are based on the frequently used credit information. The improvement of predictive power due to the use of non-financial alternative data can contribute to improving access of the thin-filers who lack sufficient data on credit history and other usual credit-related variables. In addition, it is found that the credit-worthy thick-filers with enough credit history can also have benefits of interest rate reduction and an increase in borrowing limit as the discriminating power of the credit risk model is improved. The findings of this paper suggest that the use of non-financial alternative information can contribute to the improvement of social welfare by enhancing the efficiency of credit resource allocation through alleviating the information asymmetry problem.

**Keywords:** Alternative data, information asymmetry, credit market, Korea

# THE DEPOSITORS' BEHAVIOR AND THE FACTORS AFFECTING THE DEPOSITORS' BEHAVIOR IN VIETNAM

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## **1. Introduction**

This research studied behaviors of depositors in Vietnam banking system from 2006 - 2014, focusing on the relationship between the deposit withdrawal of depositors when the crisis happens and depositors' characteristics such as gender, age, living region, the level of trust, frequency in updating information and knowledge about the deposit insurance. Findings from this study would be used as policy recommendations in banking system stability, deposit insurance, consumer protection in Vietnam. Following is findings of the study.

Firstly, the over 30-years-old depositors tend to withdraw their deposit more than the under 30-years-old depositors after receiving the adverse information about the financial market and the banks they deposit; depositors who graduated from college tend to withdraw less than depositors who graduated from high schools and below; depositors in the North Central region and South Central region, Northwest region, Southwest region of Vietnam tend to withdraw less than depositors in the Red River Delta region and the Southeast region of Vietnam; depositors who got married tend to withdraw less than single depositors; depositors who trust in official information sources (TV, newspapers, electronic media) tend to withdraw less; depositors having knowledge about Deposit Insurance of Vietnam tend to withdraw less than depositors having no idea about Deposit Insurance of Vietnam .

Secondly, whether depositors having knowledge about deposit insurance coverage or not doesn't affect the decision to withdrawing all their deposits and the other factors such as gender, average income of the depositors does not affect the withdrawal and deposit of depositors.

The paper is structured as follows. First, in Section 2, we present an overview of the relevant literature. In Section 3, we describe the research scope and methodology we employ. Section 4 contains the research results. Finally, Section 5 is conclusions and recommendations.

## **2. A brief literature review**

### ***2.1. Impact of depositors' characteristics on depositor behaviors***

- Much of the researches is done by Japanese authors, and most of them is based on data from the Japanese population itself.

- Researches show that uninsured depositors are more likely to withdraw their deposits when their banks fail than insured deposits . Both small and large depositors apply pressure on banks. However, large depositors are subjected to fewer risks than small depositors due to their diversification of investment and their bank deposits only represent a fraction of

their total assets. For small depositors, deposits in banks constitute a significant proportion of their savings.

- Besides, in studies on the impact of depositors' internal factors, **Toshihiko Takemura and Takashi Kozu's** approach (2009) is the most suitable for Vietnam's condition.

## ***2.2. Impact of deposit insurance policy on depositor behavior***

Studies worldwide on the impact of deposit insurance policy on depositors behavior have produced the following results:

- The deposit insurance mechanism in general and the deposit insurance coverage have a relationship with and have influence on the decision of depositors. Depositors are less likely to cause bank runs if their deposits are fully insured. This helps strengthening depositors' confidence, minimizing banking crises, and enhancing the stability of the banking system.

- The application of limited deposit insurance increases depositor discipline. Depositors will become more cautious with banks' performance, especially banks with large bad debts, the main factor leading to bank risks. During the 2008 financial crisis, depositors became more sensitive to the financial risks when limited deposit insurance is applied.

- When blanket guarantee is in effect, depositors expect higher interest rates to offset the bank's risk-taking, but when limited deposit insurance is applied; large, unsecured deposits holder will move their deposit(s) to a safer bank instead of demanding higher yield rates.

- In the study by **Toshihiko Takemura et al.** (2012), the authors pointed out that depositors tend to withdraw less if they have a proper understanding about the Japanese deposit insurance system. Knowledge of Japan's deposit insurance system is useful and is effective in avoiding bank runs.

In Vietnam, depositor behavior has become one of the topics of interest to some researchers in the banking and deposit insurance fields. However, studies are scarce and most of them only pointed out the factors that affect the depositor withdrawal behavior, and there are not many researches on the impact of those factors on depositing and withdrawing.

Thus, there are not many (quantitative) studies on depositor behavior in Vietnam and they only identified bank-related factors and depositor characteristics that affect withdrawal behavior, but have not indicated the level of impact of those factors on depositor withdrawal behavior. It is necessary to build a model to assess the factors affecting depositor behavior in order to propose solutions and implications for prudential policies in banking operations, deposit insurance and consumer protection.

## **3. Research scope and methodology**

### ***3.1. Research scope***

Due to the size and conditions of data collection, this research limits the scope of the study to focus on considering the impact of the depositor characteristics factors and deposit insurance policy on depositor behavior.

### 3.2. Research methodology for the impact of depositor characteristics factor

#### *Research model*

In this research, we use Toshihiko Takemura and Takashi Kozu's model (2009) in the article "An empirical analysis using individual data collected through a Web-based survey". However, when applied, the paper has made adjustments to be more suitable for Vietnam's situation by concretizing the factors affecting depositors' behavior into: gender, age, educational level, area of residence, marital status, average income, reliability of information, frequency of access to information by depositors and knowledge about deposit insurance.

#### *Research methodology*

Logit regression models are widely used to build decision-making models in the fields of psychology, sociology, economics, and economic management. In this model, the probability is  $p$ , with a logit distribution of  $\text{logit}(p) = \log(p/1-p)$ .

#### *Dependent variable(s) and explanatory variable(s)*

In the model, the action of depositors withdrawing their entire deposit after receiving adverse information about the financial market and the bank they deposited in represents depositors' behavior. Dependent variable value is the probability of depositors withdrawing their entire deposit after receiving adverse information about the financial market and the bank they deposit.

The (independent) explanatory variables for this probability include: gender, age, educational level, area of residence, marital status, average income, reliability of information, frequency of access to information by depositors and knowledge about deposit insurance.

The relationship between the independent variable and the dependent variable is described through the formula:

$$p = \frac{\exp[a + b_1X_1 + b_2X_2 + b_3X_3 + b_4X_4 + b_5X_5 + b_6X_6 + b_7X_7 + b_8X_8 + b_9X_9]}{1 + \exp[a + b_1X_1 + b_2X_2 + b_3X_3 + b_4X_4 + b_5X_5 + b_6X_6 + b_7X_7 + b_8X_8 + b_9X_9]}$$

or

$$\log(p/1 - p) = a + b_1X_1 + b_2X_2 + b_3X_3 + b_4X_4 + b_5X_5 + b_6X_6 + b_7X_7 + b_8X_8 + b_9X_9$$

In which:

$p = 1$  if the depositor withdraws the entire deposit

$p = 0$  if otherwise

In which:

Variable  $X_1$  represents gender;

Variable  $X_2$  represents age;

Variable  $X_3$  represents education level;

Variable  $X_4$  represents living area;

Variable X5 represents marital status;

Variable X6 represents average income;

Variable X7 represents reliability of information source;

Variable X8 represents how often information is updated;

Variable X9A represents the understanding of the deposit insurance system;

Variable X9B represents the understanding of deposit insurance coverage.

### *Research data*

*Data sources:* DIV collects data by directly surveying insured depositors through questionnaires at 16 commercial banks. These 16 commercial banks are selected across the country to ensure diversity.

*Survey content:* In addition to information on personal characteristics such as age, gender, education level, income, marital status and area of residence, the study also conducted the survey on:

- The information update habit;
- People's understanding of deposit insurance and deposit insurance coverage;
- Depositors' behavior towards their deposits under adverse information about the bank(s) and financial market

*Research range:* Sample size of the survey: 1,000 observations. The survey samples are distributed according on the operating region of DIV's branches and headquarters, with Hanoi and Ho Chi Minh accounting for the greatest number.

**Table 1. Distribution of depositor surveys by regions**

Survey scope	Sample size
Hanoi	300
Hochiminh city	300
Northeast region	100
North Central region	100
South Central & Central Highlands region	100
Mekong Delta region	100
<b>Total</b>	<b>1,000</b>

## **4. Empirical results of Research model on the impact of depositor characteristics**

The result of Research model on the impact of depositor characteristics is as follow:

**Table 2. Logit model regression results**

Variable	Coefficient	Std. Error	z-Statistic	Prob.
X1	0.247636	0.158325	1.564098	0.1178
X2A	-0.421255	0.205455	-2.050351	0.0403
X2B	-0.701710	0.314430	-2.231687	0.0256

<b>Variable</b>	<b>Coefficient</b>	<b>Std. Error</b>	<b>z-Statistic</b>	<b>Prob.</b>
X3A	0.325514	0.180220	1.806207	0.0709
X3B	0.296455	0.260695	1.137174	0.2555
X4A	0.412268	0.197345	2.089077	0.0367
X4B	0.462266	0.265805	1.739120	0.0820
X5	0.356586	0.203673	1.750776	0.0800
X6A	0.160412	0.223199	0.718692	0.4723
X6B	-0.215651	0.253820	-0.849620	0.3955
X6C	-0.242620	0.312946	-0.775279	0.4382
X6D	0.072259	0.315319	0.229161	0.8187
X7A	0.200899	0.091486	2.195941	0.0281
X7B	0.115302	0.103553	1.113454	0.2655
X8	1.141707	0.186764	6.113100	0.0000
X9A	0.517892	0.191207	2.708540	0.0068
X9B	0.127956	0.208540	0.613580	0.5395
C	-1.968148	0.431341	-4.562864	0.0000
Observation	997			
Log likelihood	-571.4526			
LR statistic	137.0628			
McFadden R2	0.107083			

*Source: Calculations of the authors*

Significant variables: X2A, X2B, X4A, X7A, X8, X9A at 5% significance level.

The following variables are not significant: X1, X3A, X3B, X4B, X5, X6A, X6B, X6C, X6D, X7B, X9B at 5% significance level. However, variables X3A, X4B and X5 are significant at the 10% level.

In which:

Variable X2A represents depositors from 30 to 55 years old for women, to 60 years old for men;

Variable X2B represents depositors over 55 years old for women, over 60 years old for men;

Variable X3A represents a depositor who is graduate;

Variable X3B represents a depositor who is postgraduate;

Variable X4A represents a depositor belonging to the North Central and South Central region;

Variable X4B represents a depositor belonging to the Northwest, Central Highlands, and Southwest region;



Variable X6A represents a depositor who earns from 5 million VND to 10 million VND;

Variable X6B represents a depositor who earn from 10 million VND to less than 15 million VND;

Variable X6C represents a depositor who earns from 15 million VND to 20 million VND;

Variable X6D represents a depositor who earns from 20 million VND or more;

Variable X7A represents the source of information from television, newspapers, and electronic newspapers;

The McFadden R-squared coefficient is 0.1072, which means that the variables in the model could explain 10.72% of the variation of the dependent variable.

The p-value of the LR coefficient of zero indicates that the overall pattern is statistically significant.

The coefficients in the model are not significant means the marginal contribution of that variable is insignificant. If the coefficients in the model are significant, the marginal contribution of that variable is explained as follows:

- Variable X2A (represents depositors from 30 to 55 years old for women, to 60 years old for men) has an estimator coefficient of -0.42 which means that depositors from the age group 30 to 55 years old for women, to 60 years old for men tend to withdraw more than the group under 30 years old. More specifically, holding all other variables constant, the proportion of depositors in the age group from 30 to 55 years old for women, to 60 years old for men compared to other groups is  $\exp(0.42) = 1.284$ . That means that the withdrawal ability of the group from 30 to 55 years old for women, to 60 years old for men is 28.4% higher than the other group.

- Variable X2B (represents depositors over 55 years old for women, over 60 years old for men) has an estimator coefficient of -0.7 which means that depositors over 55 years old for women, over 60 years old for men tend to withdraw more than the group under 30 years old when receiving adverse information about the financial market and the deposited banks.

- Variable X4A (represents a depositor belonging to the North Central and South Central region) has an estimation coefficient of 0.41, which means that depositors in the North Central region and South Central region tend to withdraw less than depositors in the Red River Delta region and Southeast region.

- The variable X7A (represents the source of information from television, newspapers, and electronic newspapers) has an estimator coefficient of 0.2 which means that upon receiving adverse information about the financial market and the deposited bank, the more depositors trust official sources of information (T.V, paper newspapers, electronic newspapers), the lower their tendency to withdraw money.

- Variable X9A (represents the understanding of the deposit insurance system) has an estimator coefficient of 0.52 which means that depositors who are knowledgeable of DIV tend to withdraw less than depositors who have no information about DIV.

At the 10% significance level

- The variable X3A (represents a depositor who is graduate) has an estimator of 0.32 which means that bachelor-degreed depositors tend to withdraw less.

- Variable X4B (represents a depositor belonging to the Northwest, Central Highlands, and Southwest region) has an estimation coefficient of 0.46, which means that depositors in the Northwest region, Central Highlands region, and Southwest region tend to withdraw less than depositors in the Red River Delta region and Southeast region.

- Variable X5 (represents marital status) has an estimator of 0.36 which means that depositors belonging to the married group tend to withdraw less. More specifically, holding all other variables constant, the ratio of depositors in the married group to the unmarried group is  $\exp(0.36) = 1.233$ . It means that the married group's probability to withdraw is 23.3% less than the unmarried group.

## **5. Conclusions and recommendation**

### ***5.1. Conclusions on the impact of depositor characteristics on depositor behavior***

Based on the above survey results and model results the following conclusions can be drawn about depositor behavior:

*First*, the model uses variables on gender, age, education level, area of residence, marital status, average income, reliability of information, information accessing frequency and understanding of deposit insurance that are capable of explaining depositor behavior.

*Second*, depositor behavior is measured by the decision of depositors whether to withdraw or not withdraw their entire deposit after receiving adverse information about the financial market and their banks.

*Third*, results from the model reveal important factors in depositor behavior so that the relevant authority agencies can come up with appropriate policies to protect depositors and to stabilize amount of money raised from the populace.

*Fourth*, at the 5% significance level, the factors affecting withdrawal behavior are explained as follows:

- Female depositors aged 30 to 55 and male depositors aged 30 to 60 tend to withdraw more than depositors under 30 years old. Specifically, holding all other things constant, upon receiving adverse information about the financial markets and the bank(s), the depositors from the above age group have higher probability of withdrawing (34.3% more) than that of depositors under 30 years old.

- Female depositors over 55 years old and male depositors over 60 years old have the tendency to withdraw more than those under 30 when receiving adverse information about the financial markets and the bank(s) which they deposit their earnings.

- Depositors with a bachelor degree tend to withdraw less than depositors who are only high school graduates.

- Depositors in the North Central region, South Central region, Northwest region, Central Highlands region, and Southwest region of Vietnam tend to withdraw less than

depositors in the Red River Delta region and Southeast region when receiving adverse information about the financial market and the banks they entrust deposit.

- Married depositors tend to withdraw less than unmarried depositors. Specifically, other things being equal, upon receiving adverse information about the financial market and the bank(s), the proportion of married depositors who are likely to withdraw their money is 23.3% less than that of the unmarried group.

- When receiving adverse information about the financial market and the deposited banks, the more depositors trust in official information sources (television, paper newspapers, electronic newspapers), the less likely they are to withdraw their money.

- Depositors who are knowledgeable of DIV tend to withdraw less than depositors who have no information about DIV. So, deposit insurance policy has had positive impacts on depositor behavior.

- Whether a depositor is fully aware of the Deposit Insurance Coverage or not does not affect the decision to withdraw the entire deposit after they receive adverse information about the banking and financial markets.

- The remaining factors such as: gender, average depositors income do not affect depositor withdrawal or deposit behavior.

## ***5.2. Suggestions and recommendations***

From the results of the research, this research gives some following recommendations and suggestions:

### *To State Bank of Vietnam (SBV)*

- When the financial market evolves, the agencies should focus on providing more information on official channels (depositors who trust the official information sources tend to withdraw less) and trying to minimize information on informal channel.

- Develop and implement financial education programs to raise community awareness and public confidence in the banking system, promote access to financial services, maintain the stability of the system, prevent mass withdrawal, especially in the context of difficulties.

- With different characteristics among regions, education, gender, age, the SBV should develop policies and orientation for each region when there are unfavorable changes in deposits.

### *To Deposit Insurance of Vietnam (DIV)*

- On the basis of a detailed assessment of the situation of the banking activities, DIV tightly monitors weak banks which attract deposits through policies of high interest and promotional forms which makes deposits be sent to the inefficient channel. The adjustment of the behavior of banks and the regulation of the behavior of depositors help to protect the interests of depositors better.

- DIV reviews recent DI policies, thereby giving advice and recommendations to the SBV and the relevant agencies to adjust some related policies, especially policies about coverage to ensure the confidence of depositors.

- On the basis of understanding the factors about characteristics of the depositors, DIV can make suitable PR policies with the behavior of depositors properly and timely.

- DIV coordinates with relevant agencies to cope with the panic withdrawal of depositors based on the psychological characteristics of depositors.

To commercial banks:

- Commercial banks can base on the influence of the characteristics of depositors to have suitable strategy to mobilize capital.

- Commercial banks can apply the same model to estimate the amount of deposits in upcoming time to build strategies to wait in front for this source of capital. This will be a significant business advantage to commercial banks.

- Commercial banks should publicly display copies of certificate of deposit insurance participation at visible place for the depositors to see and thoroughly explain deposit insurance policies to depositors.

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# MNCs AS FINANCIAL CONSUMERS: LEGAL REGULATIONS ON KEEPWELL TRANSFER PRICING

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## **Abstract**

Multinational Corporations (MNCs) bear risk of double taxation due to the cross-border activities. MNCs need business strategies to protect their financial status from international double taxation. For MNCs, seeking the arm's length inter-company guarantee fees are necessary to avoid excessive corporate taxation. MNCs are taxpayers, and they are thus financial consumers.

*The OECD Tax Challenges Arising from Digitalisation based on Report on Pillar One (OECD 2022)* have impacted legal regulations related to transfer pricing taxation. More specifically, Pillar 1 proposes the standardization of remuneration of related party distributors.

In connection to the Pillar 1 objectives, this article analyzes one of the landmark keepwell contract cases tried in 2006 at the Tokyo District Court. Keepwell agreements are intercompany contracts that oblige the parties to make compensating adjustment payments. If the actual operating margin deviates from the agreed amount, a compensating adjustment payment would be made from a parent company. A parent company guarantees its subsidiary's loan to be payable, however, it usually does not charge a guarantee fee.

In the 2006 keepwell case, the calculation of the arm's length price came up as a 0.1% per annum guarantee fee. The charge was not based on the banks' calculation of the arm's length price conventionally done in most keepwell agreements. The recommended calculation of the arm's length guarantee fee charge by the bank was nullified since the bank had number rates that are too broad to be applied to the case. The court decided on the guarantee rate of 0.1 per annum as the arm's length price, and nullified the parent company's application of the comparable rate suggested by the banks.

**Keywords:** MNC, financial consumers, transfer pricing taxation, keepwell contracts

## **1. Introduction**

Multinational Corporations (MNCs) are usually categorized in the context of the dichotomy between producers and consumers. Such dichotomy limits alternative legal or regulatory frameworks in the 21<sup>st</sup> global economy. MNCs are taxpayers like consumers (OECD, 2022). For corporate income purposes, "keepwell agreement contracts" particularly involve the inter-company guaranteed fee in response to credit-based banking. In this context, MNCs as taxpayers are financial consumers as transfer pricing issues emerge from the inter-companies transactions.

Transfer pricing policies and methods have been guided by the OECD publications. In the most recent OECD transfer pricing Pillar 1, standardization of remuneration of related

party distributors has emerged as a main objective. Standardization of tangible products can be feasible, however, intangibles such as “guarantee fee” comparables would require a new paradigm and new transfer pricing methods beyond “the three basic methods.” Japan’s Special Taxation Measures Law (STML) is a primary point of legal regulations related to transfer pricing methods to achieve an arm’s length criteria.

This paper analyzes a keepwell agreement between a Japanese MNC and its foreign subsidiaries. The notion of keepwell agreements is common practice in Japan due to informed consent between the parent company and subsidiaries. Keepwell agreements or “letters of comfort” are non-binding and unenforceable. The transfer pricing issue involves whether the Keepwell guarantee agreement and common guarantee agreements are comparable.

The inference to this case was based on the theory of economic substance over form. Keepwell agreements are intercompany contracts that obligate parties to make compensating adjustment payments (Oka, 2008). If the actual operating margin deviates from the agreed amount, a compensating adjustment payment would be made from the parent company.

The recommended calculation of the arm’s length guarantee fee charge by the bank was nullified since the bank had over 30% rate which was deemed too broad to be applied to the case. The taxpayer argued that computation of keepwell along with goodwill is supposed not to reflect a gap between the total business value and net book value. However, the tribunal rejected the Japanese company’s application of the comparable rate.

### *1.1. Hypothesis*

One of the transfer pricing methods, the cost-plus method can prove that a bank common guarantee fee is equal to the keepwell guarantee fee. If the comparable uncontrolled price method is applied, then the arm’s length guarantee fee cannot be used as the best method.

Timeline of the case is listed in the four main procedures.

1) A Japanese parent company guaranteed a loan to a subsidiary, N Co., in the Netherlands.

2) If the subsidiary does not have sufficient funds to pay back the loan, the parent company will guarantee the debt payment. The keepwell rate was 0.1%.

3) N Co. borrowed JPY 15,000,000,000 from Bank B, and N Co. also borrowed JPY 2,500,000,000 from Insurance Company C. In each loan, the Japanese parent confirmed its guarantee to pay back through a letter of indemnity on guarantee

4) The Japanese parent issued the letter of indemnity on guarantee to Bank D. Loans from Bank A, and Insurance Company C owned by N Co. were also guaranteed (EY, 2010, NTA, 2002, 2010).

In order to prove that the bank common guarantee fee is equal to the keepwell guarantee fee, the research question focuses on whether the objective burden of proof can lead to the conclusion that the keepwell guarantee fee is comparable to a common guarantee fee. For the calculation method of arm’s length price of the guarantee fee, the hypothesis was tested via t-test and regression analysis.

## ***1.2. Research method***

This paper presents the result t-tests that showed that there were no differences between a keepwell guarantee fee and a common guarantee fee. The economic substance over the form theory in the absence of comparables was tested using a t-test. T-test serves to compare two sets of guarantee fees between related and unrelated parties. The correlation will serve a supporting argument leading to an objective burden of proof (Akaike, 1968, Prakken, 2002).

## ***1.3. Prior Research***

There are few prior studies on the credit guarantee transfer pricing cases. By utilizing the theory of substance over the form in taxation, a few research addresses risks involved in transfer and diversification of inter-company guarantee fee. Studies have presented that by covering part of the default risk, a lender's risk is lowered (Oka, 2008). The lender guarantees secure repayment of all or part of the loan in case of default. The credit guarantee schemes absorb an important share of borrower risk, and therefore, the scheme is a "form" rather than an economic "substance". The credit guarantee schemes can also compensate for factors such as insufficient collateral and weak creditor rights.

An example of the credit guarantee interest rate determination can be found in the GE Capital case in Canada. General Electric Capital Canada Inc. was a financial service and financial management company that conducted a number of businesses in Canada (Bakker, 2012). GE Canada was a wholly owned, indirect subsidiary of General Electric Capital Corporation, a U.S. corporation. GE Canada financed its operations by borrowing funds from capital markets through the issuance of debt in the form of commercial paper and unsecured debentures. GECUS began guaranteeing debt incurred by GE Canada in 1988; however, it charged guarantee fees in 1995 based on 1% per annum of the principal amount of the outstanding debt. The Canadian Revenue Agency reassessed GE Canada and denied the deduction of the guarantee fees based on the argument that the GE was supported by the GECUS regardless of the explicit guarantee fee.

## **2. Keepwell Contracts and Transfer Pricing**

### ***2.1. Transfer Pricing Issues***

The Keepwell Contract case as a transfer pricing litigation was held at the Tokyo District Court in 2006 (NTA, 2010, PWC, 2002). The court issued the decision on the "Keepwell Agreement" to credit enhancing transactions with affiliate companies raising funds from third parties. The issue of the case was whether the Keepwell guarantee agreement and common guarantee agreement were comparable.

### ***2.2. The cost-plus method based on economic substance over form***

The tax tribunal stated that the comparable uncontrolled method yields the most reliable results when there is a high degree of comparability and that the comparables are least susceptible with fewer differences than analysis. Computation of keepwell along with goodwill is supposed not to reflect a gap between the total business value and net book value (Luckhay et al, 2012). The taxpayer argued that since their primary business involves

financial transactions, costs incurred by transactions should be included in the arm's length price. For that reason, the taxpayer argued implementing the cost-plus method.

Prior to the case coming to the tax tribunal, at the Tokyo District Court, the court rejected the taxpayer's use of the cost-plus method because there was no difference between the keepwell guarantee fee and a common fee at comparable rates.

The Tokyo District Court argued that they were comparable for three reasons:

(1) The parent Japanese company held 100% of the shares,

(2) The parent Japanese company had been maintaining a subsidiary in the Netherlands of which the net assets were more than USD10,000, and

(3) The parent Japanese company promised to provide funding to the Netherlands subsidiary (NTA, 2010).

The Keepwell Contract case was first decided by the tax tribunal, but in an inconclusive way so that the tribunal was not able to present an arm's length price.

The taxpayer's rationale was that the cost-plus method was not appropriate. In reference to the OECD Guidelines, paragraph 1.4, and paragraph 7.15, regarding loans and interest rates, the tax tribunal drew the comparables from the guarantee fee charged by banks for its guarantee transactions by the comparable uncontrolled price method (OECD, 2011, 2022). The tax tribunal's computation of the arm's length guarantee fee charged under the keepwell agreement was calculated by multiplying the guarantee fee rate used by banks and the amount of principal debts covered by the keepwell agreement together.

*Guarantee fee rate by banks x Amount of principal debt under a keepwell agreement*

The court addressed problems with the guarantee fee rate due to different banks having different rates. The court applied the Special Taxation Measures Law Article 66-4 (6)-4 addressing the treatment of loans equivalent to the keepwell guarantee fee.

In a case in which the comparable uncontrolled price method, or the cost-plus method, is to be applied to loan transactions, the currency of the comparable uncontrolled transaction must be the same as that of the foreign-related transaction, and the various factors which may affect the interest rate in the comparable uncontrolled transaction, such as timing and term of the loan, the manner of setting the interest rate, the method of payment of interest, the creditworthiness of the debtor, the conditions of collaterals and guarantees and other factors affecting the arm's length rate must be the same as those of the foreign related transaction (NTT, 2002).

The STML 66-4 (6) also noted that

In a case in which the comparable uncontrolled price method or the cost-plus method is not applicable, such an interest rate, for example, as would be applied if a debtor in the foreign-related transaction borrowed from a bank under the same conditions as that of the foreign-related transaction, may be used as the interest rate of the comparable uncontrolled transaction, and the arm's length rate may be calculated in the manner as set forth in article 66-4, Paragraph 2-2-B, of the STML (NTT, 2002).



The cost-plus method and the treatment of supply of services is discussed in 66-4, (6)-5. The tax tribunal mentioned that the intercompany guarantee loan was deemed to be a service, and thus, the STML 66-4 (6)-5 with regard to service was referred to.

In a case in which the comparable uncontrolled price method is to be applied with respect to the supply of services, the services in the comparable uncontrolled transaction must be the same kind as that of the foreign-related transaction, and the conditions of supply of services, such as the timing and term of supply of services, must be the same as those of the foreign-related transaction. Further, in a case in which the cost-plus method is to be applied with respect to the supply of services, the services of the comparable uncontrolled transaction must be the same as, or similar to, those of the foreign-related transaction (NTT, 2002).

With regard to the arm's length rate, the tribunal referred to the OECD guidelines. The tribunal reiterated reasons for rejecting the cost-plus method in reference to OECD Guidelines, paragraph 1.4 (OECD, 2022).

The court treated the keepwell agreement relating to "credit enhancing transactions with subsidiaries raising funds from outside parties." These were like credit enhancing transactions because the subsidiary would disclose the details of the keepwell agreement in the bond prospectus. Furthermore, the subsidiary informed bondholders that the company would exercise the rights granted if it were to become unable to fully redeem bonds.

The court also focused on the nature of the keepwell agreement that the keepwell in the bond prospectus was treated as one guarantee transaction, similar to a common guarantee arrangement. A guarantor gives principal creditors the right to directly claim that the guarantor pay the principal debt when the principal debtor defaults.

In this context, the Japan parent company bears a legal obligation as if it were under the common guarantee agreement. The subsidiary decided that the Japan parent has a legal obligation similar to a common guarantee agreement. The subsidiary was able to raise funds with conditions similar to those of a common guarantee.

From the "economic substance over form," the keepwell guarantee agreement differed in form from a common guarantee agreement. Under the keepwell, the parent company guarantees for the benefit of a group companies in order to obtain a third party loan. Therefore, there is no economic substance, but the guarantee agreements would only remain as a form. In this particular case, in order for the subsidiary N company to obtain external debt, the keepwell agreement functioned to protect the subsidiary for being "stand alone" in financial status.

The court referred to the OECD paragraph 7.6 with regard to the keepwell guarantee agreement as a type of beneficial service. The taxpayer, the company argued that the economic effect of the keepwell agreement is equivalent to a common guarantee agreement (OECD, 2022). Moreover, within the frame of "beneficial service," the court argued that the cost element cannot be related to a guarantee agreement.

The court further stated that the transfer pricing issues that arise in respect of parent company loans and guarantees would have to follow the OECD Guidelines Paragraph 7.15.

(1) The application of the arm's length principle requires the consideration of what independent enterprises dealing wholly independently with each other would have done under the circumstances to further their own individual economic interests. In this regard independent enterprises will consider the options available to them having regard to their respective costs and benefits.

(2) In applying the arm's length principle in the context of transfer pricing provisions in the tax law, the fact that the market may analyze the financial arrangements on a group basis may not be determinative since such an approach may defeat the purpose of the statutory rules. However, incidental benefits from association with a larger group where the market accords those benefits without an associated company actually providing an economic service that confers a benefit on the recipient would not usually be a basis for imposing a charge (OECD, 2022).

The court tried to prove that the guarantee fee charged under the common guarantee agreement is comparable to the guarantee fee charged under the keepwell agreement as both were 0.1% for the Japanese parent company and the subsidiary N Co.

### ***2.3. T-Test***

In order to prove that there is no difference between the guarantee fee and the common fee, a t-test is applied. The t-test is to examine whether the existence of a hypothesis can be accepted or rejected between the known data and unknown hypothetical data. In the Keepwell agreement case, a t-test was used to examine whether the means of the hypothesis are different. If a t-test results in difference between the known, which is the keepwell guarantee fee and the hypothetical comparable from banks, then the taxpayer would have to prove the difference.

The p-value is the probability of significance level from the observed sample results. If the p-value is below 5%, it means that the observed data is inconsistent with the assumption that the null hypothesis is true. As a result, the hypothesis must be rejected and the other hypothesis accepted as true.

In transfer pricing, a t-test can be used to find relevant correlation among different factors and seek comparables between the taxpayer's claim and the tax authority's argument.

The purpose of regression analysis in transfer pricing is to determine whether two or more comparable variables are relevant as a set of correlations. A guarantee fee to the subsidiary and the common guarantee fee are tested to examine whether the guarantee fee should be charged in a common guarantee transaction or whether the guarantee fee should be charged under a keepwell agreement.

The guarantee charge in a keepwell agreement is treated similar to a common guarantee agreement, and therefore, the arm's length guarantee fee charged to the subsidiary would have to be equivalent to the common guarantee agreement. The tribunal confirmed that the arm's length guarantee fee charge in the keepwell agreement up to year 1991 was 0.1%.

The tax tribunal's reasoning on the guarantee fee of 0.1% referred to the Commissioner's Directive on the Establishment of Instructions for the Administration of Transfer Pricing Matters issued in 2010, Article 2-7 (NTA, 2002, 2010).

(1) The interest rate that would normally be applied in a case in which the lender of the foreign related transaction had borrowed from a bank, which is an unrelated party, under circumstances in which the currency, the timing of the loan, and the loan period were similar.

(2) The interest rate that would have been received in a case in which the funds in the foreign related transaction were invested in national bonds, under circumstances in which the currency, the time of the transaction and the period, were the same as the foreign related transaction.

### 3. Analysis

The percentage of a guarantor fee according to the guarantor fee is disclosed in the published court case

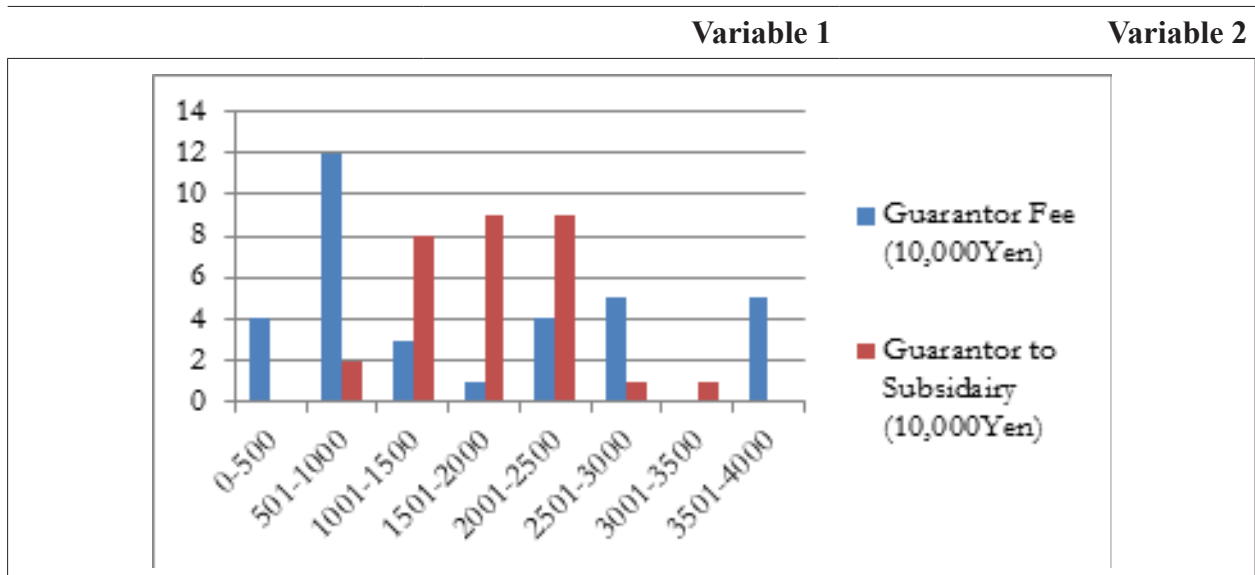
Name of bank	Year of issuance	Duration	Currency	Price (JPY 1,000,000)	Percentage of guarantor fee
A	1989/08	4	USD	100	0.1%
B	1989/09	7	SFR	15	0.1%
C	1989/09	7	SFR	50	0.1%
B	1989/11	10	USD	153	0.1%
A	1990/03	4	USD	42	0.1%
C	1990/05	4	LUX	300	0.1%
B	1990/06	10	USD	25	0.1%
B	1990/06	7	USD	3	0.1%
C	1990/06	7	USD	30	0.1%
A	1990/10	7	USD	150	0.1%
A	1990/10	4	USD	330	0.1%
A	1990/10	4	USD	340	0.1%
A	1990/10	4	USD	340	0.1%
A	1990/11	4	USD	100	0.1%
A	1990/11	5	SFR	60	0.1%
A	1990/11	4	USD	70	0.1%

Based on the disclosed data, a comparison between the parent company, the guarantor and the guarantee percentage of the subsidiary resulted in no differences between the two.

Data	Guarantor fee (10,000Yen)	%
1	378	0.1
2	625	0.1
3	44	0.1
4	252	0.1
5	1,008	0.1
6	1,500	0.1
7	1,000	0.1

Data	Guarantor fee (10,000Yen)	%
8	156	0.1
9	4,000	0.1
10	1,077	0.1
11	1,000	0.1
12	4,000	0.1
13	1,000	0.1
14	4,000	0.1
15	600	0.1
16	892	0.1
17	2,051	0.1
18	3,000	0.1
19	1,000	0.1
20	2,054	0.1
21	2,000	0.1
22	1,000	0.1
23	3,000	0.1
24	4,000	0.1
25	1,000	0.1
26	2,507	0.1
27	733	0.1
28	1,000	0.1
29	4,000	0.1
30	1,000	0.1
31	2,434	0.1
32	2,484	0.1
33	2,534	0.1
34	2,583	0.1

T-test: Testing two variables based on equal distribution



Mean	1762.117647	1664.7
Distribution	1547529.137	413318.6
Observation	34	30
Pool	1017011.32	
Difference	0	
Degrees of Freedom	62	
T	0.385642457	
P (T<=t) one tailed	0.350540765	
t value one tailed	1.669804163	
P (T<=t) two tailed	0.701081529	
t value two tailed	1.998971498	
No Difference		

Since  $t=0.385$  meaning that it is within  $\alpha = 0.05$ , the hypothesis 5.1 of “no difference in means” between the arm’s length rate and the tested rate is accepted. In order to seek the range of the guarantor fee to the subsidiary is also tested.

	<b>Guarantor Fee (10,000Yen)</b>	<b>Guarantor to Subsidiary (10,000Yen)</b>
0-500	4	0
501-1000	12	2
1001-1500	3	8
1501-2000	1	9
2001-2500	4	9
2501-3000	5	1
3001-3500	0	1
3501-4000	5	0
Total	34	30

#### 4. Results and Conclusion

The results of the t-tests shows that that even though two variables differed by about 100. Variable 1 was 1762 and variable 2 was 1664, due to the difference in range, there was no difference in the common guarantee fee used by the bank and the keepwell guarantee fee in the percentage of 0.1%. This was confirmed by the t-test and the range presented in the graph.

The range observed shows that there can be differences in price even within the same or similar products. The resale price based on the guarantee fee toward the subsidiary would reflect the “equivalent circumstances”, and therefore, the tax authority’s argument about “a test for mean difference” is valid.

Although the court was inconclusive about the arm’s length price based on the guarantee of the bonds issued in the Euro market from August 1989 to 1990, the tribunal decided that the guarantee fee ratio of 0.1% after 1991 diverged and that an adjustment was not

foreseeable. The subsidiary Company N had at least loans from four different financial institutions other than Bank A.

- (1) JPY 15,000,000,000 from Bank B
- (2) JPY 25,000,000,000 from Life Insurance Company C
- (3) Undisclosed amount from Bank D
- (4) Undisclosed amount from Bank E

The court held that the arm's length price for the guarantee fee could not be produced after the year 1991 due to the subsidiary company having had four or more loans from different financial institutions. Also, from the year 1993, the Bank of International Settlement stated that the banks have to maintain at least 8% of the asset according to the BIS regulations. The tax tribunal decided that after the year 1993, application of the BIS regulations would not be needed. The tax tribunal's inconclusive decision could have been resolved if the results of t-tests were applied. The tax tribunal could have tested the null hypothesis and sought correlation between the parent corporation guarantee fee with the keepwell guarantee fee from 1991 to test the divergence.

The court denied the cost element by emphasizing that the presence of the keepwell agreement and the principal debt were made known to the bondholders of the subsidiary and in the case of the Japanese parent company's default, the creditors will obtain the redemption. Cost and risk premium issues remain unsolved.

The company argued that even if there was a lack of economic substance in keepwell agreements, they are within the common corporate income tax framework in which the parent company would bear the risk premium. The taxpayer argued that the cost elements are what constitute the risk premium fee component for the subsidiary. The taxpayer claimed that the cost related to the risk premium fee to intragroup loans should be taken as the cost for implementing the cost-plus method.

The court argued that a keepwell agreement was between the guarantor and the guarantee, thus was not a contract. The court stated that the agreement borrows a form of contract to protect a subsidiary from high risk. The tribunal also pointed out that the guarantee fee does not have any legal effect. Between the Japanese parent company and the subsidiary N Co., there were no disclosed contractual terms that expressed the language of legal effect in the case of the subsidiary N Co.'s default.

The company's argument about the Japanese parent company taking a risk for accepting the guarantee fee in the keepwell agreement be marked as a cost was rejected (Takeuchi & Sugano, 2006). The court referred to the United States Credit Risk management rank system. The subsidiary N Co. was ranked at the BBB level based on default probability. Since the internal ratings approach requires that institutions have some reliable estimates of probabilities of default for each rating grade, for the rating of the subsidiary N Co., the rating evaluated used. The court's decision was final computation of a keepwell agreement based on the letter of indemnity on guarantee and the arm's length price, which was 0.1%.

The court further argued that there were no-risk financing activities within a group (NTT, 2002). An inter-company financing in which the lending company runs no commercial risk may be qualified as a supporting or auxiliary activity. The back-to-back situations with non-

recourse loans and situations in which the taxpayer's income including all risks incurred by the taxpaying entity is guaranteed by a group company qualify as no-risk financing activities. Expenses such as interest paid do not form part of the costs used in calculating the taxable income.

The taxpayer argued for the cost-plus method for determining the share costs for the purpose of computing the arm's length guarantee rate. However, the tribunal determined that services with a guaranteed return on the relevant cost base do not necessarily equate to a guaranteed profit, depending on what costs incurred by the provider are excluded from the cost base. Consequently, the case conclusion shows that in order to determine whether cost-plus is an appropriate methodology to consider the risk allocation between the parties. Keepwell guarantees require the parent company to ensure that the subsidiary is adequately capitalized. Also, the parent company is to compensate for adjustment payouts (Takeuchi & Sugano, 2006).

The National Tax Tribunal of Japan finally determined that the cost-plus method cannot be applied because if the guarantee rate is increased, there would be the risk-related costs that cannot be computed by the cost-plus method or resale method.

The decision implied that the cost-plus method begins with the gross costs incurred by the suppliers of property or services in a controlled transaction. Although the resale methods were the suggested method assuming that there would be differences in ranges. Difference in ranges would mean that when the difference in ranges is reflected, then the price difference between the parent and the subsidiary would be due to the differences in ranges.

Since the result of the test showed no differences in the guarantee fee set as 0.1%, the resale method can be applied as a comparable. The arm's length price from the t-test further showed that the cost-plus method as a transfer pricing method for guarantee fee charged under the keepwell agreement is valid. A statistical analysis presented the objective burden of proof. Although the subjective burden of proof is more dynamic in the sense that it shifts between the parties while they either defend themselves or attack the other party, the objective burden of proof, through statistical analysis, can help a party to clarify facts. When a transfer pricing case is related to the computation of arm's length of intangibles, a reasonable allocation of burden of proof at a court can be solved by improving an analysis of disputable facts or difference between comparables.

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# PROTECTING DEPOSITORS ON THE BASIS OF APPLYING PRINCIPLES OF FINANCIAL CONSUMER PROTECTION - BEST PRACTICES OF THE UNITED STATES AND LESSONS FOR VIETNAM

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## **Abstract**

The depositors and deposits play vital roles in capital mobilization for banks, in particular, and for the economy in general. Research showed that confidence results from the availability of knowledge, thus, from the regression results, the awareness has a positive impact on the public's confidence. The G20 high-level principles on financial consumer protection, released in 2011, are a widely recognized set of principles providing guidelines and recommendations for financial consumer protection. Key aspects of financial consumer protection are covered in these 10 principles, including having a legal framework with the involvement of supervisory agencies; promoting fair treatment and disclosure and responsibilities of financial products providers to consumers; encouraging financial education and awareness; protecting consumers' assets and data; complaints handling and competition among financial products providers. Among those, issues related to disclosure and transparency of information (Principle 4), financial education and awareness (Principle 5), and consumers' data privacy (Principle 8) are considered important and discussed in this paper as the basis for better protection of depositors. After studying the experience of the United States, I will make some recommendations to the Vietnamese authorities to enhance the protection of depositors in Vietnam.

**Keywords:** financial consumer protection, deposit insurance, disclosure, awareness, privacy

## **1. Introduction**

Bank deposits and depositors play crucial roles in capital mobilization for banks in particular and the economy in general. Financial stability and economic development can only be achieved when the public has confidence in the banking system. The deposit insurance system is established to protect the rights of the insured depositors, build their confidence, and contribute to national financial stability. However, a gap between financial consumer protection principles and deposit insurance principles and practices in Vietnam needs to be filled. In this paper, I will study some critical international principles on financial consumer protection and the US experience on financial consumer protection. Based on the research, I will make some policy recommendations to enhance financial consumer protection in Vietnam and the role of the deposit insurer in Vietnam.

## **2. Literature review**

Most studies indicate that the Deposit Insurance System was established in 1930 as the first national system in the world in the United States of America to restore depositors' confidence in the American banking system because of the negative effects of the Great Depression (1929-1933). Since then, the system has become essential for depositors, especially in times of financial crises, because in the absence of a deposit guarantee system, depositors will withdraw their money from the bank, which will threaten banks by withdrawing their assets and cash deposits (Nikolaj et al., 2019).

According to Al-Shimari, Kamal K. Jawada, and Jihad Faisal Jihad (2020), the Deposit Insurance System increases the degree of stability of deposits and attracts more savings in the banking sector. This system contributes to reducing the dangers threatening depositors in critical circumstances and increases depositors' appetite for depositing their money with banks, as well as its significant role in reassuring depositors to refrain from withdrawing their deposits in crises. Furthermore, it works to develop the savings awareness of the public.

According to researchers, Daiva, and Viktorija (2013), the unstable financial situation has caused a decrease in customers trust in commercial banks. Therefore it is crucial to strengthen customers' confidence in commercial banks at the moment. The factors that influence the level of trust in commercial banks were identified and divided into three groups that form three stages towards the formation of trust. The first stage of trust formation consists of receiving information about a particular commercial bank. Within the second stage, a favorable cooperation between a bank and a customer has to be ensured and leads to the emergence of satisfaction with the bank, which is the third stage of trust formation in a financial institution.

Andrew & Primrose (2016) research concluded that confidence results from the availability of knowledge; thus, from the regression results, the awareness has a positive impact to the public's confidence. Also the supervisory bodies and the banks were all lacking in disseminating the required information to the clients so as to enhance public confidence. There are four determinants needed to enhance public confidence (i) the people got easy access to their deposits in implementing other banking services; (ii) the maintenance of safe and confidential banking accounts; (iii) commercial banks are supervised and regulated by the central bank; and (iv) mechanism are available to prevent depository institutions from delaying the deposit payment, as this may cause bank runs.

## **3. International experience in protecting depositors on the basis of applying principles of financial consumer protection**

According to the Congressional Research Service, a federal legislative branch agency located within the Library of Congress of the United States, "consumer finance refers to the borrowing, saving, and investment choices that people (i.e., households) make over time." Therefore, financial consumers are those who make consumer finance. Given that depositors are people who have deposits at financial institutions, it can be concluded that depositors are a type of financial consumer and applying principles and best practices of financial consumer protection to safeguarding depositors is relevant and essential.

#### **4. International principles of financial consumer protection**

The G20 high-level principles on financial consumer protection, released in 2011, are a widely recognized set of principles providing guidelines and recommendations for financial consumer protection. Key aspects of financial consumer protection are covered in these 10 principles, including having a legal framework with the involvement of supervisory agencies; promoting fair treatment and disclosure and responsibilities of financial products providers to consumers; encouraging financial education and awareness; protecting consumers' assets and data; complaints handling and competition among financial products providers. Among those, issues related to the legal framework (Principle 1), the involvement of supervisory agencies (Principle 2), disclosure and transparency of information (Principle 4), financial education and awareness (Principle 5), and consumers' data privacy (Principle 8) are discussed in this paper as the basis for better protection of depositors.

In an attempt to implement financial consumer protection, having a legal framework for financial consumer protection and the involvement of relevant authorities are suggested in principles 1 and 2 as follows:

Principle 1 - Legal, Regulatory and Supervisory Framework recommends that “Financial consumer protection should be an integral part of the legal, regulatory and supervisory framework, and should reflect the diversity of national circumstances and global market and regulatory developments within the financial sector ...”

Principle 2 - Role of Oversight Bodies states, “There should be oversight bodies (dedicated or not) explicitly responsible for financial consumer protection, with the necessary authority to fulfil their mandates. They require clear and objectively defined responsibilities and appropriate governance; operational independence; accountability for their activities; adequate powers; resources and capabilities; defined and transparent enforcement framework and clear and consistent regulatory processes ... Co-operation with other financial services oversight authorities and between authorities or departments in charge of sectoral issues should be promoted ...”

Recommendations for safeguarding financial consumers in general and depositors in particular in terms of disclosure and transparency of information, financial education and awareness, and their data and privacy are provided in Principles 4, 5 and 8. Specifically:

Principle 4 - Disclosure and Transparency states that “Financial services providers and authorised agents should provide consumers with key information that informs the consumer of the fundamental benefits, risks and terms of the product. They should also provide information on conflicts of interest associated with the authorised agent through which the product is sold ...”

Principle 5 - Financial Education and Awareness provides that “Financial education and awareness should be promoted by all relevant stakeholders and clear information on consumer protection, rights and responsibilities should be easily accessible by consumers. Appropriate mechanisms should be developed to help existing and future consumers develop the knowledge, skills and confidence to appropriately understand risks, including financial risks and opportunities, make informed choices, know where to go for assistance, and take effective action to improve their own financial well-being ...”

Principle 8 - Protection of Consumer Data and Privacy suggests, “Consumers’ financial and personal information should be protected through appropriate control and protection mechanisms. These mechanisms should define the purposes for which the data may be collected, processed, held, used and disclosed (especially to third parties). The mechanisms should also acknowledge the rights of consumers to be informed about data-sharing, to access data and to obtain the prompt correction and/or deletion of inaccurate, or unlawfully collected or processed data ...”

## **5. Best practices of the United States in protecting depositors on the basis of applying principles of financial consumer protection**

### *Legal framework and the involvement of oversight bodies for financial consumer protection in the United States*

In the United States, financial consumer protection receives great attention from policymakers and relevant authorities. In particular, it is clearly regulated in legal documents such as the Dodd-Frank Wall Street Reform and Consumer Protection Act in 2010 (Dodd-Frank Act), the Gramm-Leach-Bliley Act in 1999 (GLBA), and the Regulation DD in 1993. While the Dodd-Frank Act lays the foundation for financial consumer protection, the GLBA, and the Regulation DD supplements it to establish a clear legal, regulatory and supervisory framework of financial consumer protection, with the CFPB being the primary oversight body.

The Dodd-Frank Act empowers the Consumer Financial Protection Bureau (CFPB) as the independent agency within the Board of Governors of the Federal Reserve System to regulate financial consumer protection (according to Title X). The CFPB is responsible for:

- Rooting out unfair, deceptive, or abusive acts or practices by writing rules, supervising companies, and enforcing the law
- Enforcing laws that outlaw discrimination in consumer finance
- Taking consumer complaints
- Enhancing financial education
- Researching the consumer experience of using financial products
- Monitoring financial markets for new risks to consumers.

Also, depositors are protected by not only regulations regarding financial consumers but also the Federal Deposit Insurance Act and the Federal Deposit Insurance Corporation (FDIC).

### *Regulations on disclosure and transparency in the United States*

The Regulation DD is a directive that implements the Truth in Savings Act. It became effective in 1993. Under the Regulation DD, depository institutions are required to provide their customers with certain uniform information about fees, annual percentage yield, interest rate, and other terms for deposit accounts. The Regulation DD aims to help consumers make comparisons and informed decisions about the accounts they open at depository institutions through disclosures. Information is given to consumers when:

- the account is first opened;
- consumers make requests;
- terms of the account are changed;
- a periodic statement is sent;
- for most time accounts, before the account matures.

The Regulation also includes requirements on the payment of interest, the methods of calculating the balance on which interest is paid, the calculation of the annual percentage yield, and advertising.

Except for credit unions, all depository institutions, including branches of foreign institutions located in the United States that offer deposit accounts to citizens of any state, are subject to the Regulation DD. Savings accounts, checking accounts, money market accounts, certificates of deposit (CDs), variable-rate accounts, and accounts denominated in a foreign currency are among the sorts of accounts that the Regulation DD is meant to help consumers with.

#### *Regulations on financial education and awareness in the United States*

Under the Dodd-Frank Act, financial education is an integral part of the CFPB's mandate. Its goal is to ensure that "consumers are provided with timely and understandable information to make responsible decisions about financial transactions" by "conducting financial education programs". To carry out its mission, the CFPB collaborates with various partners, mainly federal agencies, to develop appropriate financial education programs for its target audience.

The CFPB is pursuing two strategies in an attempt to achieve the financial education goal:

- Addressing the needs for inclusion and financial security of special populations: As stipulated in the Dodd-Frank Act, special populations for which the CFPB is mandated to support financial inclusion and access to financial products and services are servicemembers and veterans, older Americans, students, and traditionally underserved consumers and seven communities. In addition to these groups, the CFPB ensures to develop financial education programs that are suitable to the needs of people in all geographies across the country. What the CFPB does is researching challenges facing these groups of populations and identifying solutions to improve their access to safe and affordable financial services; and providing them with information, guidance, and technical assistance.
- Sharing research on financial well-being and financial education tools with financial educators and others: In order to help consumers achieve or improve their financial well-being, the CFPB provides financial educators with research, analysis, and tools for understanding and measuring financial well-being; implements effective practices in adult financial education; and provides teachers and parents with practical materials to help children and youth develop their financial well-being.

Remarkable achievements have been made thanks to the CFPB's outstanding effort in carrying out financial education programs. It is reported that the CFPB reached 19.1 million consumers through digital and print-formatted resources.

## *Regulations on the protection of consumer data and privacy in the United States*

Meanwhile, the GLBA protects financial consumers and depositors by requiring financial institutions to explain their information-sharing policies to their customers and protect their customers' sensitive data. Most personal information (name, date of birth, social security number, etc.), as well as transactional data (cards, bank account numbers, etc.), are covered by the Act. The GLBA applies to many types of financial institutions, including banks, savings and loans, credit unions, insurance companies, securities firms, and even a couple of retailers and automobile dealers. The Act is enforced by the Federal Trade Commission, federal banking agencies, other federal regulatory authorities, and state insurance oversight agencies. It requires financial institutions to:

- ensure the security and confidentiality of customer information; protect against any anticipated threats or hazards to the security or integrity of such information; and protect against unauthorized access to or use of customer information that could result in substantial harm or inconvenience to any customer;
- explain how they use and share customers' personal information; allow customers to stop or "opt out" of certain information sharing;
- describe how they will protect the confidentiality and security of customers' information.

## *FDIC and its role in protecting depositors and financial consumers in the United States*

As the deposit insurer and supervisory agency for financial institutions in the United States, the FDIC plays an essential role in protecting depositors. In addition to providing deposit insurance, conducting supervision and examination, and implementing resolution of bank failure, the FDIC promotes financial literacy and education to maintain stability and public confidence in the nation's financial system.

"Money Smart" is the long-running financial education program that the FDIC has been implementing since 2001. It helps people of all ages enhance their financial skills and create positive banking relationships. The program's materials are given in multiple languages, Braille, and large print and updated on a regular basis to meet the needs of various groups of audiences.

The FDIC has put a lot of effort into upgrading its "Money Smart" product family. Since September 2021, a new tool named "How Money Smart Are You?" has been introduced to encourage consumers to better learn how to control their finances and protect and manage their money. Featuring 14 games, "How Money Smart Are You?" offers a friendly and exciting learning tool for the younger generation and people of all ages to learn more about money. The FDIC also collaborated with the CFPB to release "Money Smart for Older Adults" to raise awareness among older adults and their caregivers on preventing elder financial exploitation and encouraging advance planning and informed financial decision-making. Besides, "Money Smart News", which is published on a monthly basis, is reported to gain more than 92,000 subscribers every month.

#GetBanked, a public awareness campaign about the benefits of opening a bank account, was released by the FDIC in 2021. The campaign aims to encourage consumers to open a bank account to access safer and lower-cost financial products. In the first phase,

radio, streaming audio advertising, digital display banners, streaming TV, and mobile video advertising were involved in spreading the program to its target audiences. In order to facilitate consumers to be able to get access to banks, especially during the Covid-19 pandemic, the #GetBanked webpage has been put into place with all the necessary information for consumers to find a bank and open an account online. Consumers can also find other useful information about banking and finance on the webpage. As of 2021, the webpage received nearly 600,000 views.

In addition, the FDIC works with various federal agencies and other organizations to provide young people with information about how banks can help them achieve their financial goals. Programs organized by the FDIC and banks, together with governmental agencies, have reached out to thousands of young people. Moreover, many webinars have been held by FDIC itself or in collaboration with relevant agencies to raise public awareness about financial inclusion.

## **6. Protecting depositors on the basis of applying principles on financial consumer protection - Practical situation in Vietnam**

### *Legal framework and the involvement of oversight bodies for financial consumer protection in Vietnam*

Financial consumer protection is considered an emerging issue in the world as well as in Vietnam in the context of the fast-changing economy and the appearance of new financial products and services each year. However, no official legal framework dedicated to financial consumer protection has yet been put in place in Vietnam. There are only a few legal documents regulating a couple of financial consumer protection issues, such as the Law on credit institutions.

Besides, there is a lack of specialized regulatory agencies responsible for protecting financial consumers. There are five agencies related to the protection of consumers' interests in the financial sector, including: the State Bank of Vietnam (SBV) managing the banking sector; the Ministry of Finance managing the securities and insurance sector; the Ministry of Industry and Trade; the Ministry of Information and Communications and the Consumer Protection Association which are responsible for consumer protection in general. Those agencies can participate in the consumer protection process, but they do not have specialized departments or specific management processes to carry out the task of protecting consumers. They also have no coordination mechanism to handle conflicts of interest when using financial products and services.

In addition, the Deposit Insurance of Vietnam (DIV), a key authority in protecting depositors, may also be considered a regulatory agency for financial consumer protection in Vietnam as depositors are a type of financial consumer. The DIV's core operations, especially its public awareness activities, contribute to improving financial literacy in Vietnam, which is an essential aspect of financial consumer protection.

### *Regulations on disclosure and transparency in Vietnam*

In Vietnam, issues related to disclosure and transparency of banks' information are stipulated in a couple of legal documents, such as the Law on Credit Institutions in 2010, the Circular 48/2018/TT-NHNN on savings deposits, and the Circular 49/2018/TT-NHNN

on term deposits. Accordingly, credit institutions and foreign bank branches are required to “publicize deposit interest rates, service charges and rights and obligations of clients for each product and service provided” under the Law on Credit Institutions. The Circular 48/2018/TT-NHNN and the Circular 49/2018/TT-NHNN supplement to the Law on Credit Institutions, which regulate information on savings deposits and term deposits that needs to be publicized to customers, including:

- deposit interest rates; fees (if any);
- available currencies upon taking of savings deposits;
- procedures for deposit transactions between the credit institution and depositors;
- regulations on types of deposits;
- methods offered to depositors to access their saving deposits;
- actions to be taken in a case where a passbook is crumpled, torn, or lost.

### ***Regulations on financial education and awareness in Vietnam***

On January 22, 2020, the Prime Minister of Vietnam signed the Decision 149/QĐ-TTg on the approval of the National Financial Inclusion Strategy until 2025, with a vision for 2030. The Strategy sets out views, goals, tasks, and measures to promote access to and use of financial products and services for all people and businesses, with a focus on those who have not yet reached them or have little access, especially people living in rural, remote and isolated areas; the poor, low-income people, women, and other disadvantaged groups. In that context, financial education is considered the key mission of governmental authorities in implementing the Strategy.

A lot of efforts have been put into promoting financial education in recent years. The SBV, which takes major responsibilities in this mission, has been coordinating with relevant authorities to raise public awareness of finance and bring valuable knowledge on financial products and services to the Vietnamese people. Specifically, the SBV, in collaboration with the Ministry of Finance, the Ministry of Information and Communications, and the Vietnam Television, has implemented training programs to enhance financial knowledge and skills for people and businesses. A couple of financial education programs, such as “Smart money, wise money”, “Wise children”, “Wise money” etc. have been broadcasted nationwide to reach out to people of all ages. Besides, the SBV has coordinated with universities, colleges, and high schools in Hanoi to organize the “Correct Understanding of money” contest. This contest will provide students with knowledge and skills in finance, banking, and non-cash payment, improving their understanding of the Vietnamese currency, financial products and services, black credit, etc.

In addition, financial knowledge has been integrated into the National General Education Program of Vietnam. Students have been taught about money via case studies, stories, and activities that are integrated into subjects at school. High school students will have the chance to discuss and make decisions about employment, income, shopping, spending, savings, borrowing, investing, using financial products, responding to unexpected situations, etc. Primary school students will learn basic knowledge such as how to buy goods and products or calculate the cost of a simple product, etc.



## ***Regulations on the protection of consumer data and privacy in Vietnam***

Safeguarding consumers' sensitive data is a high priority in Vietnam, and it is clearly regulated in legal documents. Article 14 of the 2017 Law on amendment and supplement to the Law on credit institutions states that, credit institutions and foreign bank branches must “maintain the confidentiality of information related to accounts, deposits, deposited assets, and transactions of customers at credit institutions and foreign bank branches” and “are not allowed to provide information related to accounts, deposits, deposited assets, transactions of customers at credit institutions, foreign bank branches to other organizations and individuals, except at the request of a competent state agency as prescribed by law or with the consent of the customer.”

Considering the importance of protecting consumers' data, the Government issued the Decree No. 117/2018/ND-CP dated September 11, 2018 on the confidentiality and provision of client information of credit institutions and foreign bank branches. Accordingly:

- Banks are only allowed to share client information in two circumstances: (i) other organizations and individuals have the authority to ask banks for client information under the regulations, legislation, and decisions of the National Assembly; and (2) when clients have given their approval for the information to be provided;
- Banks may not provide client authentication information for accessing banking services (including clients' security codes, biometric data, access passcodes, etc.) to any agencies, organizations, or individuals unless such provision is approved in writing by or in other forms agreed upon with such clients;
- State agencies, other organizations, and individuals may only ask banks to share client information for certain reasons, with specific content, and within the scope and competence defined by law or as approved by the clients, and banks must comply.
- State agencies, other organizations, and individuals who request client information must keep it confidential and use it for legitimate purposes; they may not disclose the information to any third party without the clients' consent unless the information is required by law.

In addition, consumers have the right to file complaints, file lawsuits, and seek monetary damages if state agencies, other organizations, individuals, credit institutions, or foreign bank branches provide or use their information in violation of the law, according to the Decree No. 117/2018/ND-CP.

## ***DIV and its role in protecting depositors and financial consumers in Vietnam***

The DIV, a non-profit state organization, takes the major responsibilities of protecting the legitimate rights and interests of depositors, contributing to the stability and sound development of the national financial system. The DIV protects depositors through implementing core operations such as supervision and examination of member institutions, participation in the process of handling weak institutions, deposit insurance reimbursement, and especially public awareness activities.

A lot of communication tools have been used by the DIV to disseminate deposit insurance policies to the public, such as:

- promoting the new deposit insurance coverage limit on television, newspapers, and magazines;
- conducting online surveys to assess depositors' awareness of deposit insurance policies;
- broadcasting policy talks on television.

In 2020, a total of 70 communications events were organized by the DIV itself or in collaboration with relevant agencies. Those conferences, workshops, and online contests attracted wide attention and participation of as well as positive feedback from the public. In addition, DIV cooperated with the VNPost system to provide deposit insurance information in nine provinces through posters posted at 1,416 post offices, cultural post offices in communes, and leaflets of deposit insurance coverage limits to provide the public with official information on current deposit insurance policies and coverage limit.

As can be seen, in recent years, financial consumer protection has been receiving growing attention from policymakers in Vietnam, and a couple of legal regulations on financial consumer protection have been put in place. Important aspects of financial consumer protection, such as banks' disclosure and transparency, financial education and awareness, and consumers' data privacy are stipulated in legal documents, though they need to be supplemented to provide better protection. Above all, an official legal framework for financial consumer protection is still lacking, which raises the need of establishing a synchronized scheme to regulate this emerging issue.

## **7. Recommendations for enhancing the protection of depositors on the basis of applying principles on financial consumer protection in Vietnam**

Based on the above international standards and best practices, the paper provides a couple of recommendations for enhancing the protection of depositors in Vietnam as follows:

- Establishing an official legal framework for financial consumer protection which clearly regulates responsibilities of oversight bodies; requirements of financial institutions' disclosure and transparency; protection of consumers' data; financial education and awareness, so depositors as financial consumers can also benefit from these regulations;
- Further promoting financial education and awareness by determining special groups of populations to focus resources on; conducting in-depth research on challenges and the needs of each group of audiences, thereby taking appropriate measures;
- Supplementing regulations of banks' disclosure and transparency: types of data to publicize; types of financial services and products to be covered; circumstances of the disclosure;
- Supplementing regulations of banks' responsibilities for protecting consumers' data: provision of banks' information-sharing policies to customers; raising awareness of data privacy to the public;

- For the DIV, improving public awareness activities in terms of diversification of communication tools, coordination with relevant authorities, and expansion of data and knowledge provided to promote financial literacy.

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# HOW TO AVOID RECURRENCE OF ANOTHER LUNA-TERRA CRISIS?

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## **Abstract**

Lately the price of a stablecoin (virtual asset) called Luna-Terra suddenly fell sharply, resulting in many investors' exorbitant loss. This presentation will look at the risks of stablecoins such as Luna-Terra, and look at various legal disputes about the Luna-Terra like whether the structure of the anchor protocol, which promises to pay a fixed deposit interest rate of about 20% in Luna-Terra, is a pseudo-deposit taking activity prohibited as a Ponzi scam; whether the these coin holders are deceived without being informed enough that there is a potential problem in Terra's algorithm design as these coin is backed by high volatility assets (for example, Bitcoin, etc.); and whether there are effective sanctions against acts that violate the description of the white papers provided to solicit investors.

Furthermore, while commercial banks are obliged to have money reserves in central bank, contrary to the name 'stable', the algorithms of stablecoins are not perfect and there are not enough collaterals for the algorithmic stablecoin. The Terra coin in question tried to guarantee the value of Luna with an algorithm, but through the crisis, it was found that this structure was not sustainable.

In relation to the above problems, this paper will deal with what is the current regulatory status of (stable) coins in Korea, what would be the appropriate regulation to protect Korean financial consumers, and how legislation would achieve the aim - whether to revise the current capital market law or enact a new separate law. In this process, this presentation will consider the current legislative trends in the EU and the US, where capital markets are developed.

**Keywords:** Crypto-assets, Luna-Terra, stable coin, algorithm-based, anchor protocol

# ASEAN FINANCIAL CONSUMER'S PREFERENCE OVER INSURER AND INSURANCE PRODUCTS - MYANMAR, VIETNAM AND INDONESIA

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## **Abstract**

Insurance plays an essential role in handling global and regional investment volumes, personal and business risks (OECD, 2021), and as a financial tool it is also essential to both individual and national economies by facilitating risk management, support for capital market development and support for economic growth (Outreville, 1996; Beck and Webb, 2003). ASEAN is one of the most dynamic regions in the world, and in particular, the insurance market has been steadily expanding due to the increase in life expectancy and income growth, and it is a place with great growth potential. However, research on the determinants of insurance demand has been mainly conducted on developed countries and some emerging markets, and there are almost no studies on developing countries, especially ASEAN. In this study, we selected Myanmar, Vietnam, and Indonesia among ASEAN countries and an empirical analysis is undertaken to examine differences in insurers and insurance purchase preferences in each country using survey data. We find that trust (Myanmar, Indonesia), age (Vietnam) and income (Indonesia) are positive significant factors for the insurers (social/private insurance) preference. We also find that education (Myanmar), financial literacy (Myanmar, Indonesia), age (Vietnam) and gender (Indonesia) are positive significant factors for the insurance (life/non-life insurance) preference.

**Keywords:** Insurance, Insurer preference, Insurance market, ASEAN, Multinomial logistic

## **1. Introduction**

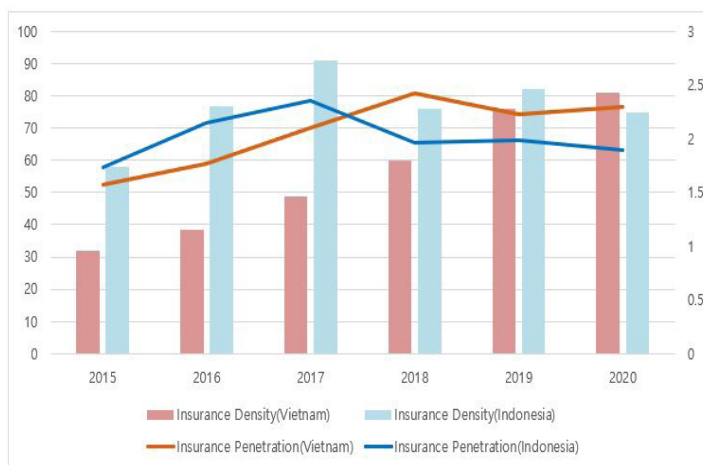
Insurance plays an essential role in handling global and regional investment volumes, personal and business risks (OECD, 2021), and has evolved with other major financial sectors to overcome economic uncertainty (Low and Fekete-Farkas, 2021). As a financial tool, insurance plays an essential role for both individuals and national economies by facilitating risk management, support for capital market development and support for economic growth (Outreville, 1996; Beck and Webb, 2003; Outreville, 2014). Studies on the relationship between insurance and economic growth have been conducted not only in countries with high insurance penetration, but also in regions with low insurance penetration (Arena, 2008; Ching et al., 2010; Pradhan et al., 2016). However, research on determinants of insurance demand has been mostly analyzed developed countries' insurance market, and only few studies conducted research on determinants of insurance demand in ASEAN countries.

ASEAN is a region where the insurance market is expected to grow in the future due to the increase in average life expectancy and in income. <Figure 1> shows changes in

insurance penetration and insurance density in Vietnam and Indonesia over the past six years. In Vietnam and Indonesia, insurance penetration rates are low, but insurance density is increasing. In particular, Indonesia has the fourth largest population in the world, and despite the majority of the population is Muslim, the insurance industry has great growth potential as the Islamic insurance sector is still in its infancy. Myanmar recorded a very low insurance penetration rate of 0.3% as of 2020<sup>1</sup>. Currently, the size of the insurance market in Myanmar, Vietnam and Indonesia is very different. Myanmar, Vietnam, and Indonesia, which have different social and cultural environments, have high potential for future insurance market growth, and research has not been conducted actively yet.

The purpose of this study is to identify factors influencing the preference of insurers (social/private insurance) and insurance product (life/non-life insurance) among individuals from three countries, Myanmar, Vietnam, and Indonesia, and present implications for the ASEAN insurance market in the future. In order to achieve the purpose of our study, an online survey was conducted for adults over 20 in Myanmar, Vietnam, and Indonesia after reviewing the related literature and previous studies. A total of 242 copies of Myanmar, 401 copies of Vietnam, and 488 copies of Indonesia, excluding inappropriate responses and students from the collected questionnaires, were included in the analysis target and used for statistical analysis.

**Figure 2. Changes of insurance density and penetration in Vietnam and Indonesia (Unit: USD, %)**



Source : Sigma World Insurance 2016-2021

Despite the academic and policy implications of studies on determinants of insurance demand in ASEAN countries, related studies have been very limited. Therefore, it is expected that our paper will be valuable to examine the influencing factors for the preference of insurers (social /private insurance) and insurance products (life /non-life insurance) of individuals from three countries, Myanmar, Vietnam, and Indonesia. Academically, the lack of existing research can be supplemented in that it focuses on ASEAN and social and cultural factors in the early stages of insurance development, which were not covered. Also, in practice, this study can be used as a reference for whom to enter ASEAN insurance market in the future.

<sup>1</sup> <https://www.sigma-explorer.com/> ( Search Date : 2021.11.25).

## 2. Literature Review

### 2.1. *Social insurance and private insurance*

Social insurance and private insurance are both a risk transfer method which is one of a method of risk management, and both are based on the same principle as insurance. However, while social insurance prioritizes the social welfare purpose of providing the minimum guarantee for all citizens, private insurance has significance as a joint response to the risks of a group with a common risk. Myanmar, Vietnam and Indonesia all three countries have concept of social insurance such as industrial accident insurance, public pension, health insurance and unemployment insurance. In Myanmar, the Social Security Board (SSB), established in 1956 in accordance with the Social Security Act enacted in October 1954, operates social insurance. Social insurance system in Vietnam is largely divided into compulsory social insurance, voluntary social insurance, unemployment insurance and health insurance. Indonesia has established a framework for public social security systems since the late 1990s, and the National Social Security System Act was enacted in 2004. According to the National Social Security System Act, Indonesia's social security system has been in operation since January 2014 with fundamental reforms.

<Table 1> shows studies related to the determinants of social insurance demand. Existing studies mainly focused on the determinants of demand of health insurance, and empirical analysis was conducted mainly in Chile and Africa, where people have to choose whether purchasing private or social health insurance. Recently, some researchers have conducted research on the determinants of health insurance demand in Vietnam, Myanmar, and Indonesia. Previous researches mainly focused on economic factors (income, insurance premium) and demographic factors (age, residence, gender, occupation). Sapelli and Torche (2001) studied the determinants of demand for social/private insurance using the 1990 and 1996 survey data in Chile. Then found that people with lower income, lower insurance premium, having spouse who are less economically active, older age, living in suburban areas or small towns prefer social insurance. Scheve and Stasavage (2006) focused on the relationship between religion and social insurance preference. In this study, they confirmed that highly religious individuals would prefer social insurance to a lower level than secular individuals, and that countries with high religious had lower social security expenditures. Pardo and Schott (2014) studied the determinants of health insurance demand in Chile, where workers must choose between public and private health insurance. They found that the larger household size, the older, the lower income, and self-employed preferred social insurance. Myint et al. (2019) identified the determinants of health insurance premium payment decisions using a survey of 320 general people and 320 social security system (SSS) members in Myanmar. As a result, in the case of the general sample, they found that an individual's health status and trust in health insurance had a significant effect on the intention to pay health insurance premiums.

**Table 1. Determinants of social insurance demand**

<b>Authors</b>	<b>Research method</b>	<b>Research subject</b>	<b>Variables</b>
Sapelli and Torche (2001)	Regression	Chile Health Insurance	Income (-), Insurance premium (-), age (+), Residence/Suburban area (+)
Scheve and Stasavage (2006)	Regression	22 developed countries	Income (-), Gender/Female (+), Age (+), Religion/Existence (-), Religiosity (-)
Jehu- Appial et al. (2012)	Survey, Regression	Ghana Health Insurance	Education (+), Religion/Islam (+), Gender/Female (+), Age (+), Residence/Suburban area (+), Number of Households (-)
Pardo and Schott (2014)	Regression	Chile Health Insurance	Gender/Female (+), Household size (+), Age (+), Income (-), Occupation/Self-employed (+)
Myint et al. (2019)	Survey, Regression	Myanmar Health Insurance	Health status (-), Education (NS), Occupation (NS), Trust (+), Gender (NS), Age (NS)
Sari and Idris (2019)	Regression	Indonesia Health Insurance	Age (+), Education/High school (+), Residence/City (+)

<Table 2> shows studies related to the determinants of private insurance demand. Existing studies have mainly focused on developed countries, and some researchers have conducted research on emerging markets and developing countries. Previous studies mainly focused on economic factors (income, dependency ratio, insurance premium, inflation rate), structural factors (social security), and demographic factors (gender, residential area, marital status), and latest few studies focused on social and cultural factors (trust, religion, financial literacy). Liu and Chen (2002) analyzed determinants of private health insurance demand in Taiwan using logistic and OLS regression analysis. They found that income, education, marital status, gender, employment status, occupation, and residence have positive effect on private insurance demand. Guiso (2012) insists that insurance trust is lower as insurance consumers' damage, ambiguous terms and conditions, insurance fraud, insurers' non-competition, and risk aversion are stronger. In addition, he found that trust in insurance companies has a positive effect on insurance demand. Gill et al. (2018) conducted a survey study on corporate representatives in India, and as a result, it was confirmed that the level of faithfulness and religious of the representatives were positive factors influencing the decision to purchase private insurance.

**<Table 2> Determinants of private insurance demand**

<b>Authors</b>	<b>Research method</b>	<b>Research subject</b>	<b>Variables</b>
Liu and Chen (2002)	Regression	Taiwan	Income (+), Education (+), Marital Status (+), Gender/Female (+), Employment Status (+), Occupation (+)
Guiso (2012)	Regression	Italy	Trust (+)



Authors	Research method	Research subject	Variables
Zakaria et al. (2016)	Survey, Regression	Malaysia	Financial literacy (+), Savings motive (+), Religiosity (+)
Gill et al. (2018)	Regression	India	Religiosity (+), Education (+)
Courbage and Nicolas (2020)	Survey, Regression	7 advanced insurance countries	Trust (+)

## 2.2. Life insurance and non-life insurance

Insurance can be broadly divided into life insurance and non-life insurance. <Table 3> shows studies related to determinants of life insurance demand. Existing studies have mainly focused on developed countries and some emerging markets. According to previous studies, most economic factors (income, inflation rate, interest rate, dependency ratio, etc.) were found to have a significant effect on the determinants of life insurance demand. In addition, the researchers conducted research focusing on structural factors (financial and banking development, presence of foreign companies, legal environment, social security, etc.). In the case of education, there were both significant and insignificant results, and some researchers analyzed the relationship between effect of financial literacy and life insurance demand. Some researchers have focused on the relationship between religion and life insurance, and recent studies are focusing on effect of trust in insurance. Browne and Kim (1993) analyzed the determinants of life insurance demand using data for 1980 and 1987 from 45 countries. They found that dependency ratio, religion (Islam), income, expected inflation rate, education, and insurance price are influencing factors. Beck and Webb (2003) found that income, inflation rate, interest rate, dependency ratio, religion (Islam), and legal environment were significant factors in determining life insurance demand, while other variables were not significant. Nguyen and Knowles (2010) studied the factors affecting the private health insurance demand in Vietnam, and they confirmed that education and gender have a positive effect on demand. Millo and Carmeci (2015) found that income, trust, and education are determinants of life insurance demand. Luciano et al. (2016) analyzed the relationship between income, age, education (with or without college degree), occupation and demand for life insurance, hence they found that all variables are significant.

**Table 3. Determinants of life insurance demand**

Authors	Research method	Research subject	Variables
Browne and Kim (1993)	Regression	44 countries (mainly developed countries)	Income (+), Dependency ratio (+), Inflation rate (-), Social security (NS), Insurance premium (-), Life expectancy (-), Religion/Islam (-), Education (+)
Outreville (1996)	Regression	48 developing countries	Income (+), Interest rate (NS), Inflation rate (-), Life expectancy (+), Economic development (+), Education (NS)

<b>Authors</b>	<b>Research method</b>	<b>Research subject</b>	<b>Variables</b>
Beck and Webb (2003)	Regression	68 Developed, developing countries	Income (+), Inflation rate (-), Interest rate (+), Youth dependency ratio (NS), Old dependency ratio (+), Life expectancy (NS), Social security (NS), Banking development (+), Legal environment (+), Education (+), Religion/Islam (-)
Nguyen and Knowles (2010)	Regression	Vietnam	Education (+), Gender/Male (-)
Elango and Jones (2011)	Regression	35 emerging markets	Income (+), Inflation (NS), Interest (+), Total Dependency (NS), Education (NS), Life Expectancy (NS), Corruption (-), Economic freedom (NS), Business ownership (-), Economic openness (NS)
Sen and Madheswaran (2013)	Regression	15 countries in Asia	Income (+), Youth dependency ratio (-), Illiteracy (-), Life expectancy (+), Urbanization (NS), Inflation (-), Interest rate (-)
Millo and Carmeci (2015)	Regression	Italy	Income (+), Wealth (+), Social Security (NS), Old dependency ratio (NS), Youth dependency ratio (+), Age (NS), Education (-), Trust (+)
Luciano et al. (2016)	Regression	Italy	Gender/Female (-), Income (+), Age (+), Education (+), Occupation/Self-Employed (+)
Zakaria et al. (2016)	Regression	Malaysia	Financial comprehension (+), Savings motive (+), Religiosity (+)
Zerriaa and Noubigh (2016)	Regression	MENA 17 countries	Income (+), Inflation rate (+), Interest rate (+), Financial development (+), Youth dependency ratio (-), Life expectancy (+), education (+), Urbanization (NS), Social security (-), Religion/ Islam (-)
Lee et al. (2017)	Regression	4 ASEAN countries	Income (+), Inflation (NS), Interest rate (NS), Youth dependency ratio (-), Urbanization (NS), Life expectancy (NS), Education level/ secondary education (NS), Education level/ higher education (-)
Lin et al. (2017)	Regression	Taiwan	Financial literacy (+), Gender/male (-), Marital status (+), Residence/city (+), Income (+)
Outreville (2018)	Regression	15 emerging markets	Uncertainty avoidance (-), Individualism (+), Religion/Islam (-)
Dragos et al. (2020)	Survey Regression	Romania	Trust (+), Financial literacy (+), Income, (+) Gender/male (+), Marital status (+), Education (+)

<Table 4> shows studies related to the determinants of non-life insurance demand. Similar to the determinants life insurance demand, most of studies have focused on economic and structural factors as well as developed countries and some emerging markets. Esho et al. (2004) analyzed the impact on non-life insurance demand in 44 developed and emerging market countries. As a result, income and urbanization were confirmed as

factors that had a significant positive effect, and the remaining variables were found to be insignificant factors. Gine et al. (2008) studied the determinants of demand for rainfall insurance in India, and found that income, trust, and financial literacy had a positive significant effect, and risk aversion tended to have a negative significant effect. Cole et al. (2013) studied the determinants of crop insurance demand for suburban households in India. Insurance premiums had a negative effect on crop insurance demand, and individual wealth, trust, and financial literacy were positive factors. Trinh et al. (2016) analyzed the difference of the determinants of non-life insurance demand between developed countries and developing countries using cultural variables. As a results, economic freedom index, income, level of bank development, urbanization, long-term orientation, power distance, and Islamic law were identified as significant factors in all countries. In developed countries, economic freedom index, income, level of banking development, education, urbanization, Individualism and in developing countries, economic freedom index, income, level of banking development, education, urbanization, pursuit of pleasure, long-term orientation, and Islamic law were identified as significant factors.

**Table 4. Determinants of non-life insurance demand**

<b>Authors</b>	<b>Research method</b>	<b>Research subject</b>		<b>Variables</b>
Esho et al. (2004)	Regression	44 developed and emerging markets		Income (+), Urban residence ratio (+), Education (NS), Insurance premium (NS), Legal system (NS)
Gine et al. (2008)	Regression	India		Income (+), Risk aversion (-), Trust (+), Financial literacy (+)
Park and Lemaire (2012)	Regression	Developed and Emerging Markets 82		Urbanization (+), Education (-), Individualism (+), Uncertainty avoidance (+), Power distance (-), Religion/Islam (-)
Cole et al. (2013)	Survey Regression	India		Income (+), Insurance premium (-), Trust (+), Religion (+), Financial literacy (+)
Trinh et al. (2016)	Regression	36 developed countries, 31 developing countries	Developed countries & developing countries	Income (+), Banking development (+), Education (NS), Urbanization (+), Individualism (NS), Long-term orientation (-), Masculinity (-), Uncertainty avoidance (NS), Power distance (+), Islamic law (-)
			Developed countries	Income (+), Banking development (-), Education (-), Urbanization (-), Individualism (+), Long-term orientation (NS), Masculinity (-), Uncertainty avoidance (NS), Power distance (+)

Authors	Research method	Research subject		Variables
			Developing countries	Income (+), Banking development (+), Education (+), Urbanization (+), Individualism (NS), Long-term orientation (-), Masculinity (NS), Uncertainty avoidance (-), Power distance (NS), Islamic law (-)

### 3. Methodology

#### 3.1. Data survey and analysis method

We collected data using online survey on adults 20 years of age or older in Myanmar, Vietnam, and Indonesia. Our survey was conducted by distributing online survey questionnaires to Yangon and suburbs in Myanmar, to Ho Chi Minh City and suburbs in Vietnam, and to Jakarta and suburban in Indonesia. A total of 242 copies of Myanmar, 401 copies of Vietnam, and 488 copies of Indonesia were used for statistical analysis, excluding inappropriate responses and responses of students from collected questionnaires. <Table 5> and < Table 6> shows structure of survey questionnaire and definition of variables.

**Table 5. Structure of survey questionnaire**

Variables	No.	Question No.	Measure	References
Demographic	7	1-7	Multiple choice, Short-answer	
Income	1	8	Short-answer	
Religiosity	3	9	Likert 7 scales	Scheve and Stasavage (2005), Noussair et al. (2013), Fabian Huber (2012), World Value Survey (2020)
Financial literacy	7	11-14	OX, Multiple choice	Lusardi and Mithcell (2011), Lusardi (2019), Tennyson (2010)
Financial trust	1	15	Likert 7 scales	Ampudia and Palligkinis (2018), van der Crujisen et al. (2020), Courbage and Nicolas (2020)
Government trust	4	16	Likert 7 scales	World Value Survey (2020)
Social insurance trust	6	17	Likert 7 scales	Jung and Oh (2008), Jin (2012)
Private insurance trust	6	18	Likert 7 scales	
Insurance preference (life/non-life)	1	21	Multiple choice	
Insurer preference (social/private)	1	22	Multiple choice	

**Table 6. Definition and Classification of Variables**

	<b>Variables</b>	<b>Definition</b>
Independent variable	InINC (Income)	Log annual income (ISD)
	REL (Religiosity)	Sum of 7 likert scale
	FLI (Financial literacy)	Sum of No. of correct answer
	FINT (Financial trust)	Sum of 7 likert scale
	GOVT (Government trust)	Sum of 7 likert scale
	SIT (Social insurance trust)	Sum of 7 likert scale
	PIT (Private insurance trust)	Sum of 7 likert scale
	EDU (Education)	1=upper high school 0=under high school
	AGE (age)	age
	GEN (Gender)	1 = male, 0 = female (reference group )
Dependent variable	SPP (Insurer preference - Society/ Private Insurance)	1= Social insurance preference 2 = prefer private insurance 3 = neutral (reference group )
	LNP (Insurance preference - life/ non-life insurance)	1= Prefer life insurance 2= Prefer non-life insurance 3 = neutral (reference group )

The independent variables of this study were income, religiosity, financial literacy, financial trust, government trust, social insurance trust, private insurance trust, education, age, and gender. We used question no.21 and no.22 as a dependant variable which was written in multiple-choice format so that respondents chose the preferred ratio (100:0, 75:25, 50:50, 25:75, 0:100) for life/non-life insurance and social/private insurance. Hence, we divided Preference of insurer (social/private insurance) and insurance product (life / non-life insurance) into three groups according to responses. In this study, multinomial logistic regression analysis, which is used when there are three or more alternatives for the dependent variable, was used to test hypotheses.

### **3.2. Research hypothesis**

We develop hypotheses based on previous literatures of determinants of insurance demand. In particular, we input trust and religion as an independent variables which has less used in previous studies. Religious propensity affects to one's attitude toward usefulness of insurance (Sihem, 2019), for instance, religious individuals tend to have higher subjectively measured life satisfaction (Ellison, 1991), and they are much less likely to purchase insurance than others (Burnett and Palmer, 1984). Insurance industry is built on trust more than any other financial industry, especially, insurance products have characteristic of being a trust product because consumers purchase it based on trust that they can get insurance money in the future in return for insurance premium. Therefore, trust is more important than any other financial industry in insurance demand decisions (Courbage and Nicolas, 2020). In developing countries, which are in the early stages of development of insurance industry, trust is so important than anything else, and lack of trust is a major problem (Guiso et al., 2008; Yeshiwas et al., 2018).

*H1. There is a negative correlation between income and social insurance preference*

*H2. There is a negative correlation between religiosity and social insurance preference*

*H3-1. There is a positive correlation between government trust and social insurance preference*

*H3-2. There is a positive correlation between social insurance trust and social insurance preference*

*H3-3. There is a negative correlation between private insurance and social insurance preference*

*H4. There is a positive correlation between age and social insurance preference*

Next, hypotheses based on the determinants of life insurance and non-life insurance demand in previous studies are as follows. We especially focused on trust and financial literacy, which have rarely analyzed in previous researches, and develop our hypotheses. Through previous studies, it was found that there is a significant positive correlation between income and life insurance consumption (Brown and Kim, 1993; Outreville, 1996; Beck and Webb, 2003; Li et al., 2007; Lee et al., 2010; Elango and Jones, 2011; Park and Lemaire, 2011, Sen and Madheswaran, 2013; Dragos, 2014; Millo and Carmeci, 2015; Luciano et al., 2016; Zerriaa and Noubbigh, 2016; Lee et al., 2017; Lin et al., 2017; Dragos et al., 2020). When a high-income earner dies, expected utility loss of dependents is greater and it affect to increase a value of life insurance (Li et al., 2007). In general, people who have higher level of education have higher understanding of risk management and risk recognition. In other words, the more educated people feel necessity of insurance, the more they are exposed to information about benefits of insurance (Truett and Truett, 1990; Browne and Kim, 1993; Outreville, 1996; Liu and Chen, 2002).; Li et al, 2007; Feyen et al., 2013). Financial literacy refers to ability to process information and make decisions about financial planning, wealth accumulation, debt, and pensions (Lusardi and Mithcell, 2014).

*H1. There is a positive relationship between income and life insurance preference*

*H2. There is a positive relationship between education level and life insurance preference*

*H3. There is a positive relationship between financial literacy and life insurance preference*

*H4. There is a positive relationship between financial trust and life insurance preference*

*H5. Age is positively correlated with life insurance preference*

*H6. Gender (male) is positively correlated with life insurance preference*

## **4. Results**

### **4.1. Basic Statistical Analysis**

We did frequency analysis to understand general socio-demographic characteristics of research targets. <Table 8> presents the socio-demographic characteristics by country and <Table 9> presents characteristics of insurance and insurers by country.

**Table 7. Socio-demographic Characteristics**

Classification		No.			%		
		Myanmar (N=242)	Vietnam (N=401)	Indonesia (N=488)	Myanmar	Vietnam	Indonesia
Age	20's	70	117	186	28.9	29.2	38.1
	30's	103	165	222	42.6	41.1	45.5
	40's	46	64	65	19.0	16.0	13.3
	50's	20	27	12	8.3	6.7	2.5
	over 60	3	28	3	1.2	7.0	0.6
Gender	Male	86	173	266	35.5	43.1	54.5
	Female	156	228	222	64.5	56.9	45.5
Residence	Rural are	34	68	47	14.0	17.0	9.6
	Small town	99	48	120	40.9	12.0	24.6
	City	109	285	321	45.0	71.1	65.8
Job	Farmer	16	45	7	6.6	11.2	1.4
	Public official	97	37	42	40.1	9.2	8.6
	Company worker	55	176	225	22.7	43.9	46.1
	Self-employed	45	70	147	18.6	17.5	30.1
	Others	29	73	67	12.0	18.2	13.8
Education	Under primary school	10	17	2	1.2	4.2	0.4
	Middle School	7	39	15	2.9	9.7	3.1
	High School	14	72	167	5.8	18.0	34.2
	Bachelor	132	237	283	54.5	59.1	58.0
	Master	73	34	21	30.2	8.5	4.3
	Doctoral	13	2	0	5.4	0.5	0
Marital Status	Married	104	208	316	43.0	51.9	64.8
	Single	129	148	154	53.3	36.9	31.6
	Divorce	2	28	14	0.8	7.0	2.9
	Widow	7	17	4	2.9	4.2	0.8
Religion	Buddhism	237	156	9	97.9	38.9	1.8
	Hinduism	3	0	5	1.2	0	1.0
	Catholic	2	66	86	0.8	16.5	17.6
	Muslim	0	4	386	0	1.0	79.1
	None	0	175	2	0	43.6	0.4

**Table 8. Characteristics of insurers and insurance preference**

Classification		Myanmar		Vietnam		Indonesia	
		Frequency (persons)	ratio (%)	Frequency (persons)	ratio (%)	Frequency (persons)	ratio (%)
Insurer preference (Society/Private)	Social insurance preference	43	17.8	198	49.4	161	33.0
	Private insurance preferred	82	33.9	71	17.7	83	17.0
	Neutral	117	48.3	132	32.9	244	50.0
	Total	242	100.0	401	100.0	488	100.0
Insurance preference (Life/Non-life)	Life insurance preference	61	25.2	214	53.4	233	47.7
	Non-life insurance preference	85	35.1	55	13.7	41	8.4
	Neutral	96	39.7	132	32.9	214	43.9
	Total	242	100.0	401	100.0	488	100.0

**4.2. Exploratory Factor Analysis (EFA)**

We conducted exploratory factor analysis to verify validity of factors composed of various items. As a result, among 21 questions, we excluded question no.27\_2 and no.27\_3 because they impeded validity, and we used total 19 questions for the exploratory factor analysis. Based on contents of each factor, social trust insurance (SIT), private insurance trust (PIT), religiosity (REL), and government trust (GOVT) were named in turn.

**Table 9. Results of Exploratory Factor Analysis**

Factor name	Question	Factor			
		1	2	3	4
SIT (Social insurance trust)	28_3	.829	.263	.056	.087
	28_1	.815	.229	.022	.112
	28_2	.812	.282	.028	.098
	28_4	.806	.268	.034	.076
	28_6	.797	.228	.051	.109
	28_5	.765	.267	.063	.089
PIT (Private insurance trust)	29_3	.300	.798	.026	.211
	29_1	.273	.773	.052	.195
	29_2	.300	.765	.056	.215
	29_4	.287	.760	.043	.238
	29_6	.265	.744	.055	.200
	29_5	.305	.735	-.023	.238



Factor name	Question	Factor			
		1	2	3	4
REL (Religiosity)	9_1	.055	.050	.962	-.049
	9_3	.061	.037	.941	-.024
	9_2	.053	.043	.940	-.064
GOVT (Government Trust)	27_6	.104	.199	-.068	.838
	27_5	.074	.124	-.193	.760
	27_1	.130	.304	.006	.731
	27_4	.106	.308	.118	.698
Eigen value		7.836	2.914	2.082	1.167
Common variance (%)		41.244	15.335	10.960	6.143
Cumulative variance (%)		41.244	56.579	667.539	73.683
KMO=.905, Bartlett's =15744.116 (p<.001)					

#### 4.3. Reliability analysis

<Table 10> presents results of reliability analysis results and we found that reliability of main variables is statistically fine.

**Table 10. Results of reliability analysis**

Factor name	Question	When removing item, $\alpha$	Cronbach's $\alpha$
REL (Religiosity)	9-1	.909	.952
	9-2	.946	
	9-3	.935	
GOVT (Government Trust)	27-1	.772	.824
	27-4	.798	
	27-5	.806	
	27-6	.737	
SIT (Social Insurance Trust)	28-1	.914	.926
	28-2	.912	
	28-3	.908	
	28-4	.912	
	28-5	.918	
	28-6	.914	
PIT (Private Insurance Trust)	29-1	.917	.931
	29-2	.914	
	29-3	.915	
	29-4	.918	
	29-5	.923	
	29-6	.920	

#### 4.4. Results of insurer preference (social/private) multinomial regression

To analyze the effect of Income (lnINC), religiosity (REL), government trust (GOVT), social insurance trust (SIT), private insurance trust (PIT), and age (AGE) on insurer preference (social/private), we firstly classified dependent variable into three groups; social insurance preference, private insurance preference, and neutral. <Table 11> ~ <Table 14> provides results of each country's multinomial regression analysis. <Table 11>

presents result of Myanmar, and social insurance trust is negatively related with private insurance preference and private insurance trust is positively related with private insurance preference. In other words, the lower the trust in social insurance and the higher the trust in private insurance, the higher possibility of preference for private insurance compared to neutral. Also, as trust in social insurance increased, the possibility of preference for private insurance decreased by 6.68%, and as trust in private insurance increased, the possibility of preference for private insurance increased by 10.15%.

**Table 11. Insurer preference (social/private) multinomial regression - Myanmar**

dependent variable	independent variable	B	SE	Percent Change (%)	Exp (B)	CI	
social insurance preference	intercept	1.973	2.288				
	lnINC	-.207	.208	-18.68	.813	.541	1.222
	REL	-.088	.071	-8.46	.915	.796	1.052
	GOVT	-.013	.038	-1.28	.987	.917	1.063
	SIT	.005	.038	.45	1.005	.932	1.082
	PIT	-.007	.040	-.73	.993	.919	1.073
	AGE	.020	.020	1.99	1.020	.981	1.060
private insurance preference	intercept	-5.703	2.327				
	lnINC	.338	.199	40.15	1.401	.948	2.072
	REL	.050	.071	5.18	1.052	.915	1.210
	GOVT	.013	.031	1.28	1.013	.953	1.077
	SIT	-.069 *	.029	-6.68	.933	.881	.988
	PIT	.097 **	.033	10.15	1.102	1.032	1.175
	AGE	.014	.017	1.44	1.014	.981	1.049
$\chi^2=23.962$ * $-2LL=429.685$ , Nagelkerke $R^2=.119$							

\* Reference category : Neutral (Preference of Sabo = Preference of Minbo), \*p<.05, \*\* p<.01, \*\*\* p<.001

<Table 12> presents result of Vietnam, and age is positively related with social insurance preference. In fact, the higher the age, the higher the possibility of preference for social insurance compared to the neutral and the possibility of preference increases by 4.59%. On the other hand, for private insurance preference, we could find that all independent variables are non significant.

**Table 12. Insurer preference (social/private) multinomial regression - Vietnam**

Dependent variable	Independent variable	B	SE	Percent Change (%)	Exp (B)	CI	
Social insurance preference	(constant)	-1.112	1.315				
	lnINC	.031	.126	3.16	1.032	.806	1.321
	REL	.003	.020	.30	1.003	.964	1.043
	GOVT	.008	.035	.80	1.008	.941	1.080
	SIT	-.008	.030	-.77	.992	.936	1.052
	PIT	-.012	.026	-1.19	.988	.939	1.040
	AGE	.045 ***	.012	4.59	1.046	1.022	1.070

Dependent variable	Independent variable	B	SE	Percent Change (%)	Exp (B)	CI	
Private insurance preference	(constant)	-2.446	1.781				
	lnINC	.119	.170	12.61	1.126	.807	1.572
	REL	-.024	.026	-2.42	.976	.927	1.027
	GOVT	.037	.046	3.75	1.038	.949	1.135
	SIT	-.040	.039	-3.89	.961	.890	1.037
	PIT	.042	.034	4.30	1.043	.975	1.116
	AGE	.006	.016	.64	1.006	.975	1.038
$\chi^2=26.487$ ** -2LL=788.519 Nagelkerke $R^2=.074$							

\* Reference category: Neutral (Preference of SI = Preference of PI), \* p<.05, \*\* p<.01, \*\*\* p<.001

<Table 13> presents result of Indonesia, and income is negatively, and government trust is positively related with social insurance preference. Also, social insurance trust is negative related and private insurance trust are positively related with private insurance preference. As income increases, the possibility of preference for social insurance decreases by 28.62%, and as trust in government increases, the possibility of preference for social insurance increases by 5.56%. Also, as trust in social insurance increases, the possibility of preference for private insurance decreases by 7.65%, and as trust in private insurance increases, the possibility of preference for private insurance increases by 10.13%.

**Table 13. Insurer preference (social/private) multinomial regression - Indonesia**

dependent variable	independent variable	B	SE	Percent Change (%)	Exp (B)	CI	
Social insurance preference	(constant)	2.475	1.541				
	lnINC	-.337 *	.144	-28.62	.714	.538	.946
	REL	-.007	.040	-.69	.993	.918	1.075
	GOVT	.054 *	.025	5.56	1.056	1.005	1.109
	SIT	.017	.025	1.71	1.017	.969	1.068
	PIT	-.046	.021	-4.48	.955	.916	.996
	AGE	.003	.014	.29	1.003	.975	1.031
Private insurance preference	(constant)	-2.951	1.795				
	lnINC	.240	.160	27.09	1.271	.928	1.740
	REL	-.047	.046	-4.63	.954	.871	1.044
	GOVT	.027	.031	2.77	1.028	.967	1.093
	SIT	-.080 **	.030	-7.65	.923	.870	.980
	PIT	.096 **	.028	10.13	1.101	1.042	1.164
	AGE	-.012	.018	-1.16	.988	.955	1.023
$\chi^2=46.789$ *** -2LL=942.601 Nagelkerke $R^2=.105$							

\* Reference category : Neutral (Preference of SI = Preference of PI), \* p<.05, \*\* p<.01, \*\*\* p<.001

#### 4.5. Results of insurance preference (life/non-life) multinomial regression

To analyze the effect of Income (lnINC), education (EDU), financial literacy (FLI), financial trust (FINT), age (AGE), and gender (GEN) on insurance product (life/non-life), we firstly classified dependent variable into three groups; life insurance preference, non-

life insurance preference, and neutral. <Table 14> ~ <Table 16> provides results of each country's multinomial regression analysis.

<Table 14> presents result of Myanmar, level of education above a bachelor's degree is negatively and significantly related with life insurance preference, and people with over college degree are 74.09% less likely to prefer life insurance than those with lower high school diploma. Financial literacy is positively related with non-life insurance preference, and as financial literacy increases, the possibility of non-life insurance preference increases by 41.77%. <Table 15> shows result of Vietnam, age is positively related with life insurance preference, and as age increases, the possibility of preference for life insurance increases by 5.21%. <Table 16> presents result of Indonesia, and gender is positively related with life insurance preference. Also, financial literacy is positively related with both life and non-life insurance preference.

**Table 14. Insurance preference (life/non-life) multinomial regression - Myanmar**

Dependent variable	Independent variable	B	SE	Percent Change (%)	Exp (B)	CI	
Life insurance preference	(constant)	.129	2.067				
	lnINC	.098	.217	10.27	1.103	.721	1.686
	EDU	-1.351 *	.619	-74.09	.259	.077	.871
	FLI	-.096	.108	-9.19	.908	.734	1.123
	FINT	.113	.113	11.98	1.120	.897	1.398
	AGE	-.011	.021	-1.06	.989	.950	1.031
	GEN	.178	.403	19.53	1.195	.542	2.635
Non-life insurance preference	(constant)	-5.198	1.925				
	lnINC	.276	.214	31.74	1.317	.866	2.003
	EDU	.235	.715	26.46	1.265	.311	5.135
	FLI	.349 **	.113	41.77	1.418	1.137	1.768
	FINT	.157	.106	17.02	1.170	.950	1.441
	AGE	.020	.019	2.05	1.020	.983	1.059
	GEN	.403	.357	49.67	1.497	.743	3.014
$\chi^2=38.998$ *** -2LL=431.513, Nagelkerke $R^2=.185$							

\* Reference category: Neutral (Preference of LI = Preference of NI), \* p<.05, \*\* p<.01, \*\*\* p<.001

**Table 15. Insurance preference (life/non-life) multinomial regression -Vietnam**

Dependent variable	Independent variable	B	SE	Percent Change (%)	Exp (B)	CI	
Life insurance preference	(constant)	-3.526	1.266				
	lnINC	.240	.128	27.10	1.271	.988	1.635
	EDU	.094	.272	9.88	1.099	.645	1.873
	FLI	-.006	.075	-.59	.994	.859	1.151
	FINT	-.008	.081	-.81	.992	.846	1.163
	AGE	.051 ***	.013	5.21	1.052	1.026	1.078
	GEN	-.113	.233	-10.65	.893	.566	1.412

Dependent variable	Independent variable	B	SE	Percent Change (%)	Exp (B)	CI	
Non-life insurance preference	(constant)	-3.090	1.746				
	lnINC	.068	.176	7.08	1.071	.759	1.511
	EDU	.093	.388	9.76	1.098	.513	2.348
	FLI	.017	.105	1.76	1.018	.829	1.249
	FINT	.164	.117	17.78	1.178	.936	1.483
	AGE	.020	.018	2.03	1.020	.985	1.057
	GEN	.150	.326	16.14	1.161	.613	2.200
$\chi^2=31.036$ ** -2LL=739.780, Nagelkerke $R^2=.087$							

\* Reference category: Neutral (Preference of LI = Preference of NI), \* p<.05, \*\* p<.01, \*\*\* p<.001

**Table 16. Insurance preference (life/non-life) multinomial regression - Indonesia**

Dependent variable	Independent variable	B	SE	Percent Change (%)	Exp (B)	CI	
Life insurance preference	(constant)	-2.414	1.215				
	lnINC	.133	.133	14.22	1.142	.880	1.482
	EDU	-.070	.215	-6.76	.932	.612	1.421
	FLI	.256 ***	.068	29.12	1.291	1.129	1.476
	FINT	-.013	.088	-1.28	.987	.830	1.174
	AGE	.006	.014	.59	1.006	.979	1.033
	GEN	.792 ***	.203	120.86	2.209	1.483	3.289
Non-life insurance preference	(constant)	-1.436	2.200				
	lnINC	-.170	.249	-15.60	.844	.518	1.374
	EDU	-.421	.366	-34.38	.656	.320	1.344
	FLI	.302 *	.120	35.31	1.353	1.069	1.712
	FINT	.027	.154	2.75	1.027	.760	1.389
	AGE	.003	.024	.28	1.003	.957	1.050
	GEN	.520	.358	68.20	1.682	.833	3.395
$\chi^2=44.458$ *** -2LL=853.183, Nagelkerke $R^2=.103$							

\* Reference category: Neutral (Preference of LI = Preference of NI), \* p<.05, \*\* p<.01, \*\*\* p<.001

## 5. Discussion

ASEAN is currently receiving huge attention and investment as the youngest and most dynamic region in the world. Although insurance penetration rates are currently low in Myanmar, Vietnam, and Indonesia, insurance market is steadily growing due to increase in average life expectancy and income growth. Also, Myanmar, Vietnam, and Indonesia have

great potential for insurance market growth in future. This study aims to identify factors influencing insurer preference (social/private) and insurance (life/non-life) preference of individuals from three countries, Myanmar, Vietnam, and Indonesia, and aims to suggest implications for ASEAN insurance market. For this research purpose, we collect survey data from three countries and conducted multinomial logistic analysis to find significant factors and see differences.

<Table 17> shows comparison of our research results with results of previous studies on determinants of social/private insurance demand. First, result of our study that income has a negative effect on social insurance preference in Indonesia is same as some previous studies (Sapelli and Torche, 2001; Sanhueza and Ruiz-Tagle, 2002; Kimani et al., 2012; Pardo and Schott, 2014; Hasegawa, 2019). Unlike private insurance, where premiums are set differently according to individual risk, social insurance has a characteristic in that premiums are set according to a common rate proportional to income. Pardo and Schott (2014) insist that individuals with higher incomes are more likely to choose private insurance, and as in most developing countries, Chilean self-employed people have lower incomes and therefore they prefer social insurance. The most famous social insurance in Indonesia is National Health Insurance, BPJS Kesehatan, which covers about 80% of the Indonesian population. BPJS Kesehatan is particularly popular with low and middle-income families. In Indonesia, where the inequality between the rich and the poor is extreme, individuals with high incomes prefer private insurance which covers more and has higher premium, while individuals with low incomes prefer social insurance provided by the government. Second significant factor is trust. Our finding that government trust is positively related with social insurance preference in Indonesia is the same as that of Yeshwas et al. (2018). Trust in government provides social insurance affects intention to participate social health insurance,<sup>1</sup> and in Indonesia, the higher the trust in government, the higher the possibility of preference for social insurance than neutral. Research result that social insurance trust has a negative effect on private insurance preference in Myanmar and Indonesia is differently from result of Myiint et al. (2019), and it is due to difference of dependent variable. Our research finding that trust in private insurance has a positive effect on private insurance preference in Myanmar and Indonesia is same as previous studies (Zakaria et al., 2016; Guiso, 2012). This can be attributed to nature of insurance as a trust product (Courbage and Nicolas, 2020) that purchases based on trust in future insurance money payments.

<Table 18> shows comparison of our research results with results of previous studies on determinants of life/non-life insurance demand. First, result of our study that education level has a significant negative effect on life insurance preference in Myanmar are same as Lee et al., 2017, Millo and Carmeci, 2015. Lee et al. (2017) analyzed four ASEAN countries (Thailand, Malaysia, Indonesia, and the Philippines), and find that higher education does

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<sup>1</sup> Yeshwas et al. (2018), Civil servants' demand for social health insurance in Northwest Ethiopia. Archives of Public Health, 76(1), p.6.

not mean more likely to purchase life insurance. It is because level of higher education is not directly related to high awareness of importance of life insurance. Thus, it can be explained our results in Myanmar too. Our research finding that financial literacy is positively related with non-life insurance preference in Myanmar and life and non-life insurance preference in Indonesia is same as previous researches (Dragos et al., 2020; Lin et al., 2017; Cole et al., 2013; Gine et al., 2008). Financial literacy means the ability to process information and make informed decisions about financial planning, wealth accumulation, debt, and pensions (Lusardi and Mithcell, 2014). In other words, it seems that individuals with higher financial understanding have a clear preference for insurance products they need because they better judge level of risk they face. Research finding that age has a significant positive effect on life insurance preference in Vietnam is same as Luciano et al. (2016). In Vietnam, savings-type life insurance and universal insurance account for about 80% of market share, and savings-type life insurance is more developed than protection-type insurance. Savings-type life insurance is a product designed to provide a large amount of money for a long period of time or to prepare for old age, with a stronger savings function rather than a risk guarantee function. Vietnam has particularly high demand for education insurance<sup>1</sup> Due to these characteristics of Vietnamese life insurance market, it seems that life insurance is preferred as age increases. Gender (male) has a positive effect on Indonesia's life insurance preference is same as Dragos et al. (2020) and Luciano et al. (2016). In Italy, where patriarchal culture is strong, women do not realize their importance in family and do not consider their death as a significant risk in family as much as the risk of losing the head of the family (usually a male).<sup>2</sup> Islam is inherently based on an authoritarian and patriarchal family community. This is because Islamic law explicitly stipulates the authority of a man who is the father and husband in the family, and the authority and authority of the head of the family is almost absolute<sup>3</sup> Indonesia is also a Muslim country and has a strong patriarchal culture. In general, men are often responsible for the livelihoods, and women often do not contribute to household income. Women are more likely to attach less importance to their own deaths in family compared to risk of a men's death. Therefore, in Indonesia, men attach greater importance to life and prefer life insurance.

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1Baek, Y. H. (2017). Cultural Values and Economic Action : A Case Study of Life Insurance Market in Vietnam. *The Journal of Asian Studies*, 20(4), p.39.

2Luciano et al. (2016), Life insurance ownership by Italian households: A gender-based differences analysis. *The Geneva Papers on Risk and Insurance-Issues and Practice* , 41(3), p.14.

3 Yoon, M. W. (2017). A Study on the Recent Trends of Islamic Extremism in Indonesia. *Korean Security Science Review*, 50, p.188.

**Table 17. Comparison of results with previous research - social/private insurance**

Variables	Myanmar		Vietnam		Indonesia		Social insurance						Private insurance		
	SI	PI	SI	PI	SI	PI	Yeshwas et al. (2018)	Pardo and Schott (2014)	Myint et al. (2016)	Dercon et al. (2011)	Scheve and Stasavage (2006)	Sanhueza and Ruiz-Tagle (2002)	Zakaria et al. (2016)	Cole et al. (2013)	Guiso (2012)
InINC (Income)	NS	NS	NS	NS	NS	NS		(-)	NS		(-)	(-)		(+)	
REL (Religiosity)	NS	NS	NS	NS	NS	NS					(-)		(+)		
GOVT (Government Trust)	NS	NS	NS	NS	NS	NS	(+)								
SIT (Social Insurance Trust)	NS	(-)	NS	NS	NS	(-)			(+)	(+)					
PIT (Private Insurance Trust)	NS	(+)	NS	NS	NS	(+)								(+)	(+)
AGE (Age)	NS	NS	(+)	NS	NS	NS		(+)	NS		(+)	(+)			NS



**Table 18. Comparison of results with previous research - life/non-life insurance**

Variable	Myanmar		Vietnam		Indonesia		developing countries						Developed countries			Developed countries +Developing countries		
	LI	NI	LI	NI	LI	NI	LI			NI			LI			LI	NI	
							Dragos et al. (2020)	Lee et al. (2017)	Zerriaa and Noubigh (2016)	Trinh et al. 2016	Cole et al. 2013	Gine et al. (2008)	Lin et al. (2017)	Luciano et al. (2016)	Millo and Carmeci (2015)			Trinh et al. (2016)
InINC (Income)	NS	NS	NS	NS	NS	NS	(+)	(+)	(+)	(+)	(+)	(+)	(+)	(+)	(+)	(+)	(+)	(+)
EDU (Education level)	(-)	NS	NS	NS	NS	NS	(+)	(+)	(+)	(+)	(+)	(+)	(+)	(+)	(+)	(-)	(-)	(+)
FLI (Financial literacy)	NS	(+)	NS	NS	(+)	(+)												
FINT (Financial trust)	NS	NS	NS	NS	NS	NS	(+)	(+)	(+)	(+)	(+)	(+)	(+)	(+)	(+)			
Age (AGE)	NS	NS	(+)	NS	NS	NS												
GEN (Male)	NS	NS	NS	NS	(+)	NS	(+)	(+)	(+)	(+)	(+)	(-)	(+)	(+)	(+)			

## 6. Conclusion

According to Sigma (2021), total insurance penetration rates in Vietnam and Indonesia are 2.3% and 1.9%, and it is similar to total insurance penetration rates of 2.3% in Korea's 1980. In other words, Myanmar is same as the early stage of Korea before the 1980s, and Vietnam and Indonesia are same as the stage of growth in Korea in the 1980s. Implications for Indonesia and Vietnam, which are in the growth phase of insurance, and Myanmar, which are in the early stages of insurance, are as follows.

First, in Myanmar, the national health insurance system for all citizens has not been implemented, and social insurance and private insurance are playing an alternative role. According to results of our study, trust in private insurance in Myanmar has a significant effect on private insurance preference. In Myanmar, sales of health insurance products using digital technology are expected to expand so the importance of trust will be increase. Therefore, when preparing a plan to expand role of private health insurance to improve access to health insurance, direct efforts are essential for private insurance companies in Myanmar to improve trust in insurance. In addition, in order to increase its share in life insurance market in Myanmar, insurance education is also expected to be essential.

Second, in Vietnam, social insurance and private insurance play complementary and complementary roles. In addition, Vietnam's life insurance market is gradually growing, and its market share is expanding. According to our results, in Vietnam, social insurance and life insurance preference increases with age. Therefore, it seems necessary to reorganize social insurance system for the older age group, redevelop a life insurance product that can secure the younger age group, and promote and educate the younger age group about insurance products.

Third, in Indonesia, social insurance and private insurance also complement and supplement each other. Social insurance preference in Indonesia is greatly influenced by trust in government that provides social insurance. The Indonesian government should continue to strengthen capacity of policy makers through steady exchanges with advanced countries and improve management of health insurance management organizations. As a result, it is expected that this will help increase trust in insurance. Indonesia's private health insurance is becoming more and more popular and growing along with expansion of the middle class. However, professional ability and knowledge of insurance company that manages it is very lacking.<sup>1</sup> Since trust has a significant influence on preference for private insurance in Indonesia, insurance companies will need to make efforts to improve their sales channels and professionalism in insurance products. In addition, the government needs to strengthen financial protection system and protect consumers to increase trust in private insurance companies. In addition, the Indonesian life insurance market is expected to need marketing strategies and product development to make life insurance more attractive to female customers as well as existing male customers. Lastly, since the increase in financial understanding affects both life insurance products and non-life insurance products preference, the government needs to provide financial education for consumers to increase insurance subscription rate and develop insurance industry.

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<sup>1</sup> AXCO (2021).

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# MUTUAL RISK SHARING AND FINTECH: THE CASE OF XIANG HU BAO

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## **Abstract**

Unlike insurance transferring risks, mutual risk sharing shares losses among market participants. Xiang Hu Bao (*XHB*), meaning ‘mutual aid’ in Chinese, was the largest online mutual risk sharing platform operated by Alibaba’s Ant Financial to facilitate risk sharing of critical illness exposures. *XHB* provided restricted coverage to aged individuals, potentially leading to separating equilibrium, à la Rothschild-Stiglitz, where low-risk individuals join mutual aid programs while high-risk individuals purchase insurance. Using *XHB*’s enrollment and claim data, our analysis corroborates this argument and justifies the role of advantageous selection in explaining cost advantages of mutual risk sharing.

**Keywords:** Mutual risk sharing, Fintech, Separating equilibrium, Critical illness

## **1. Introduction**

Borch’s theorem (Borch, 1962), also known as the *mutuality principle*, applies Arrow (1953)’s general equilibrium framework to characterize optimal risk sharing in the insurance market. It shows that participants mutually insure each other to share diversifiable risks while transferring the non-diversifiable risks to the more risk-tolerant parties<sup>1</sup>. While the mutuality principle is viewed as the cornerstone of the insurance theory and mutual risk sharing, it is barely applied in practice. A major hurdle is the challenge in reaching a sufficiently large pool to diversify the idiosyncratic risks given the presence of myriad regulatory interventions and significant information costs. In the marketplace, instead of having participants pool their risks and mutually insuring each other, insurance companies take on a central role and set insurance premiums with a goal to maximize their own values (Marshall, 1974)<sup>2</sup>.

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<sup>1</sup> Appendix 1 presents the key aspects of the theorem.

<sup>2</sup> Notably, Joskow (1973), an influential work on the insurance industry almost half a century ago, characterizes the insurance industry as “the combination of state regulation, cartel pricing, and other legal peculiarities [that] has resulted in the use of an inefficient sales technique, supply shortage, and overcapitalization.” More recently, Zanjani (2002), Koijen and Yogo (2015, 2016), among others, offer further evidence on the inefficiency and frictions in the insurance market. Data from National Association of Insurance Commissioner (NAIC) between 1990 and 2015 shows that insurers’ operating expenses account for one third of insurance premiums charged by U.S. insurance companies.

The significant progress in information technologies promotes new venues in risk sharing and risk management practices (OECD, 2017). Just as peer-to-peer (P2P) lending platforms connected un- or under-financed borrowers to lenders, emerging Fintech platforms can also be leveraged to reach traditionally un-insured or under-insured customers<sup>1</sup>. This is exemplified by Xiang Hu Bao (*XHB*, meaning “mutual treasure” or “protecting each other”), an online mutual risk sharing, also known as mutual aid, platform operated by the Chinese Fintech giant Ant Financial. Launched in late 2018, *XHB* provides indemnity payments to members who are confirmed to have contracted one of the 100 types of covered critical illnesses, such as thyroid cancer, breast cancer, lung cancer, and critical brain injury. Individuals between 30 days and 59 years of age who meet basic health and risk criteria are eligible to become members of *XHB*. The program has been successful: by December 2019, only one year after its inception, *XHB* already had nearly 100 million members, a number that is comparable to the total number of policyholders holding traditional critical illness insurance policies in China. Despite the overwhelming market approval, as it was perceived as a rival to the insurance market, *XHB* did not have regulatory approval. It was under substantial pressure to revamp business and to comply with insurance and financial regulations. *XHB*, unfortunately, ceased its operation on January 28, 2022 (Feng and Ng, 2021). The short presence of *XHB*, nevertheless, leaves us a valuable record of the mutual sharing practice potentially facilitating insightful comparison between mutual aid and the conventional insurance practice.

Unlike traditional insurance setting price *ex-ante*, *XHB* does not charge participants a predetermined price but let participants share losses and costs *ex-post*. Practically, *XHB* participants equally share aggregate medical claim payments during each claim period plus a 8% markup for operating expenses; in exchange they receive a fixed indemnity - CNY300,000 for individuals under 40 years old and CNY100,000 for participants of 40 and older - if they are confirmed to have been treated for one of the covered critical illnesses (details provided in Section 2 and Appendix 2). *XHB*'s participation cost per member is far below the premium of the corresponding critical illness insurance (*CII*) providing the same level of coverage. In the sample period for this study, *XHB* charged between CNY3 and CNY6 for a coverage of over 100 illnesses in a biweekly claim period; in contrast, the comparable one-year term *CII* for a 30-year old female charged an annual premium between CNY400 and CNY 600, i.e., between CNY16 and CNY 25 biweekly. This gives rise to the central question of this study: What accounts for the substantial difference between *XHB*'s participation cost and the premium of traditional critical illness insurance?

*XHB*'s association with Alipay, an online payment giant in China, offers a huge information advantage. In particular, the large member base of Alipay allows *XHB* to operate at a low cost. As a result, *XHB* to a large extent resembles index funds designed to attract investors for diversification benefits in asset management. In addition, *XHB* has several additional technology-driven advantages. One is that *XHB*'s enrollment process is conducted online only. To be eligible to get enrolled in *XHB*, one (or her/his immediate family member) must be an Alipay account member meeting a credit score requirement. As depicted in Figure 1, Alipay account holders' age distribution is quite

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<sup>1</sup> See Thakor (2020) for a review of the literature on Fintech applications in the banking and insurance sectors.



different from the national population's - at the end of 2019, nearly 40% of Alipay users are younger than 25 years old which accounts for 27% of the overall population; nearly 50% of population is 40+ years old, accounting for only 9% of Alipay users. Alipay users are much younger, thus potentially healthier, than the overall population. Moreover, as discussed in Appendix 1, *XHB* adopts an artificial intelligence (*AI*) based platform for claim processing, which significantly lowers human involvement, leading to lower labor expenses and a more standardized (and objective) claim procedure. This contributes to the system's lower administrative costs and claim costs than traditional insurers. Further, *XHB* announces critical illness claims accepted for payments to all participants while privately communicating with individual participants for rejected claims (detailed in Section 2). This leads to two outcomes. If an approved case is challenged by *XHB* members, the claim will be reexamined by *XHB* professionals. Alternatively, in case an individual member does not agree with a denial of her/his claim application, she/he can appeal and the case will be announced to *XHB*'s public panel network, which involves millions of qualified *XHB* members who voluntarily participate in the process of disputes. Both arrangements offer incentives to the large number of *XHB* members to actively participate in the claim process, which does not exist in the insurance practice. This reminds us a seminal article titled *Vox Populi*, meaning 'voice of the people', published in *Nature*, Galton (1907) which demonstrates the surprising accuracy of a group's aggregated judgments, namely the "wisdom of crowds."

A main insight from this study is that the relatively rigid indemnity amount structure plays a key role in *XHB*'s ability to address the adverse selection problem. *XHB*'s indemnity amount for members who are confirmed with one of the covered critical illnesses is below the typical medical cost to treat such illness, particularly for elder members who receive a reduced indemnity. In a simple setup, we show the existence of a separating equilibrium, à la Rothschild-Stiglitz where low-risk individuals choose *XHB* while high-risk individuals purchase traditional critical illness insurance. High-risk individuals value the more flexible choice of coverage amount offered by traditional insurance policies relative to the rigid indemnity level under *XHB*. The preference of traditional insurance over *XHB* is more likely to occur among the relatively aged population for two reasons: first, *XHB*'s indemnity level to members who are 40 and above is only 1/3 the level for members whose ages are below 40; second, the fraction of individuals who are high-risk tends to be higher in older age groups who desire more comprehensive coverages.

We examine the separating equilibrium argument by comparing participation rates of young people (less risky) and older individuals (more risky). The result shows that young individuals are more likely to join *XHB* than older individuals - 8.5% of the national population younger than 39 years are members of *XHB* while the participation rate, defined as the fraction of the number of *XHB* participants of an age group in the national population of that age group, for people who are 40 and above is 5%. We interpret the higher participation rate of the young population as a support to the presence of separating equilibrium where a reduced coverage limits high-risk individuals' incentive to participate in *XHB*. Next, we shed more light on the separating equilibrium argument by comparing incidence rates of *XHB* and commercial critical illness insurance. The test follows the intuition that, if *XHB* can separate individuals of different risk types, we would observe that relatively lower risk

individuals in both young and older groups are more likely to join *XHB*. The result turns out to be *highly supportive* to the separating equilibrium argument. Across all participants, the average incidence rate of *XHB* is 1/7 to 1/6 of *CII* 's for the 6 and 25 leading critical illnesses. Taking a look at the incidence rates of the most senior group of *XHB* (ages 50 to 59), we find that *XHB*'s average critical illness incidence rate is still far below that of the incidence rates of commercial critical illness insurance. The incidence rates of critical illness insurance are respectively 7.4 and 7.8 times of the incidence rates of *XHB* in terms of the 6 and 25 leading critical illnesses. The fact that *XHB* is far below the incidence rate of critical illness insurance strongly supports to the presence of separating equilibrium in individuals' choices.

*XHB* potentially makes the market more complete given that the platform is appealing to young and/or healthier individuals with low incentive to purchase expensive commercial critical illness insurance and people with low income who cannot afford such insurance. Conversely, critical illness insurance is attractive to high-risk individuals as it has advantages in risk classification and can cede risks to reinsurance companies. As a result, we expect mutual aid products to complement traditional insurance markets. We investigate this prediction using the data from a mutual aid product survey launched by Ant Financial. The primary finding is that, among different age groups, Alipay users that already have a commercial health insurance are less likely to participate in mutual aid programs. It suggests that mutual aid platforms are able to reach customers typically not covered by conventional medical insurance and critical illness coverage, different from Tang (2019)'s finding that Fintech-based P2P lending often occurs among borrowers who have access to bank credit.

Moreover, our analysis using mutual aid survey adds new insights to better understand the information role on individuals' risk management incentives. There are two competing views regarding the role of private information in the insurance market. The *adverse selection* argument, following the pioneering works by Akerlof (1970) and Rothschild and Stiglitz (1976), suggests that high-risk individuals are more likely to purchase insurance than low-risk individuals do (e.g., Cawley and Philipson, 1999). However, the advantageous selection argument suggests that private information based on individuals' risk aversion and other attributes leads to that lower risk individuals buy more insurance (de Meza and Webb, 2001). Recent works offer broad evidence on advantageous selection that wealthier and healthier individuals purchase more insurance and other medical coverage (e.g., Cutler, Finkelstein, and McGarry, 2008; Fang, Keane, and Silverman, 2008). Using the Ant Financial survey data, we find that income plays an important role in mutual aid participation - high-income respondents are more likely to participate in mutual aid programs than low-income respondents. Given that that high-incomers typically are healthier, i.e., less risky, than low-incomers (see, e.g., Marmot, 2002; Deaton, 2008), this result supports advantageous selection, rather than adverse selection. We also find that younger respondents (those below 40 years) from developed regions are more likely to join

a mutual aid program than the same age group of respondents from less developed cities, which is, again, supportive to the advantageous selection argument<sup>1</sup>.

In an insightful study, Carbrales, Calvo-Armengol, and Jackson (2003) examine a primitive mutual risk sharing program, namely ‘La Crema’, meaning mutual farm insurance, which applies a special way to determine how much a household is reimbursed in the case of a fire and how payments are apportioned among other households - solely relying on households’ announced property value. They conclude that as the size of the society becomes large, the benefit from deviating from truthful reporting vanishes, resulting in equilibria of the mechanism being nearly truthful and approximately Pareto efficient. Carbrales et al. (2003) highlight two key features of mutual farm insurance: i) severe penalty in case a member commits fraud, and ii) the arrangement being made in a tightly knit society; given that each household is insured by its neighbors, who have an incentive to monitor the behavior of a given household. In contrast, *XHB* does little to punish bad behavior (such as frauds) and members are not tightly connected with each other. The use of financial technology and its connection with Alipay serve as useful devices to deter fraudulent activities, reduce processing costs, and expedite claim payments.

Our paper is related to the literature on household risk-sharing networks. A growing literature (see, e.g., Cochrane, 1991; Townsend, 1994; Cox and Fafchamps, 2007; Fafchamps and Gubert, 2007), highlights the role of risk sharing among households - a mechanism to deal with idiosyncratic risks such as illness, unemployment, and bad harvest between friends and families. A focus of these studies is the key implication of mutual risk sharing - the mutuality principle mentioned in the opening paragraph, that an individual’s idiosyncratic risk does not matter to her or his consumption while the aggregate risk does. Studies show that the risk-sharing mechanism among households is particularly important in less-developed countries where insurance and financial markets are underdeveloped (Ligon, 1998; Fafchamps and Lund, 2007)<sup>2</sup>.

By focusing on *XHB*, our study presents a different channel to share and diversify idiosyncratic risks - applying Fintech in a large network. The rapid growth in Fintech as a result of less-developed financial markets in emerging countries (e.g., Lyons, Kaas-Hanna, and Fava, 2022), making it possible to develop mutual risk sharing products in these markets.

The remainder of the paper is structured as follows. Section 2 describes the institutional background of *XHB*; in Section 3, we present a simple model that contrasts mutual aid against critical illness insurance, and demonstrate the existence of separating equilibrium;

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<sup>1</sup> Interestingly, we find that, among respondents above 40, those from less developed regions are more likely to buy mutual aid products than those from developed regions. Mutual aid products offer restricted coverage to aged individuals, making mutual aid products less appealing. However, mutual risk sharing meets the need of individuals from less developed regions better given that traditional insurance is relatively more expensive in these regions. Therefore, this finding renders additional support the complimentary relation in mutual risk sharing and insurance.

<sup>2</sup> Households in less-developed countries pay much more out-of-pocket costs in health expenditures than those in developed countries do. According to the World Bank’s worldwide development indicator data, in 2019, the ratios were 54.78% and 64.39% for India and Cambodia while they were merely 11.31% and 17.07% for the U.S. and U.K.

in Section 4, we describe the data sets used in our empirical analysis; in Section 5, we present our empirical findings and Section 6 concludes.

## 2. Xiang Hu Bao: An Overview

Started in October 2018, Xiang Hu Bao was the largest online mutual aid platform sponsored by Alibaba's Ant Financial. The life insurance partner quit shortly after the launch, making *XHB* a pure online mutual aid platform<sup>1</sup>. It was quite successful - *XHB* had nearly 100 million participants by the end of 2019 and its total number of members exceeded 100 million in 2020. Owing to the pressure to conform its business to regulatory requirements, *XHB*'s operation was shutted down on January 28, 2022, ending the largest Fintech-based mutual aid platform<sup>2</sup>.

*XHB* hosts two plans: i) the critical illness plan, abbreviated as *CIP*, for young and middle-aged participants between 30 days and 59 years covering 100 critical illnesses and 5 rare illnesses (see Appendix 4), and ii) the senior plan, abbreviated as *SP*, for senior participants 60 to 70 covering malignant tumors/cancers only (thus it is also known as the "senior cancer plan." All participants of *CIP* stay in the same pool whereas the indemnity to members below 40 is CNY300,000 while the indemnity to members who are 40 and above is CNY100,000. Moreover, senior participants between 60 and 70 stay in a different pool and they receive CNY100,000 once confirmed to have a malignant tumor. The size of *CIP* is far larger than that of *SP* - at the end of 2020, the number of participants in *SP* was 4% of *CIP*'s. In both plans, members are only eligible to receive one indemnity in their lifetime.

Table 1 provides details about *XHB*'s critical illness coverages and indemnity schedule. The first version of the product ('V1') was effective from October 2018 to April 2019, covering 99 critical illnesses and critical malignant tumors. The indemnity for a young and middle-aged participant diagnosed with critically ill is CNY300,000 (USD43,000) and the indemnity is reduced to CNY100,000 for an ill participant at or above 40. In the second version ('V2'), *XHB* re-classified two severe critical illnesses to mild critical illnesses with an indemnity of CNY100,000 and CNY50,000, respectively for young and middle-aged participants. Next, in the third version ('V3') starting in January 2020 and ending in May 2020, *XHB* additionally added coverages for 5 rare illnesses and discontinued mild illness coverage. The latest version of the program ('V4') offers an alternative reduced indemnity plans which allows CNY100,000 indemnity for participants below 40 and CNY50,000 for participants 40 and older. Accordingly, corresponding participation costs are determined on a proportional basis.

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<sup>1</sup> XHB was jointly launched in October 2018 by Ant Financial and its life insurance partner, Trust Mutual Life Insurance. It was initially operated as a peer-to-peer risk sharing program with an annual price ceiling of CNY188. Trust Mutual Life left the platform a month later because the price ceiling was not approved by the Chinese Bank and Insurance Regulatory Commission (CBIRC).

<sup>2</sup> XHB is not the only mutual aid network in China although it is the biggest. Other mutual aid platforms include Water Drop Mutual (closed on March 31, 2021), Meituan Mutual (closed on January 18, 2021), and Qingsong Mutual (closed on March 25, 2021), among others

Next, We provide the platform's operation details by showing its enrollment and claim procedure. The first panel of Figure 2 outlines *XHB*'s enrollment procedure. The first step is to file an online application (through mobile phone) with an authentic identity. To be a qualified member, an applicant needs to be free of any illness listed in Appendix B and maintains a clean medical record. Individuals receiving non-stopped medical treatments for 30+ days or hospitalized for 15+ days in the past two years are not allowed to join *XHB*. The first 90 days of enrollment is the *observation period*; if a new member is diagnosed with a critical illness within this observation period, then the membership would be terminated and the paid sharing costs would be fully refunded. Moreover, *XHB* members are required to have an Alipay account (like the PayPal account in the U.S.). According to *iimedia*, <https://data.iimedia.cn>, a third-party data mining and analysis organization, over two thirds of Alipay users are below 30 while this age group accounts for 40 percent of the population at the end of 2019. Additionally, individuals must have a good credit score, a minimum of 600 sesame points out of the maximum of 800 points, to be eligible for *XHB*, likely making *XHB* subscribers healthier (see, e.g., Marmot, 2002; Deaton, 2008). The participation in *XHB* is fully voluntary and members can leave at any time.

The second panel of Figure 2 illustrates *XHB*'s claim procedure. It begins with *XHB* participants' submissions of their claims through an artificial intelligence (*AI* based system designed for a high claim processing efficiency and accuracy (we present details of the *AI* program in Appendix C). Claim documents are recorded on a temper-proofed blockchain. Once *XHB* receives a claim submission, it conducts a preliminary review involving online video interviews and field visits to hospitals and other relevant sites. After *XHB* completes claim investigations, it publicly announces approved claims to members on scheduled announcement dates: the 7<sup>th</sup> and 21<sup>st</sup> in each month. *XHB* privately communicate with individual members whose claim requests are rejected. Total claim payments on the announcement dates are equally shared by *XHB* participants. In case a member does not plan to participate in the coming claim sharing, she or he needs to leave the program before the announcement day. There are three days of notification period for outstanding claim payments. Claims challenged by *XHB* members are withdrawn from pending payments and re-examined by claim specialists. Undisputed claims are scheduled for payments on the 14th and 28th of each month, known as payment announcement days.

*XHB* grants members the right to appeal. She/he can request a second-round review by a panel of qualified *XHB* members. Any *XHB* member is eligible to serve as a panel member after a 30-day enrollment and the completion of a qualification test. The second round review is administered by a third-party network platform affiliated with Ant Financial. The third-party administrator invites eligible panel members randomly. Invited panel members vote within 24 hours. The result is only valid if 1,000 or more valid votes are cast. The appealing claimant is set as a winner or a loser following the simple majority rule. In other words, the "wisdom of crowds" is applied. There were altogether six appeals conducted from October 2018 to September 2020. This extremely low number of appeals indicates that second-round investigations are a rare event and that the frequency of false

rejections in the first-round claim process is very low. Each case involved over 1 million panel member votes

*XHB* and commercial critical illness insurance policies are common in several ways. First, like *XHB* but different from commercial medical insurance offering reimbursement to actual medical costs up to a certain limit. Second, critical illness insurance also offers lump-sum indemnities to claimants and covered illnesses for critical illness insurance and mutual aid programs are highly comparable (reference). Nevertheless, there are noticeable distinctions between these two products. First, different from *XHB* offering short-term (bi-weekly) coverage, coverages offered by traditional critical illness insurance has a much longer horizon, e.g., one year or multiple years, known as term critical illness policies and even whole-life critical illness policies<sup>1</sup>. In 2019, critical illness insurance covered approximately 100 million people, a comparable size to the *XHB* participants. A similar set of illnesses are covered under critical illness insurance and *XHB*. critical illness insurance offers more options and better coverage than those of *XHB* and other mutual aid products. As such, mutual aid products are viewed as a supplement to insurance. Different from *XHB* offering a one-time payment to each participant diagnosed with critical illness, critical illness insurance often allows multiple payments - it breaks down critical illnesses into several categories and purchasers will receive one claim payment for each category.

China's government also offers coverage on critical illnesses through health insurance under "social security." The urban employee basic health insurance (*UEBHI*) is an employer sponsored social security program; the urban and rural resident basic health insurance (*URRBHI*) provides basic medical coverage to unemployed urban and rural residents (see, e.g., Barber and Yao, 2010; Zhu et al., 2017). In 2012, the government's critical illness health insurance was introduced as an extension to basic health insurance to cover critical illness patients' medical expenses (see, e.g., Jiang et al., 2019). The government-sponsored critical illness insurance reimburses medical expenses (for limited, typically less expensive, drugs and treatments, on the permitted drug list, rather than the fixed amount indemnity applied in *XHB* and commercial critical illness insurance, making the former more restrictive than the latter. The government-sponsored critical illness insurance has a low reimbursement rate, below 60% on average<sup>2</sup>. Despite the government-sponsored health insurance covers 95% of the Chinese population<sup>3</sup>. its protection on critical illness exposure is quite limited. For example, in Shanghai, the most economically-developed region in China, the employer-sponsored critical illness insurance only covers four types critical illnesses<sup>4</sup>.

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1 In China, term policies are often available for institutional purchasers and individuals purchase whole-life critical illness policies.

2 Data source: National Health Security Administration (NHSA); [http://www.nhsa.gov.cn/art/2019/5/13/art\\_78\\_3554.html](http://www.nhsa.gov.cn/art/2019/5/13/art_78_3554.html).

3 Data source: National Health Security Administration (NHSA); [http://www.nhsa.gov.cn/art/2019/5/13/art\\_78\\_3554.html](http://www.nhsa.gov.cn/art/2019/5/13/art_78_3554.html).

4 According to the Mutual Aid Industry White Paper (2020) of Ant Financial, the average cost of medical treatment for critical illnesses in China in 2019 was about 330,000 CNY, and there was still a gap of about 132,000 CNY to be paid out-of-pocket after 60% reimbursement of medical insurance coverage for critical illnesses

### 3. A Simple Model

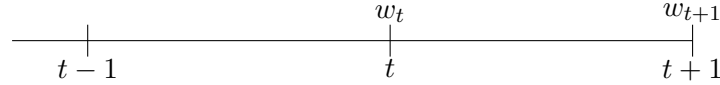
#### 3.1. Risk Sharing in a Large Pool

A key feature of *XHB* is its large participant pool attributed to its sponsorship from Ant Financial. This motivates us to evaluate the effect of pool size on participants' incentives. A large participant pool offers a higher level of diversification, while a wider range of potential participants include various age groups with different incidence rates, resulting in wealth transfer from older and high-risk individuals to young and low-risk participants. This tradeoff is modeled here. Using  $x$  to denote *XHB*, we express the price, or more precisely the sharing cost, of *XHB*,  $\pi_t^x$  as:

$$\pi_t^x = p_t^x K^x (1 + \lambda^x) \quad (1)$$

where  $p_t^x$  is the incidence rate for *XHB* at time  $t$ ;  $K^x$  is the amount of fixed indemnity to a *XHB* participant;  $\lambda^x$  is the management fee (also known loading or markup) charged to *XHB* participants proportional to the indemnity cost.

Note that individuals make their decisions on whether to continue with *XHB* before  $p_t^x$  is publicly announced. This is illustrated as the following timeline:



To be eligible for the claim payment for a critical illness occurring between time  $t$  and  $t+1$ , the individual needs to be a *XHB* member before  $t$ . Thus, when an individual decides to stay with *XHB* and commits to pay the sharing cost  $\pi_t^x$ , she or he does not know  $p_t^x$ . For this consideration, we express  $p_t^x$  as the sum of an expected incidence rate  $p^x$  and a residual term  $u_t^x$ , with a mean 0 and a standard deviation of  $\sigma$ .  $u_t^x$  is the idiosyncratic risk, which can be fully diversified away.

$$p_t^x = E(p_t^x) + u_t^x = p^x + u_t^x \quad (2)$$

Now, we model the individual's expected utility. As shown in the above timeline, the *XHB* participant receives a stream of wealth:  $w_t$  at time  $t$  and  $w_{t+1}$  at time  $t+1$ . Participating in *XHB* qualifies the individual to receive the indemnity  $K$  in the subsequent period if diagnosed to be critically ill at  $t$ , and at the same time subjects the individual to *XHB* pricing uncertainty. Denoting the incidence rate for individual  $s$  to be  $p_s$  and the amount of losses to be  $O$ , the individual's expected utility after joining *XHB* can be written as below:

$$E[u^x] = \underbrace{E[u(w_t - \pi_t^x)]}_{EU_t} + \beta \underbrace{[(1 - p_s)u(w_{t+1}) + p_s u(w_{t+1} - O + K^x)]}_{EU_{t+1}} \quad (3)$$

We look at how the size of *XHB*'s participant pool, denoted as  $N$ , influences an individual's expected utility. We consider the simple case that  $p_s$  is independent of  $N$ . As a result,  $\frac{\partial EU_{t+1}}{\partial N} = 0$  and we focus on how  $N$  affects  $EU_t$ .

Applying the Arrow-Pratt approximation (Arrow, 1965; Pratt, 1964), we express  $EU_t$ , the expected utility of a *XHB* participant from his wealth at  $t$ , as below:

$$\begin{aligned} E[u(w_t - \pi_t^x)] &= u[w_t - p^x K^x (1 + \lambda^x) - \Pi_t^x] \\ &= u[v_t^x - \Pi_t^x] \end{aligned} \quad (4)$$

where

$$\begin{aligned} v_t^x &= w_t - p^x K^x (1 + \lambda^x) \\ \Pi_t^x &= 1/2 A_s [K^x (1 + \lambda^x)]^2 \sigma^2 \end{aligned} \quad (5)$$

where  $A_s$  is the individual's risk aversion.  $\Pi_t^x$  is the compensation for the pricing risk taken by *XHB* participants.  $\sigma$  is the standard deviation of *XHB*'s incidence rates.

Taking derivatives of the expected utility with respect to the size of pool, we have the following expression capturing the dual pooling effects of *XHB*'s expected incidence rates,  $u_t^x$ , defined earlier.

$$\frac{\partial E u^x}{\partial N} \propto \left( \frac{\partial p^x}{\partial N} + \gamma \frac{\partial \sigma}{\partial N} \right) \quad (6)$$

where  $\gamma = A_s K^x (1 + \lambda^x) \sigma$ .

The derivation of Eq. (6) is provided in Appendix D.1. It carries the following intuition: for low-risk individuals, staying in a larger pool means they have to share risk with more risky individuals. As a result, we expect  $\frac{\partial p^x}{\partial N} > 0$ . For the holding of the optimal condition Eq. (6), the standard deviation of the incidence rate must be inversely related to the pool size; i.e.,  $\frac{\partial \sigma}{\partial N} < 0$ . This results in the following proposition:

**Proposition 1:** *A necessary condition for an expected utility maximizer to participate in a mutual aid program is  $\frac{\partial \sigma}{\partial N} < 0$ .*

The proposition states that a larger participant pool results in a more stable incidence rate but the program also invites high-risk individuals when the same price is charged to all participants. Thus practically mutual aid programs may restrict their participant pool size to deter high-risk individuals' participation. This is consistent with *XHB* practice that we discussed in Section 2: *XHB* impose a ceiling of 60 years old for its critical illness program (*CIP*). It restricts the coverage to high-risk participants by offering individuals 40 years old and above 1/3 indemnity payment of individuals younger than 40. We carefully analyze this feature in Section 3.3.

### 3.2. Price Difference between *XHB* and *CII*

As we discussed in Section 3.1, we explore the conditions leading to an equivalence in these two products. Using  $i$  to denote insurance, we express the insurance price,  $\pi_t^i$  below:

$$\pi_t^i = p^i K^i (1 + \lambda^i) \quad (7)$$

where  $p^i$  and  $K^i$  are the expected incidence rate and the amount of indemnity under *CII*;  $\lambda^i$  is the insurance markup. The individual's expected utility with insurance is



$$E[u^i] = u(w_t - \pi_t^i) + \beta[(1 - p_s)u(w_{t+1}) + p_s u(w_{t+1} - O + K^i)] \quad (8)$$

It shall be noted that because insurance premium  $\pi_t^i$  is set ex-ante  $u^i$  is deterministic. Set an identical coverage  $K$  under *XHB* and *CII*, i.e.,  $K^x = K^i = K$ . Inserting Eq. (3) and (4) in Eq (8), we obtain the following expression for the difference between  $u^x$  and  $u^i$ :

$$\Delta Eu = E[u^x] - E[u^i] = E[u(w_t - \pi_t^x)] - u(w_t - \pi_t^i) \quad (9)$$

Denoting  $v_t^i = w_t - \pi_t^i$ , we can simplify the expression as  $\Delta Eu = u[v_t^x - \Pi_t^x] - u(v_t^i)$ . The condition for  $\Delta Eu = 0$  is  $v_t^x - \Pi_t^x = v_t^i$ , where  $\Pi_t^x = 1/2A_s[K(1 + \lambda^x)]^2\sigma^2$ . This is equivalent to

$$\pi_t^i - \pi_t^x = \Pi_t^i \quad (10)$$

**Proposition 2:** *The condition to make the expected utilities of XHB and CII identical is  $\pi_t^i - \pi_t^x = \Pi_t^i$ , where  $\pi_t^i$  is the insurance price;  $\Pi_t^x$  is the expected sharing cost of XHB;  $\Pi_t^x = 1/2A_s[K(1 + \lambda^x)]^2$ .*

This proposition states that the price of *XHB* is expected to be lower than *CII* because of their difference in pricing mechanisms - insurance premium is set ex-ante while *XHB*'s sharing cost is determined ex-post. In equilibrium, the price difference in two products is bounded by investors' risk premium  $\Pi_t^x$ .

Further noting that the prices of *XHB* and *CII* consist of expected incidence rates,  $p^x$  and  $p^i$ , and their respective markups,  $\lambda^x$  and  $\lambda^i$ , we have

$$\Delta \pi_t = \underbrace{[p^i - p^x]K(1 + \lambda^x)}_{\text{IR difference}} + \underbrace{p^x K(\lambda^i - \lambda^x)}_{\text{Loading difference}} \quad (11)$$

It states that the price difference between *XHB* and *CII* is the sum of i) the difference in their incidence rates (*IRs*) and ii) the difference in their respective loadings. We examine specific drivers of these differences. As noted in Appendix C, the Fintech application in *XHB* cuts its operational cost, driving  $\lambda^x$  to be lower than  $\lambda^i$ . Considering the case that both *XHB* and *CII* operates efficiently and the expected incidence rates are the same,  $p^i = p^x$ , and inserting it in Eq. (11), we can rewrite Eq. (10) as

$$\lambda^i - \lambda^x = \frac{\Pi_t^i}{p^x K} \quad (12)$$

This result is summarized in the following lemma.

**Lemma 1:** *When XHB and CII are both efficiently designed, i.e.,  $p^i = p^x$ , we expect their loading difference is bounded by XHB participants' risk premium per dollar of expected indemnity.*

### 3.3. Choice between *XHB* and *CII* : A Separating Equilibrium

As we discussed in Section 2, in reality, *XHB* offers less coverage to participants than *CII* does. The coverage restriction is larger for older individuals. Here we demonstrate that the coverage restriction potentially leads to a separating equilibrium, à la Rothschild-Stiglitz.

Figure 3 presents individual wealth in a two-state space - either the individual experiences no loss ( $w_1$ ) or has loss ( $w_2$ ). It involves three points:  $E$  represents payoffs in two states without any protection;  $X$  represents payoffs after participating in *XHB* ;  $I$  represents payoffs with insurance purchase. Their specific coordinates are presented below:

Point	Protection Type	$W_1$	$W_2$
$E$	No Protection	$w_t + w_{t+1}$	$w_t + w_{t+1} - O$
$X$	<i>XHB</i>	$w_t - \pi^x + w_{t+1}$	$w_t - \pi^x + w_{t+1} - O + K^x$
$I$	<i>CII</i>	$w_t - \pi^i + w_{t+1}$	$w_t - \pi^i + w_{t+1} - O + K^i$

$E$  shows the individual's payoff when she/he has no protection - the individual's total wealth is  $w_t + w_{t+1}$  in the no-loss state ( $W_1$ ) and the total wealth is  $w_t + (w_{t+1} - O)$  in the loss state ( $W_2$ ). By joining *XHB*, the individual's aggregate payoff is  $w_t - \pi_t^x + w_{t+1}$  in  $w_1$  while it is  $w_t - \pi_t^x + (w_{t+1} - O + K^x)$  in  $w_2$ . With information about  $E$  and  $X$ , the slope of the budget line,  $EX$ , for individuals to participate in *XHB* is expressed as follows (see Appendix D.2 for the proof):

$$\frac{\partial W_2}{\partial W_1} \Big|_X = \frac{\pi_t^x - K^x}{\pi_t^x} = 1 - \frac{1}{p_t^x(1 + \lambda^x)} \quad (13)$$

where  $p_t^x$  is the incidence rate of *XHB*.

Alternatively, if the individual decides to purchase insurance, the individual's aggregate payoff becomes  $w_t - \pi_t^i + w_{t+1}$  in  $w_1$  and it is  $w_t - \pi_t^i + (w_{t+1} - O + K^i)$  in  $w_2$ . The slope of the budget line,  $EI$ , for insurance purchase is:

$$\frac{\partial W_2}{\partial W_1} \Big|_I = \frac{\pi_t^i - K^i}{\pi_t^i} = 1 - \frac{1}{p^i(1 + \lambda^i)} \quad (14)$$

Note that  $\frac{\partial W_2}{\partial W_1} \Big|_X$  and  $\frac{\partial W_2}{\partial W_1} \Big|_I$  are negative because  $\frac{1}{p_t^x(1 + \lambda^x)}$  and  $\frac{1}{p^i(1 + \lambda^i)}$  are greater than 1. If we continue to assume that the expected incidence rate of *XHB*,  $p_t^x$ , is the same as the insurance incidence rate,  $p^i$ , then *XHB*'s budget line is expected to be steeper than *CII* since  $\lambda^x < \lambda^i$ .

Accordingly, the utility gain from participating in *XHB* is the difference in expected utilities between a *XHB* participant and an individual without any protection (see Appendix D.3. for the proof):

$$\begin{aligned}
\Delta E u^x &= E[u^x] - E[u^n] \\
&= E[u(w_t - \pi_t^x)] - u(w_t) + \beta p_s [u(w_{t+1} - O + K^x) - u(w_{t+1} - O)] \quad (15)
\end{aligned}$$

The individual's expected utility gain between having a critical illness insurance and not having insurance can be expressed as:

$$\begin{aligned}
\Delta E u^i &= E[u^i] - E[u^n] \\
&= E[u(w_t - \pi_t^i)] - u(w_t) + \beta p_s [u(w_{t+1} - O + K^i) - u(w_{t+1} - O)] \quad (16)
\end{aligned}$$

Now, we consider heterogeneity in unobservable incident rates across individuals - a high-risk individual with a high incidence rate and a low-risk individual with a low incidence rate. It can be easily shown that the indifference curve (*IC*) for the low-risk individual is steeper than that of the high-risk individual. Therefore, as shown in Figure 3, coverage *I*, offering greater coverage than *X*, delivers a higher expected utility than *X* to the high-risk individual. Intuitively, the high-risk individual prefers more coverage thus they are willing to pay a higher cost to purchase insurance. Alternatively, low-risk individuals would rationally choose the low-coverage *X*. This results in a Rothschild and Stiglitz (1976) type of separating equilibrium for individual choices. Individuals with high risk (private information) choose *I* and those with low risk choose *X*. We summarize the separating equilibrium in the following proposition.

**Proposition 3:** *Given different coverages of mutual aid and insurance, high-risk individuals choose I and low-risk individuals choose X.*

Two potential concerns are associated with the separating equilibrium mentioned in Proposition 3. The first is associated with the stability of the equilibrium. If an insurer/mutual aid platform offers a new contract *Y* which delivers better expected utility than *I* and *X* do, it will attract individuals of both high- and low-risk. This pooling equilibrium is also discussed in Rothschild and Stiglitz (1976). Whether the pooling equilibrium *Y* is sustainable depends on the fraction of high-risk individuals - a presence of large fraction of high-risk individuals will render the insurer offering *Y* insolvent and leads to a prevalence of the separating equilibrium. However, the separating equilibrium does not hold when *Y* is profitable. Second, this proposition holds when mutual aid and insurance are mutually exclusive. However, this condition does not hold in practice where participants can access mutual aid products and insurance simultaneously. As a result, high-risk individuals have incentives to choose *X* as a supplement to traditional insurance coverage, thus increasing *XHB*'s participation costs. Following Eq. (13), a high  $p^x$  leads to a less negative slope of the budget line. Consequently, *XHB* becomes less attractive to low-risk individuals. They may rationally quit the program when they are perfectly price elastic. Nevertheless, there are several reasons to believe *XHB* participants may not be fully price elastic. One is that insurance buyers often do not have complete information about their own risk types. This is pointed out in Rothschild and Stiglitz (1976) and other works, e.g., Doherty and Thistle (1996) and Doherty and Posey (1998). A consequence of a lower price sensitivity for *XHB* and other mutual aid participants is that low-risk individuals would stay as long as the price is not too high. The second reason is that relatively young and healthy individuals are likely

to stay due to the altruism incentive (Bourlès, Bramouille, and Perez-Richet, 2021; Say, shan A. Guo, and Chen, 2014).

#### 4. Data

Our data include i) *XHB* enrollment, ii) *XHB* 's sharing cost per participant (pricing), and iii) claims in each payment period. The data is from the inception of *XHB*, October 2018, to December 2020. Since *XHB* has a 90-day observation period for new members (see Section 2 for details), the first claim payment made by *XHB* was in January 28 2019, i.e., 201901#2 (the second payment period of January 2019), as shown in Table 2. For this reason, we begin our sample from the second payment period of January 2019. Participant information includes the number of participants in each payment period and their genders. The data for *XHB* participants across six age groups, i) 3 months to 9 years old, ii) 10 to 19, iii) 20 to 29, iv) 30 to 39, v) 40 to 49, and vi) 50 to 59, is provided by the Financial Research Institute, Ant Financial. Our hand-collected claim data include detailed information of each claim such as the illness name and indemnity amount as well as claimant information such as the paid participant's name and the city of residence. The data source is *XHB* the public announcement bulletin released on the 7<sup>th</sup> and 21<sup>st</sup> of each month, noted in Figure 2.

We collect *XHB* claim data by taking screenshots of all claim reports published on *XHB* 's claim bulletin board and converting them to the digital data including the following key items: payment time, payee's names, names of illness, identifiers for mild critical illnesses, patient age, gender, province, and indemnity amount. To ensure data quality, we identify two cases clearly violating *XHB* payment rules: i) critical illness participants below 40 years old receiving an indemnity of CNY100,000 or CNY50,000 and ii) participants who are 40 years and above receiving an indemnity of CNY300,000. Altogether we found 149 such cases (out of 68007 claims of our sample) and correct them. We also verify the quality of digital data against original *XHB* information (the information with initial screenshots) by randomly sampling claim data in three different payment windows, 202003#2, 202006#1, and 202009#1. This reveals five erroneous observations (removed from the sample) in terms of age/payment amount out of 5,558 observations of the randomly selected samples.

Our data for participation and claims of critical illness insurance come from the 2020 Historical Critical Illness Incidence Rate Table (henceforth "*CI* table") report published by the China Association of Actuaries (*CAA*). The *CI* table reports the incidence rates for i) the 6 leading critical illnesses and ii) the 25 leading illnesses (names of illnesses covered under both categories are provided in the Appendix 3). As noted in China Actuary Association Report (2013), the incidence rate is calculated based on a group of most popular critical illness insurance policies<sup>1</sup>. The incidence rate covered in the *CI* Table is the rate paid by insurance companies - to avoid the contamination effect from the waiting period, the table excludes first-year policies issued by an insurer. While, as noted previously, critical illness

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<sup>1</sup> Namely "pre-paid" critical illness insurance policies. It is a mix of life and critical illness insurance. In China, 85% of critical illness insurance policies belong to this category.

insurance often allows multiple payments, only the first payment is included to construct the insurance incidence rate table.

An additional source of the data is the survey of internet mutual production products conducted by the Financial Research Institute of Ant Financial in 2019. The survey was distributed to Alipay (i.e., Chinese PayPal) account holders. The key questions of the survey are i) whether or a respondent participates in mutual aid platforms, ii) whether or not a respondent has commercial medical coverage (including critical illness insurance), and iii) whether or not a survey respondent participates in government-sponsored medical and critical illness programs. Other survey questions include participants' ages, gender, city tier of the residence, and their income levels. The total number of survey respondents is 58,721, including 24,117 participating in at least one type of mutual aid products, 51,128 enrolled in the social security program, 33,329 purchasing commercial health insurance. Apparently, among survey respondents, medical social security sponsored by the government has the largest coverage, followed by commercial medical insurance and mutual aid plans. Moreover, the report shows that 11,111 survey respondents participate in mutual aid but do not commercial health insurance; 20,323 survey takers purchase commercial health insurance but do not participate in any mutual aid plans; 13,006 survey participants both join mutual aid plans and buy commercial health insurance. More commercial insurance buyers do not participate in mutual aids plans than the other way around.

In Table 2, we report the number of enrollments, claim payments and shared expenses per participant in bi-weekly periods from January 2019 to August 2020. The first reported aggregate enrollment is 23,307,300 on January 28, 2019. The total amount of claim payment is CNY600,000 (awarded to 2 *XHB* members as reported in Table 2). The “premium” (membership due) charged by *XHB*, i.e., the claim cost allocated to each *XHB* member plus the 8% administrative fee, is merely CNY0.03. The table also shows that enrollments grow rapidly in 2019. At the end of 2019, the number of *XHB* participants reaches 97,942,100. After the fast growth in the first year, the enrollment to *XHB* significantly slow down in 2020, which is clearly demonstrated in Figure 4. There was a modest negative growth rate for the first time in May 2020, suggesting that the program reaches its satiation level.

Owing to the 3-month-observation period, *XHB*'s claim payments are low in the first half of 2019. The aggregate claim payment is CNY33 million at the end of June 2019 (i.e., 201906#2, the second payment period in June of 2019), corresponding to a bi-weekly premium of CNY0.51. It increases and stays around CNY4 in each payment period, corresponding to an annual payment of CNY100. We consider the sample period from September 2019 is a “stable” claim period since the enrollment no longer grows after this point.

A noticeable change is that claim payments dropped significantly over the period from 202002#2 to 202004#1 when China was locked down to contain the COVID-19 pandemic. The aggregate claim payment dropped from CNY300 million in January 2020 to CNY150 million in February 2020, and it was bounced back to CNY350 million in April 2020. *XHB*'s enrollment remained stable during the COVID lockdown period.

## 5. Empirical Results

We present empirical findings on predictions derived in the model section. We first look at the dual effects of pooling participants of different ages by examining the competing influences of a large pool size on the expected value and variance of incidence rates. Next, we compare incidence rates of *XHB* and critical illness insurance. The analysis sheds light on relative pricing effectiveness of *XHB* versus critical illness insurance. More importantly, it helps to validate the potential existence of separating equilibrium of high- and low-risk individuals owing to the unique design of *XHB*. Finally, to understand the sources of *XHB*'s efficiency, we further analyze individual choices between mutual aid programs and insurance using the mutual aid survey conducted by Ant Financial.

### 5.1. Effect of Diversification

*XHB*'s critical illness program pools participants of different ages in the same platform - participants below 40 years old receive CNY300,000 while participants 40+ years old receive CNY100,000. While this arrangement has the benefit to achieve a high level of diversification, it has two potential weaknesses. First, as all participants below 40 and those above 40, respectively, pay the same price to access the coverage pool, it is unclear whether the diversification benefit can offset the potential cost due to relatively high incentive for older individuals to join *XHB*. Second is whether it is reasonable to set 40 years old as the threshold for the two different price groups. We address these questions by testing the first hypothesis to check whether pooling lowers the variance of the participant pool thus offering incentives to young people to mix with older people.

We express the critical illness incidence with a binomial distribution.

$$p_t = \frac{M_t}{N_t} \quad (17)$$

where  $M_t$  denotes the of participants receiving payments at time  $t$  and  $N_t$  denotes the number of participants in *XHB* in period  $t$ .

Consider that  $M_{it}$  follows a binomial distribution:  $p(M_t = m_t) = \binom{N_t}{m_t} p_t^{m_t} (1 - p_t)^{(N_t - m_t)}$ , where  $m_t$  is reported number of illness cases. The expected value and variance of  $M_t$  are expressed as below:

$$E(M_t) = N_t p_t \text{ and, } \sigma^2(M_t) = N_t p_t (1 - p_t) \quad (18)$$

$$\begin{aligned}
\sigma^2 &= \sigma^2(p_t) = \sigma^2\left(\frac{M_t}{N_t}\right) \\
&= \frac{p_t(1-p_t)}{N_t}
\end{aligned} \tag{19}$$

Following Eq. (19),  $\sigma$  increases in when  $p_t$  is  $p_t$  below 1/2, applicable to the incidence rate. Thus, a high incidence rate for a larger pool also applies to the variance effect. It is an empirical question as to whether pooling different age groups together reduces the platform's pricing uncertainty.

We have data of *XHB* enrollment and claim payments for the entire program and for different age groups. As a result, we address this problem by breaking down *XHB* participants into six age groups (<10; 10~19; 20~29; 30~39; 40~49; and 50~60) and evaluate the variance of incidence rates (*IR*) of the first five age groups and compare them with the *IR* variance of wider age groups (< 19; 10~29; 20~39; 30~19; 10~59; and 50-60).

Corresponding to the data, we use  $p_{it}$  to refer to the incidence rate of a specific age group  $i$  at time  $t$ . Considering different age groups,  $N_t$  and  $M_{it}$  respectively represent the number of enrollments and paid claims associated with the incidence rate of age group  $k$  at time  $t$ .

*XHB* claim data provide the names of illnesses, which allows us to match incidence rates between *XHB* and critical illness insurance, we define three incidence rates for *XHB* respectively for the 6 leading critical illness ( $IR_{k,t}^{6x}$ ), 25 leading critical illness ( $IR_{k,t}^{25x}$ ) and all critical illnesses ( $IR_{k,t}^{100x}$ , including both severe critical illnesses and non-severe critical illnesses). Using the incidence rate of 6 leading illnesses, ( $IR_{k,t}^{6x}$ ), as an example, where  $c_{k,t}^6$  and  $e_{k,t-6}$  are the number of paid claims for the 6 leading critical illnesses at time  $t$  and the number of enrollments at  $t - 6$ , as a result of the 3-month (equivalently 6 payment periods) waiting period; *XHB* members are not eligible for claim payments till they have been a member for 3 months.

We estimate the variance of incidence rates for a given age group using Eq. (19). In Table 3, we report the comparison results for the effect of diversification when pairing a single age group (e.g., 10~19) with the corresponding combined age-group (10-29). Panel A reports the results using all stable periods from 201909#2. Panel B reports the result when the COVID-19 lockdown period (202002#2-202004#1) is excluded. Among all pairs, the variance of the large group is lower than that of the small group. For example, for the 6 leading illnesses, the reported variance of the incidence rate is 14.43 for the 30-39 age group and it is reduced to 12.41 when we mix the 30-39 and 40-49 age groups. The result holds for the 25 leading illnesses and all critical illnesses. The evidence suggests that combining different age groups lower the variance of the group's incidence rate.

Next, we answer the question of whether it is beneficial to add more age groups to the risk pool from the perspective of diversification. Figure 5 addresses this question by comparing the variance of six age groups: 0-9, 0-19, 0-29, 0-39, 0-49, and 0-59. As we can see, the effect of diversification stops after adding the 20-29 age group in the pool. Using *CI6* as an example, the average variance in the stable non-COVID periods is 13.10 for the 0-9 group, and significantly drops to 6.16 for the 0-19 group and 3.31 for the 0-29 group. The variance increases to 3.85, 4.42 and 5.31 for the 0-39, 0-49 and 0-59 groups,

respectively. The same pattern holds for all illness groups and stays the same for the last payment period.

Collectively, our finding addresses the issue brought up by proposition 1 regarding the optimality of *XHB*'s design. Our finding suggests *XHB* is not optimally designed under the participant expected utility maximization perspective. Based on our analysis, the optimal cutoff of age for reduced indemnities should be between ages 30 and 40.

### 5.2. Incidence Rates: *XHB* versus *CII*

In this subsection, we analyze incidence rates of different age groups and compare them with the incidence rates of *CI* insurance for corresponding age groups. We report the statistics of claim payments in Table 4. The first column shows the the total number of claims paid in each payment period from January 2019 to December 2020. The first two claims were paid on on January 28<sup>th</sup>, 2019. At the end of 2019, the number of paid claims was 1,953 and it was 2,810 at the end of December 2020. In the subsequent two columns, we break down critical illness into for young participants (below 40 years old) and middle aged participants (40+ years) and report the number of cases of each type. Table 4 clearly shows that there are more claims for the middle-aged than for the young. The total number of critical illness claims for the middle-age group in the sample period is 30,978, almost double the number of the young group (21,271).

We further report the incidence rates of critical illnesses of *XHB* in each payment period. Denoted as  $IR_x$ , the annual incidence rate of *XHB* is  $24 \cdot IR \cdot 100^x$ . The annualized incidence rates per million for severe critical illness participants are reported in the last column of Table 4. The incidence rate is fairly low in early periods; however, there is an increase from the first to the second payment period in September 2019 (from 226 per million to 540 per million). The incidence rate becomes stable after that, with an overall incidence rate from 529 to 670 per million participants each payment period. As reported, the number of claims and incidence rates are notably lower over the COVID lockdown period from 202002#2 to 202004#1 which is consistent with the number of payments reported in Table 2.

For comparison, we estimate an implied insurance incidence rate using *CAA* incidence rates and assume participants following a standard population distribution. Different from the incidence rate covering over 100 critical illnesses, the *CAA* incidence rate report only covers rates for the 6 leading critical illnesses and 25 leading critical illnesses at different ages. We therefore estimate incidence rates of 6 (25) leading illnesses using the 2018 population distribution published by the China Statistics Bureau for participants' distribution across ages. We find the average incidence rates are 3,085 and 3,347 per million in these categories. *XHB*'s incidence rates reported here, e.g., 442 and 458 per million during stable periods, are far below those of critical illness insurance.

Next, we compare the incidence rates of *XHB* and *CII* for each of the six age groups. Similar to Table 4, we trace *XHB*'s incidence rates of illness groups including the 6 leading critical illnesses and 25 leading critical illnesses:  $IR6_{k,t}^x$ ,  $IR25_{k,t}^x$ , and  $IR100_{k,t}^x$ . We further estimate *CII*'s incidence rate of a given age group as the weighted average of incidence rates across different ages using the population distribution. Specifically, the insurance incidence rate of the age group  $k$ , for the 6 leading critical illnesses ( $IR6_k^i$ ) and 25 leading critical illness ( $IR25_k^i$ ), is



$$IR6_k^i = \sum_{j \in k} w_{jk} * IR6_j^{CAA} \quad \text{and} \quad IR25_k^i = \sum_{j \in k} w_{jk} * IR25_j^{CAA} \quad (21)$$

Note that  $j$  is a specific age reported in CAA, e.g., 35 years old.  $IR6_j^{CAA}$  and  $IR25_k^{CAA}$  denote CAA incidence rates respectively for the 6 leading critical illness and 25 leading critical illnesses, respectively.  $w_{jk}$  is the proportion of participants at age  $j$  in the age group  $k$ .<sup>1</sup>

The results are reported in Table 5, with Panel A for the average results for all stable periods from 201909#2 to 202012#2 and Panel B for the average results for all stable periods excluding the COVID pandemic lockdown period from 202002#2 to 202004#1. Note that the reported incidence rates for *XHB* are annualized per million. Notably, incidence rates, for both *XHB* and insurance, are the highest in the 50-59 age group. However, the lowest is in the 10-19 age group for *XHB*, while 0-10 for CI insurance. In the average results, the incidence rates are 43 and 50 per million participants respectively for CI6 and CI25 in age group 10-19, while they are respectively 1,278 and 1,321 per million in age group 50-59.

More importantly, the table shows a clear pattern that *XHB* participants are “healthier” than traditional CI insurance buyers - with a much lower incidence rate than that reported by CAA in each age group. In the table, we report the ratios of CAA and *XHB* incidence rates (calculated in each payment period and averaged over time) which shows that combining all age groups, the incidence rate of CAA is 7.43 times that of *XHB* for the 6 critical illnesses, and 7.79 times of that of *XHB* for the 25 critical illnesses. The result indicates that the average incidence rate is significant lower than that of insurance in every age group and every way we categorize illnesses - for both CI6 and CI25. Interestingly, the incidence ratio between the CAA and *XHB* is the lowest for the youngest group (< 10). Consistent result are obtained after excluding the COVID period, though the incidence rates become larger in all age groups after we exclude the COVID lock-down period. One may attribute the much lower average incidence rate of *XHB* than that of CAA to the fact that internet users are younger than the overall population. While *XHB* participants are younger, the difference cannot be explained due to age, considering that the incidence rate is much lower for *XHB* in every age group.

In Figure 6, we plot the enrollment distributions of *XHB* in November 2020 and critical illness insurance reported by CAA and compare them with the 2018 population distribution across ages. Inspecting the enrollment distributions, we find *XHB* is lower in the young age groups (below 20 years old) and among the participants 40 years and older. The 30-39 group has the highest participation rate. Another interesting point is that *XHB*'s enrollment rate declines significantly from the 30-39 group (33%) to the 40-49 group. This is consistent with the significant drop of indemnity from CNY 300,000 to CNY 100,000 from 39 years old to 40 years old. A smoother transition may potentially help *XHB* to attract more participants in the 40-49 age range.

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<sup>1</sup> The CAA table separately reports incidence rates for females and males. We create a combined table based on the gender ratio for the 2018 population distribution.

When contrasting the enrollment distributions of *XHB* and insurance, we find they share similar traits. For example, the insurance participation rate also peaks in the 30-39 age group and drops in the 40-49 age group. Interestingly, the fractional enrollment of *XHB* exceeds that of insurance in the 20-29 group and the 50-59 group. The lower participation cost of *XHB* makes it appealing to both young and older individuals who are not willing or able to afford conventional critical illness insurance.

In Figure 7, we compare incidence rates of *XHB* and conventional critical illness insurance in different age groups. Panels A and B respectively depict the contrasts in the incidence rates between two programs for the 6 leading critical illnesses and 25 leading illnesses across different age groups. We can see that insurance incidence rates are higher in every age group than that of *XHB*. The most striking finding is that the incidence rate of insurance exceeds *XHB* most in the 50 to 59 age group. Jointly considering the relatively higher participation rates of *XHB* in this age range, the lower claim rate indicates that *XHB* can attract healthier older participants.

Notably, the results shown in Table 5 and Figures 6 and 7 suggests that *XHB* has a much lower incidence rate than traditional critical illness insurance. This echoes the third hypothesis that the restricted coverage offered by *XHB* leads to a separating equilibrium whereas healthy individuals participate in *XHB* while less healthy individuals prefer traditional insurance coverage. In practice, Fintech facilitates the separation between these types by efficiently declining claims from high-risk participants. This is documented in Appendix 3 - in 2020, Fintech rejected 50% of claim requests during the preliminary screening stage and pre-existing conditions are one of major reasons causing claim rejections.

### **5.3. Age Gradients in Incidence Rates of *XHB* and *CII***

In this subsection, we look at age gradients in incidence rates of *XHB* and compare them with those of *CII*. *XHB* sets different indemnities for individuals below 40 years old (CNY300,000) and those who are 40 and above (CNY100,000). This motivates us to look at the average incidence ratios of individuals below and above 40 years old. If the ratio of incidence rates of these two groups, i.e., age gradients, is close to 1:3, we could conclude *XHB* is fairly priced. Otherwise, we would conclude that *XHB* favors one age group against the other.

With the results reported in Panel A of Table 6, we estimate the age gradient of incidence rates above and below 40 for *XHB* and *CII*. We find that, in the stable period, the ratios of incidence rates for 6, 25 and 100 illnesses between the middle-aged and young groups are respectively 4.53, 4.47 and 4.24, all statistically significantly exceeding the indemnity ratio of 3 based on incidence rates in payment periods. For comparison purpose, we also report the ratios of *CII* incidence rates between the middle-aged and young groups - they are 5.21 and 5.12 for the 6 and 25 leading illnesses, higher than the ratios for *XHB*. We obtain consistent results when excluding COVID lockdown periods.

Taken together, our finding shows that *XHB* is not fairly priced - young participants subsidize the older group even though *XHB*'s sharing cost of the young group is one-third of the mid-aged group. Moreover, we find that the magnitude of "mispricing" is smaller for *XHB*. It appears the adverse selection problem is less severe among *XHB* participants.

#### 5.4. Further Evidence from the Mutual Aid Survey

Under the mutuality principle, risk pooling (mutual aid) and risk transfer (insurance) are two non-mutual exclusive mechanisms in risk management. Mutual risk sharing is potentially effective in sharing relatively simple and diversifiable risk among participants while insurance has advantages in handling sophisticated risks. We therefore expect mutual aid products are able to supplement the insurance market. In this section, we examine the relationship between mutual aid and insurance, whether it is supplementary or substituting, and test it using a survey that Ant Financial distributed to Alipay users on mutual aid participation in March 2020.

The mutual aid program survey contains 12 questions regarding Alipay users' participation in mutual aid programs, social insurance programs, and commercial insurance programs as well as covering the following four subjects: i) whether or not an Alipay user participates in a social insurance program; ii) whether or not an Alipay user purchases a commercial health insurance; iii) whether or not an Alipay user participates in at least one mutual aid programs and/or subscribes mutual aid program for family members; iv) range of annual income (below CNY 50,000, 50,000-100,000, 100,000-200,000, 200,000-500,000, and above CNY 500,000). The survey was distributed to two million randomly selected Alipay users and received 58,719 completed and valid responses. The detailed questionnaire is provided in Appendix E.

Among 58,719 completed surveys, 24,117 respondents (41%) mentioned they enrolled in at least one mutual aid program. The supermajority of respondents (51,128, 87%) are involved one of the government-sponsored social health insurance programs. This is largely consistent with, while slightly lower than, that 95% of the population have a social health insurance coverage mentioned in the background section. In addition, slightly more than half of the respondents (29,823) purchased commercial medical insurance products. It should be noted that the survey does not directly ask respondents whether they have a commercial critical illness program. Thus the reported number for medical insurance coverage overstates the number of survey participants having commercial critical illness insurance. Further, 21,867 had both mutual aid and social security coverage (37.2%) and 12,011 had both mutual aid and commercial insurance (20.5%). The number of participants that only have mutual aid but no insurance or social security is 1,255, while the number of participants that only have insurance but not mutual aid or social security is 2,512.

We perform logistic regressions for the determinants of mutual aid program participation. The dependent variable is an indicator equal to 1 when an Alipay account holder participates in one of the major mutual aid programs and 0 otherwise. The independent variables include i) whether a respondent participates in a social security health insurance program (*SS*), ii) an indicator for purchasing commercial insurance (*CINS*), iii) age of a survey participant (*AGE*), iv) an indicator for a female survey participant (*Female*), v) city tier (*CITYTIER*) for a city's economic development status which takes a number from 1 to 6, a higher city tier score suggests a lower economic development status,<sup>1</sup> and vi) four indicators for individuals' annual income: *INC2* for an annual income range between CNY 50,000 and

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<sup>1</sup> See <https://www.china-briefing.com/news/chinas-city-tier-classification-defined/> for more information.

100,000, *INC3* for an income range between CNY 100,000 and 200,000, and *INC4* for an income range between CNY 200,000 and 500,000, and *INC5* for income above CNY 500,000. The results are reported in Table 7.

Column 1 reports the results of the analysis based on valid survey responses. We first include all the above explanatory variables except for the income. Several results are interesting. The coefficient on *SS* is positive (= 0.6; t-stat = 22.31), indicating that respondents who have health insurance coverage under social security actively participate in mutual aid programs. As we discussed in the background section, social health insurance provides limited coverage on critical illnesses. Mutual aid products nicely fits into the coverage gap. The coefficient on *CINS* (commercial insurance) is negative (= -0.29; t-stat = -13.62), meaning that respondents with a commercial health insurance are less likely to participate in mutual aid programs. It suggests that mutual aid platforms are able to reach customers typically not covered by conventional health and critical illness insurance, different from the finding of Tang (2019) showing that P2P lending often occurs among borrowers who have access to bank credit. It appears that mutual aid programs complement commercial insurance in health risk management.

In addition, Column 1 also reports a negative coefficient on *CITYTIER* (= -0.02; t-stat = - 2.92). As *CITYTIER* is inversely related to the wealthy level of the respondent's city of residence, this result suggests that respondents from rich regions are more likely to join mutual aid programs than those from poor regions, consistent with Fang et al. (2008)'s broad perspective of advantageous selection where income is considered as an important source of advantageous selection. Interestingly, the coefficient on *FEMALE* is negative (= -0.08; t-stat = -4.09), suggesting that females are less likely to participate in mutual aid programs and the coefficient on *AGE* is insignificant, indicating that, on average, survey participants' ages do not affect their incentives.

In Column 2, we additionally include indicative variables for different income ranges (*INC2*, *INC3*, *INC4* and *INC5*) in the regression. We find similar results for the coefficients on variables reported in Column 1 except for *CITYTIER* which has an insignificant coefficient now. The coefficients on the individual income dummy variables are all significantly positive. Note that we leave out the income group below CNY 50,000 as the benchmark. Therefore, the result suggests that the probability of joining a mutual aid program for any of the four higher income groups is greater than the benchmark group. The coefficients on income indicators are respectively 0.28, 0.37, 0.43, and 0.24. Moreover, this result suggests a greater likelihood of participating in a mutual aid program for an individual from a higher income group, except for *INC5*, the highest income group. Again, we consider this as supporting evidence to the advantageous selection argument.

Next, we separate respondents into two age groups based on *XHB*'s age cutoff: the young participant group for those below 40 and the middle-aged participant group for those 40 and older, and independently perform the regressions. The results are reported revealed in Columns 3 (for the young group) and in Column 4 (for the middle-aged group). An obvious pattern revealed in Table 7 is that the coefficients of the same variable often take opposite signs in these two groups. As reported in Column 3, among those below 40 years old, mutual aid programs are more attractive to older respondents, and people from more developed areas are more likely to participate. By contrast, among those 40 and

older, Column (4) shows that old respondents are less willing to participate, as mutual aid programs with a low indemnity are not attractive, while people from less wealthy regions are more willing to participate, since mutual aid programs are more affordable. In both groups, the coefficients on *SS* are positive, and the coefficients on *CINS* are negative, confirming the complementary relationship between mutual aid and commercial insurance.

The overall findings from the mutual aid survey support the existence of advantageous selection and the complementary relation between commercial health insurance and mutual aid programs.

## Conclusions

Xiang Hu Bao (*XHB*) is a novel online platform facilitating mutual risk sharing of critical illness exposures. It leverages the tech giant's platform and digital technology to lower the cost and improve the efficiency of participants' enrollment and claim processing. Different from insurance products applying actuarial models in pricing, *XHB* simply lets healthy participants share indemnity payment of sick members. As a result, it is operated in a much more transparent way than traditional critical illness insurance products do. *XHB* offers restricted coverage amounts to participants and the coverage reduction is particularly high for older participants. We show that such indemnity schedule leads to separating equilibrium where low-risk individuals enroll in *XHB* while high-risk individuals purchase critical illness insurance. The design also determines the nature of *XHB* and other mutual aid products: they are complementary, rather than substituteable, to existing insurance products.

Although the platform existed merely slightly over 3 years, there is no doubt that *XHB* was a huge success in terms of both its business idea and social impact. In just one year after its inception, *XHB* has nearly 100 million of participants, close to the total number of critical illness insurance buyers in China. Over the short 3-year of its life, *XHB* paid nearly CNY 30 billion to over 200,000 participants experiencing critical illnesses. It launched an artificial intelligence based claim system, a blockchain to maintain claim records, and deployed a "seldom-used" panel system for disputed cases. The idea of the platform is quite simple to identify a way to enforce the law of large numbers to diversify idiosyncratic risks. Fintech brings this idea to reality: the technology substantially lowers *XHB*'s operational costs, equips the platform with high operational efficiency, and in the end it offers the incentive for sufficient relatively low risk individuals to stay in the pool, which is supported by the empirical evidence we provide in the paper. *XHB*'s incidence rate is much lower than comparable critical illness insurance and it holds for different age groups.

This study contributes to the literature in several ways. First, it presents evidence that *XHB* and other mutual aid products make the market more complete. Traditional insurance products might be better in underwriting sophisticated risks that are difficult to be diversified away. On the other hand, mutual aid products are appealing to young and/or healthy individuals or low-incomers who are facing idiosyncratic critical illness exposure but unwilling to purchase commercial coverage as they are often expensive. We present evidence that mutual aid platforms can reach customers typically not covered by conventional health and critical illness insurance and show that individuals with commercial health insurance are less likely to participate in mutual aid programs. The findings suggest

that *XHB* and other mutual aid programs complement the existing insurance markets. Second, we also find that high-income individuals have a greater tendency to participate in the mutual aid programs than low-income individuals. This phenomenon particularly holds among younger participants. This finding is consistent with the broad perspective of advantageous selection (Fang et al., 2008) and further indicates that the restricted coverage for older individuals limits their participation. Third, our paper extends the existing literature on mutual risk sharing among households (Cochrane, 1991; Townsend, 1994; Cox and Fafchamps, 2007; Fafchamps and Gubert, 2007). We show that Fintech-based platforms may serve a similar role as households. This alternative function is more effective in emerging markets where traditional risk management tools are undeveloped.

## Tables

**Table 1. Summary Statistics**

This table summarizes the key coverage and major changes of the Xiang Hu Bao (*XHB*) program.

Panel A: Program V1 from October 2018 to April 2019			
Plan Name	Age	Indemnity (CNY)	Coverage
Critical Illness Plan (CIP)	30 days to 39 years	300,000	99 Critical illnesses Critical malignant tumors*
	40 to 59 years	100,000	Same as above
Panel B: Program V2 from May 2019 to December 2019			
Plan Name	Age	Indemnity (CNY)	Coverage
Critical Illness Plan (CIP)	30 days to 39 years	300,000	99 Critical illnesses plus critical malignant tumors**
	40 to 59 years	100,000	Same as above
Senior Cancer Plan (SP)	30 days to 59 years	50,000	2 Mild critical illnesses**
	60 to 70 years	100,000 50,000	Critical malignant tumors 2 Mild critical illnesses
Panel C: Program V3 from January 2020 to May 2020			
Plan Name	Age	Indemnity (CNY)	Coverage
Critical Illness Plan (CIP)	30 days to 39 years	300,000	Same as V2 plus 5 rare illnesses
	40 to 59 years	100,000	Same as V2 plus 5 rare illnesses
Senior Cancer Plan (SP)	60 to 70 years	100,000	Critical malignant tumors only
Panel D: Program V4 since June 2020			
Plan Name	Age	Indemnity (CNY)	Coverage
Critical Illness Plan (CIP)	30 days to 39 years	300,000 (Standard) 100,000 (Reduced)	Same as V3
	40 to 59 years	100,000 (Standard) 50,000 (Reduced)	Same as V3
Senior Cancer Plan (SP)	60 to 70 years	100,000	Critical malignant tumors only

\* For the full list of malignant tumors, see <https://www.cancer.gov/types>. \*\* Two types of illnesses originally categorized as malignant tumors in *XHB* V1, including i) Papillary thyroid cancer (PTC) or follicular thyroid cancer (FTC) without distal metastases and ii)  $T2N_0M_0$  prostatic cancer, are no longer included. They are reclassified as mild critical illnesses.

**Table 2. Xiang Hu Bao Aggregate Enrollment and Claims Over Time**

This table presents i) the number of enrollments to Xiang Hu Bao, ii) aggregate claim payments, and iii) allocated cost per member from January 2019 to December 2020.

Period	Enrollment	Aggregate Claim Payment (CNY)	Allocated Cost Per Member (CNY)
201901#2	23,307,500	600,000	0.03
201902#1	32,407,600	0	0
201902#2	34,684,900	900,000	0.03
201903#1	37,537,000	300,000	0.01
201903#2	41,185,700	0	0
201904#1	48,624,500	900,000	0.02
201904#2	52,426,700	2,500,000	0.05
201905#1	56,824,200	2,200,000	0.05
201905#2	62,896,200	7,800,000	0.13
201906#1	67,186,700	20,600,000	0.33
201906#2	70,224,600	33,000,000	0.51
201907#1	73,234,000	63,400,000	0.94
201907#2	75,621,800	103,550,000	1.48
201908#1	77,327,200	105,100,000	1.47
201908#2	79,920,300	107,200,000	1.44
201909#1	83,391,000	115,000,000	1.49
201909#2	85,756,600	235,300,000	2.96
201910#1	87,904,100	245,200,000	3.01
201910#2	89,682,000	254,100,000	3.06
201911#1	93,883,800	263,450,000	3.03
201911#2	95,145,600	266,700,000	3.02
201912#1	96,718,200	274,700,000	3.06
201912#2	97,347,400	274,650,000	3.05
202001#1	97,942,100	284,400,000	3.13
202001#2	98,927,100	317,950,000	3.47
202002#1	99,461,300	318,350,000	3.45
202002#2	99,531,100	139,700,000	1.51
202003#1	100,071,800	142,000,000	1.53
202003#2	100,433,700	144,500,000	1.55
202004#1	100,992,000	264,100,000	2.83
202004#2	101,035,200	369,650,000	3.95
202005#1	101,049,100	368,350,000	3.93
202005#2	100,952,900	367,000,000	3.92
202006#1	101,165,600	400,625,776	3.96
202006#2	100,944,200	396,710,705	3.93
202007#1	101,070,800	400,240,368	3.96
202007#2	101,056,300	397,151,259	3.93
202008#1	101,305,000	387,150,000	4.17
202008#2	101,129,000	380,900,000	4.11
202009#1	101,279,021	385,250,000	4.17
202009#2	100,716,367	381,700,000	4.17
202010#1	100,486,662	386,300,000	4.23
202010#2	100,287,800	439,300,000	4.86
202011#1	100,669,825	436,750,000	4.83
202011#2	100,026,526	432,100,000	4.83
202012#1	98,243,639	424,250,000	4.83
202012#2	97,159,970	460,300,000	5.31

**Table 3. Effect of Diversification**

This table reports the variances of incidence rates (reported as annualized per million IRs) of different age groups and their differences. Panel A reports the average results based on the XHB claim data from 201909#2 to 202012#2. Panel B reports the average results based on the XHB claim data from 201909#2 to 202012#2 (excl. 202002#2-202004#1, the COVID-19 lockdown period. CI6, CI25, and CI100 respectively represent 6, 25, and all leading critical illnesses.  $\sigma_i^2$  and  $\sigma_j^2$  in each period are calculated based on Eq. (19) and then averaged over time. t-statistics for the differences are reported in the parentheses

Group $i$	Group $j$	CI6					CI25					CI100				
		$\sigma_j^2$	$\sigma_i^2$	$\sigma_j^2 - \sigma_i^2$	(t-stats)	$\sigma_j^2$	$\sigma_i^2$	$\sigma_j^2 - \sigma_i^2$	(t-stats)	$\sigma_j^2$	$\sigma_i^2$	$\sigma_j^2 - \sigma_i^2$	(t-stats)			
<b>Panel A: Results of “Stable” Periods</b>																
<10	0~19	5.75	12.25	-6.49	(-12.80)	6.55	13.78	-7.23	(-13.59)	9.51	20.14	-10.63	(-14.43)			
10~19	10~29	4.02	9.27	-5.25	(-8.12)	4.26	10.86	-6.59	(-8.86)	5.03	15.53	-10.50	(-11.99)			
20~29	20~39	5.03	5.27	-0.25	(-1.41)	5.23	5.56	-0.32	(-1.82)	5.93	6.47	-0.54	(-2.95)			
30~39	30~49	12.41	14.43	-2.03	(-6.96)	12.82	14.97	-2.15	(-7.25)	14.19	16.79	-2.60	(-8.57)			
40~49	40~59	40.19	52.83	-12.64	(-7.12)	41.51	54.39	-12.89	(-7.24)	45.58	59.37	-13.79	(-7.29)			
<b>Panel B: Results of Non-COVID19 “Stable” Periods</b>																
<10	0~19	6.16	13.10	-6.94	(-13.44)	7.02	14.75	-7.73	(-14.59)	10.20	21.65	-11.43	(-16.81)			
10~19	10~29	4.25	9.98	-5.72	(-8.31)	4.51	11.68	-7.17	(-9.24)	5.33	16.58	-11.25	(-12.60)			
20~29	20~39	5.32	5.57	-0.25	(-1.22)	5.55	5.88	-0.33	(-1.63)	6.29	6.85	-0.56	(-2.64)			
30~39	30~49	13.23	15.30	-2.07	(-6.19)	13.68	15.88	-2.21	(-6.49)	15.16	17.84	-2.69	(-7.78)			
40~49	40~59	43.11	56.69	-13.58	(-6.88)	44.51	58.35	-13.84	(-6.98)	48.90	63.76	-14.85	(-7.08)			



**Table 4. Number of Paid Claims and Incidence Rates of Xiang Hu Bao**

This table reports the number of claims of different groups and incidence rates of XHB in each payment period. # total is the total number of paid claims # <40 ( $\geq 40$ ) is the number of participants below 40 years (at or above 40 years old) receiving claim payments. The incidence rates (*IR*) of a given group is the number of paid claims of a group and scaled by the number of enrollment of 3-month lagged enrollments. Then this number is annualized, i.e., multiplied by 24, and converted to a per million basis:  $IR_t^x = 24 * 1,000,000 * \frac{c_t}{e_{t-6}}$ . The last row reports the aggregate number of cases for different groups and the average incidence rates.

Period	# (Full sample) (1)	# (<40) (2)	# ( $\geq 40$ ) (3)	$IR_t^x$ (per mil) (4)
201901#2	2	2	0	0
201902#1	1	0	0	0
201902#2	3	3	0	0
201903#1	1	1	0	0
201903#2	1	0	0	0
201904#1	3	3	0	0
201904#2	9	8	1	9
201905#1	10	6	4	7
201905#2	32	23	9	22
201906#1	100	53	47	64
201906#2	150	90	60	87
201907#1	286	178	108	141
201907#2	496	301	195	227
201908#1	500	319	181	211
201908#2	615	347	268	235
201909#1	632	377	255	226
201909#2	1,581	862	719	540
201910#1	1,718	904	814	563
201910#2	1,731	863	868	549
201911#1	1,735	857	878	538
201911#2	1,837	811	1,026	552
201912#1	1,931	860	1,071	556
201912#2	1,953	863	1,090	547
202001#1	2,025	882	1,143	553
202001#2	2,279	982	1,297	610
202002#1	2,381	1,056	1,325	609
202002#2	1,045	459	586	264
202003#1	1,047	462	585	260
202003#2	1,003	440	563	247
202004#1	1,753	709	1,044	430
202004#2	2,559	835	1,724	621
202005#1	2,411	833	1,578	582
202005#2	2,234	851	1,383	539
202006#1	2,219	801	1,418	532
202006#2	2,213	768	1,445	529
202007#1	2,291	751	1,540	544
202007#2	2,275	733	1,542	540
202008#1	2,370	776	1,594	563
202008#2	2,344	757	1,587	557
202009#1	2,336	775	1,561	554
202009#2	2,300	770	1,530	547
202010#1	2,303	785	1,518	547
202010#2	2,660	885	1,775	632
202011#1	2,663	873	1,790	631
202011#2	2,607	869	1,738	619
202012#1	2,554	867	1,687	605
202012#2	2,810	917	1,893	670
Total/Avg	52,250	21,272	30,978	430

**Table 5. Age Gradients in Incidence Rates: *XHB* versus *CII***

This table reports the number of claims, incidence rates of *XHB* and critical illness insurance of six age groups: <10, 10~19, 20~29, 30~39, 40~49, and 50~59. Panel A reports the results during the “stable” claim period from 201909#2 to 202012#2. Panel B reports the results during the “stable” period while excluding COVID-19 lockdown months. *CI6* and *CI25* respectively represent 6 and 25 leading critical illnesses. The reported number of *XHB* enrollment is the averaged 3-month trailing number of enrollments. The number of paid claims is the average number of claims reported in the current payment period. *XHB* incidence rates (*IR*) are estimated as the number of paid claims and scaled by the aggregate *XHB* enrollment in the lagged 3-months. The *CAA* incidence rates (*IRs* are the critical illness incidence rates published by the China Association of Actuaries (*CAA*) weighted by the 2018 population distribution. Both incidence rates reported in the table are first estimated in each payment period and then averaged over time. Ratios of *CAA* and *XHB* incidence rates are calculated in each payment period and averaged over time. The *t*-statistics for the ratio of incidence rate ratios of *CI* insurance and *XHB* minus 1 are reported in the parentheses.

Group	# <i>XHB</i> (3-month lag)	# <i>XHB</i> Cases		<i>IR<sup>e</sup></i> (per million)		<i>IR<sup>i</sup></i> (per million)		IR Ratio <i>CII/XHB</i>	
		<i>CI6</i>	<i>CI25</i>	<i>CI6</i>	<i>CI25</i>	<i>CI6</i>	<i>CI25</i>	<i>CI6 (t-stats)</i>	<i>CI25 (t-stats)</i>
<b>Panel A: Results Based on “Stable” Periods</b>									
<10	6,512,308	22	25	80	90	175	257	2.55 (5.31)	3.32 (6.20)
10~19	4,728,042	9	10	43	50	249	321	7.16 (5.91)	8.23 (5.27)
20~29	26,926,729	163	171	146	153	995	1,102	7.65 (9.64)	8.02 (9.59)
30~39	28,091,886	457	473	391	404	2,391	2,558	6.50 (10.53)	6.71 (10.47)
40~49	14,515,814	461	474	763	784	4,933	5,297	6.96 (8.42)	7.26 (8.63)
50~59	10,814,477	576	595	1,278	1,321	8,100	8,780	7.40 (8.17)	7.77 (8.35)
Total	91,589,257	1,689	1,748	442	458	3,085	3,347	7.43 (9.12)	7.79 (9.23)
<b>Panel B: Results Based on Non-COVID-19 “Stable” Periods</b>									
<10	6,434,483	24	27	88	99	175	257	2.15 (6.73)	2.80 (7.99)
10~19	4,671,539	9	11	48	55	249	321	6.01 (4.47)	6.72 (4.02)
20~29	26,604,940	175	183	157	166	995	1,102	6.93 (7.42)	7.21 (7.20)
30~39	27,756,173	489	505	422	437	2,391	2,558	5.80 (8.46)	5.98 (8.43)
40~49	14,342,342	502	515	840	862	4,933	5,297	5.88 (6.82)	6.14 (6.93)
50~59	10,685,238	624	644	1,401	1,446	8,100	8,780	6.40 (6.61)	6.74 (6.76)
Total	90,494,716	1,822	1,885	483	500	3,085	3,347	6.39 (7.32)	6.70 (7.39)

**Table 6. Incidence Rates of Age Groups and Cost Sharing**

This table shows the incidence rates of *XHB* and critical illness insurance as well as ratios between these two for people below 40 years old and those of 40 years and older. Panel A reports the results in the “stable” claim period from 201909#2 to 202012#2. Panel B reports the results in “stable” periods excluding the COVID lockdown period. *IR6* and *IR25* represent incidence rates for 6 and 25 leading critical illnesses of *XHB* and *CII* and *IR100* is for the incidence rate of all illnesses. The t-statistics of ratios for the relative incidence rates between the 40-59 group and the below 40 group minus 3 are reported in the parentheses.

**Panel A: Results Based on “Stable” Periods**

	<i>XHB</i>			<i>CII</i>	
	<i>IR6</i>	<i>IR25</i>	<i>IR100</i>	<i>IR6</i>	<i>IR25</i>
<39	233	244	283	1,183	1,300
40~59	1,055	1,091	1,200	6,167	6,656
40~59/<39	4.53	4.47	4.24	5.21	5.12
( <i>t</i> -stats)	(6.54)	(6.52)	(6.26)		

**Panel B: Results Based on Non-COVID “Stable” Periods**

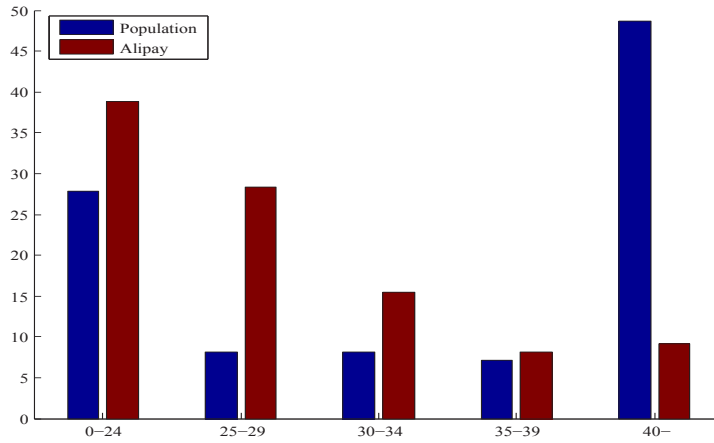
Group	<i>XHB</i>			<i>CII</i>	
	<i>IR6</i>	<i>IR25</i>	<i>IR100</i>	<i>IR6</i>	<i>IR25</i>
<39	245	258	299	1,183	1,300
40~59	1,132	1,171	1,288	6,167	6,656
40~59/<39	4.61	4.54	4.31	5.21	5.12
( <i>t</i> -stats)	(6.56)	(6.48)	(6.20)		

**Table 7. Logistic Regressions of Mutual Aid Participation Data**

This table presents the logistic regression results based on a survey on mutual aid program participation conducted by Ant Financial in 2019. The dependent variable of the logistic regression is an indicator of whether a survey participant joined an internet mutual aid program. It reports the regression examining the determinants of mutual aid participation including the following independent variables: i) whether a respondent participates in a social security health insurance program (*SS*), ii) whether a respondent purchases commercial insurance (*CINS*), iii) a respondent's age (*AGE*), iv) a respondent's gender (*FEMALE*=1 for a female respondent and 0 otherwise), v) the city tier of a respondent's residence (*CITYTIER* taking a number from 1 to 6, the higher the number is, the worse economic development the city is), vi) four indicative variables for a respondent's annual income range: *INC2* equal to 1 when a respondent's annual income is between CNY 50,000 and 100,000 and 0 otherwise, *INC3* equal to 1 when a respondent's annual income is between CNY 100,000 and 200,000 and 0 otherwise, *INC4* equal to 1 when a respondent's annual income is between CNY 200,000 and 500,000 and 0 otherwise, and *INC5* equal to 1 when a respondent's annual income is more than CNY 500,000. t-statistics are reported in the parentheses. The last two rows report the number of observations and the regression R-squared.

	(1) All Ages	(2) All Ages	(3) <40	(4) >40
SS	0.60***	0.56***	0.57***	0.49***
	(22.31)	(20.90)	(19.30)	(7.62)
CINS	-0.29***	-0.29***	-0.28***	-0.34***
	(-13.62)	(-16.56)	(-14.07)	(-9.47)
AGE	0.00	-0.00	0.01***	-0.01**
	(0.42)	(-0.06)	(6.81)	(-2.50)
FEMALE	-0.08***	0.01	-0.004	0.06
	(-4.09)	(0.39)	(-0.18)	(1.47)
CITYTIER	-0.02***	-0.01	-0.01***	0.03***
	(-2.92)	(-1.02)	(-2.77)	(3.02)
INC2		0.28***	0.30***	0.15***
		(14.40)	(13.26)	(3.68)
INC3		0.37***	0.38***	0.21***
		(14.32)	(12.83)	(3.92)
INC4		0.43***	0.46***	0.22**
		(9.27)	(8.47)	(2.38)
INC5		0.24***	0.17	0.42**
		(2.67)	(1.63)	(2.22)
INTERCEPT	-0.69***	-0.88***	-1.00***	-0.65***
	(-19.48)	(-23.53)	(-22.93)	(-5.05)
N	58,722	58,722	45,031	13,691
R <sup>2</sup>	0.01	0.02	0.02	0.02

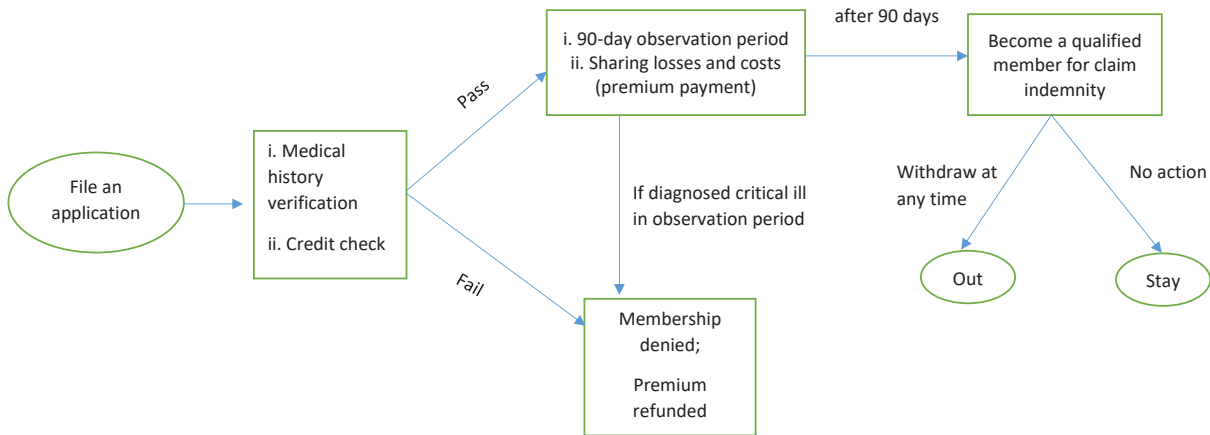
**Figure 1. Distributions: Chinese Population vs. Alipay Participants**



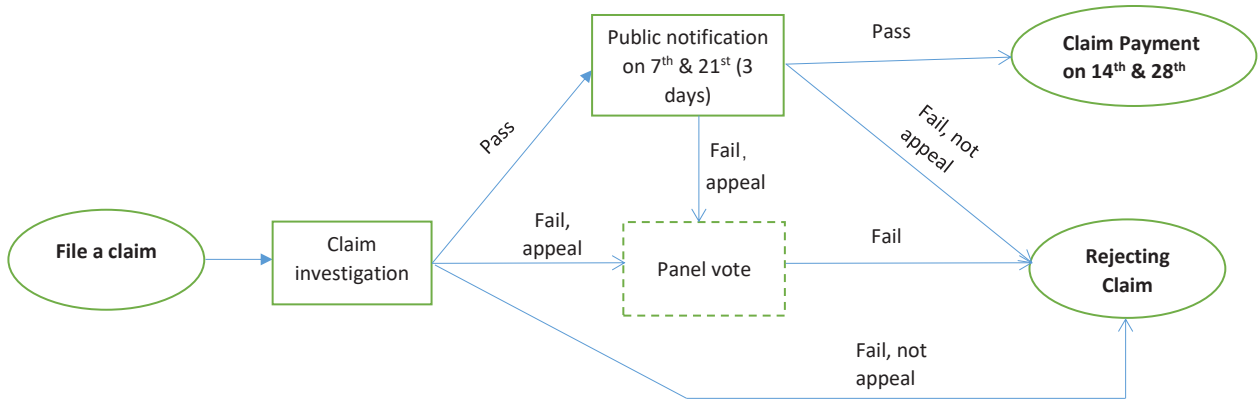
The figure plots the Chinese population (the blue bar) and Alipay participants across different age groups at the end of 2019.

**Figure 2. XHB Enrollment and Claim Procedures**

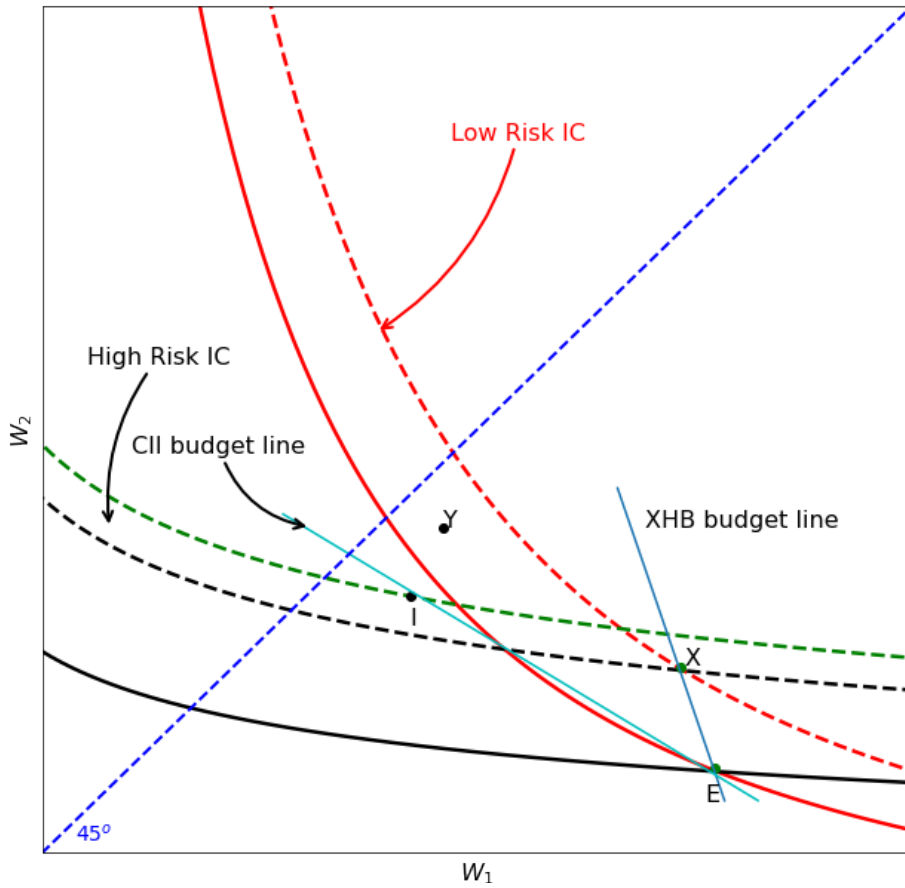
**Panel A: Procedure to Enroll in XHB**



**Panel B: Claim Process**

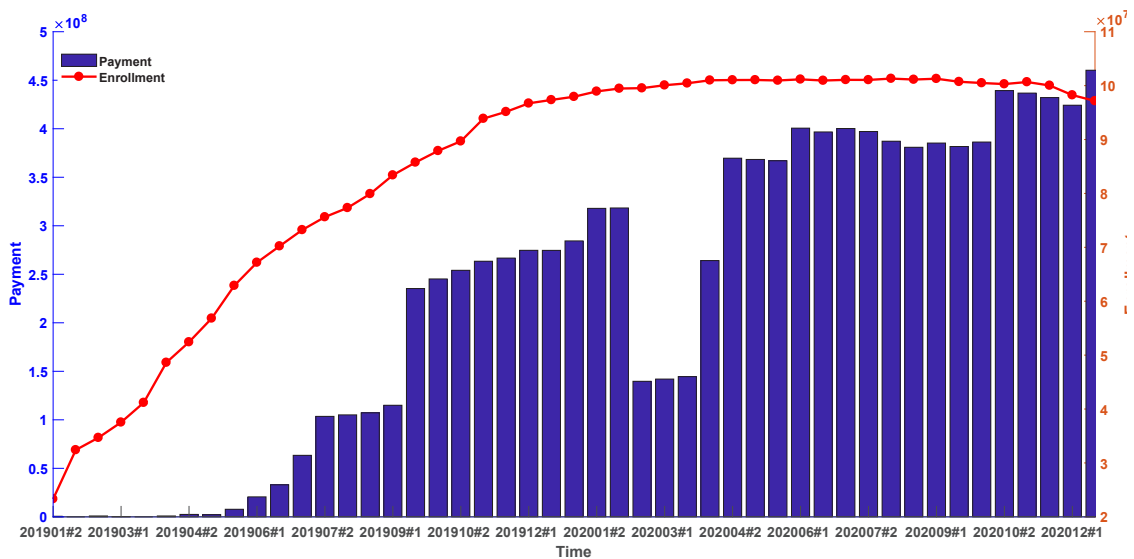


**Figure 3. Mutual Aid versus Critical Illness Insurance**



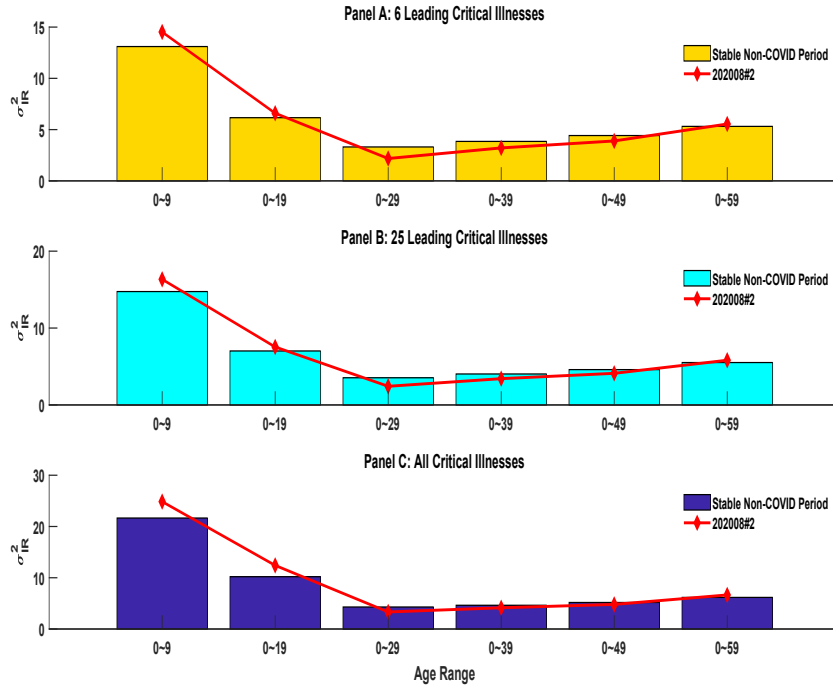
$W_1$  represents an individual's aggregate Payoff at  $t$  and  $t + 1$  in the no-loss state.  $W_2$  represents the individual's aggregate payoff at  $t$  and  $t + 1$  in the loss state.

**Figure 4. XHB Enrollment and Aggregate Claim Payout**



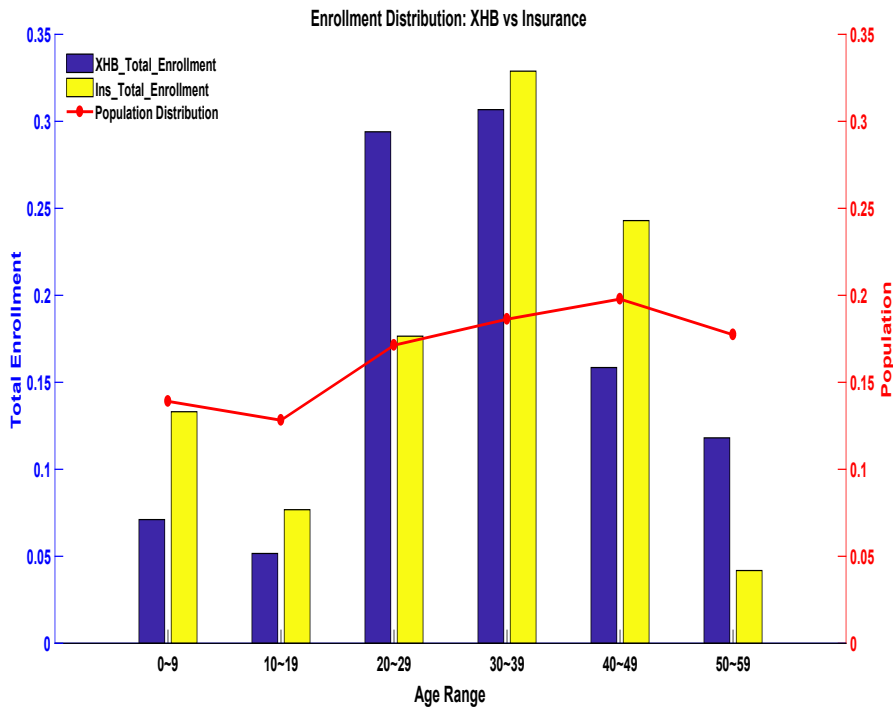
This figure shows the number of Xiang Hu Bao enrollments and aggregate claim payouts over time.

**Figure 5. Diversification across Age Groups**



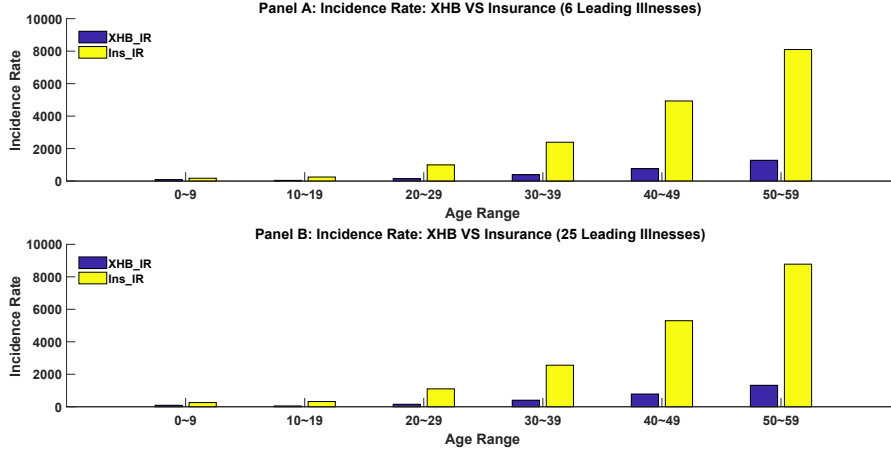
This figure shows the variance of XHB incidence rates of six age groups: 0-9, 0-19, 0-29, 0-39, 0-49, 0-59 years old. Bars represent the stable non-COVID periods; Curves represent the last payment period: 2020#2.

**Figure 6. Enrollment Distribution Across Age Groups**



This figure shows enrollment distributions of XHB and critical illness insurance across different age groups. The distribution of the population across different ages is also plotted.

**Figure 7: Incidence Rates of XHB and Critical Illness Insurance Across Age Groups**



This figure shows the incidence rates of age groups for XHB and critical illness insurance.

## Appendix

### Appendix 1. Mutuality Principle: A Review

This appendix summarizes Borch (1962)'s theorem which derives conditions for optimal risk sharing under the state contingent framework. Imagine we are in a world with no trading costs. There are  $n$  risk averse agents and a finite number of possible future states of nature,  $s = 0, 1, 2, \dots, S-1$ . While which state prevails in the future is unknown, there is a probability  $p^s$  attached to the realization of state  $s$ . Use  $w_i^s$  to denote the uncertain wealth to individual  $i$  in state  $s$  and use  $n_s$  to denote the price of the Arrow-Debreu asset in state  $s$ . Then, agent  $i$  chooses a consumption plan in different states,  $c_i^0, c_i^1, \dots, c_i^s, \dots, c_i^{S-1}$  to maximize her expected utility:

$$\max_{c_i^0, c_i^1, \dots, c_i^{S-1}} EU_i[c_i^s] = \max_{c_i^0, c_i^1, \dots, c_i^{S-1}} \sum_{s=0}^{S-1} p_i u_i[c_i^s] \quad (1)$$

subject to the wealth constraint for any agent whereas the value of the agent's new portfolio equates the value of her initial endowment:

$$E[\Pi^s(c_i^s - w_i^s)] = 0 \text{ for } \forall i \quad (2)$$

The first-order conditions for the problem can be expressed as:

$$u_i'[c_i^s] = \pi^s \eta_i \text{ for all } s \quad (3)$$

where  $\pi^s = \frac{\Pi^s}{p^s}$  (the price of state  $s$  per unit of state and  $\eta_i$  is the shadow cost of violating the wealth constraint, Eq. (2)).



The above expression describes the market participant's tradeoff at the equilibrium point.  $u'_i[c_i^s]$  is the marginal utility of consumption for agent  $i$  in state  $s$ ; i.e., the gain in the agent's utility given a change in her consumption in state  $s$ .  $\pi^s \eta_i$  represents the shadow cost for agent  $i$  when its consumption deviates from the optimal consumption,  $\hat{c}_i^s$ .

In equilibrium, an individual agent  $i$ 's wealth change in state  $s$  is  $\hat{c}_i^s - w_i^s$ , which can be denoted as  $\hat{z}_i^s$ .

Summing up across individuals in each state  $s$ , we have that in each state the aggregate net wealth change is 0 when the market is cleared:  $\sum_{i=1}^n \hat{z}_i^s = 0$ .

$$\sum_{i=1}^n \hat{c}_i^s = \sum_{i=1}^n w_i^s = w^s \quad (4)$$

Intuitively, in absence of transaction costs, risk sharing does not alter the aggregate wealth in any state even if it makes changes to individual agents' consumption plan in individual states.

Now let us consider the simple case of idiosyncratic uncertainty - i.e., the aggregate wealth is constant even though individual wealth varies across states. Since the risk can be diversified away when an individual pools her risk with other participants, she would have the same consumption regardless of the state. In other words, agents hold a risk-free portfolio. It can be easily shown that  $\pi^s = \frac{1}{1+r}$  where  $r$  is the risk-free rate of return. Accordingly, the state price  $\pi^s$  is fully determined by  $p^s$ :

$$\pi^s = \frac{p^s}{1+r} \quad (5)$$

It states that when the aggregate risk can be fully diversified away, the state contingent price does not depend on individual agents' risk tolerance, but fully depends on their probability of having state  $s$ . An individual is willing to pay a higher price for state  $t$  when she has a greater likelihood to have the state. Take *XHB* as an example. A greater critical illness likelihood results in a higher participation cost for *XHB*.

Next we consider the general case that the aggregate wealth is not expected to be the same across states. Under the assumption that any individual's optimal consumption,  $c_i^s$  is equally sensitive to any individual's initial wealth, the rule for efficient risk sharing can be obtained by Equations A3 and A4 - the sensitivity of agent  $i$ 's consumption to the aggregate wealth,  $c_i^{s'}(w_s)$  ( $w_s$  represents the aggregate wealth of state  $s$ ), is proportional to agent  $i$ 's risk tolerance to the sum of individual risk tolerance:

$$\frac{dc_i^s}{dw_s} = \frac{t_i}{\sum_i^n t_i} \quad (6)$$

where  $t_i = \frac{u'(c_i^s)}{u''(c_i^s)}$  stands for risk tolerance for agent  $i$ .

In other words, any increment in an agent's wealth should be shared in proportion to individual risk tolerances. Details of the derivations can be found in Wilson (1968). Under the specific setting of critical illness risk sharing, when the aggregate cost of critical illness is uncertain, we expect less risk-averse agents to take more risks.

## Appendix 2. List of Critical Illnesses

**Panel A: Critical Illness**

#	Critical illnesses	CBIRC 6	CBIRC 25
1	Malignant tumor/cancer	Yes	Yes
2	Acute myocardial infarction	Yes	Yes
3	The sequelae of severe stroke	Yes	Yes
4	Major organ transplantation or hematopoietic stem cell transplantation	Yes	Yes
5	Coronary artery bypass surgery (or coronary artery bypass grafting)	Yes	Yes
6	End-stage renal disease (or chronic renal failure uremia period)	Yes	Yes
7	Multiple limbs are missing		Yes
8	Acute or subacute severe hepatitis		Yes
9	Benign brain tumors		Yes
10	Decompensation period of chronic liver failure		Yes
11	Sequelae of severe encephalitis or sequelae of meningitis		Yes
12	Deep coma		Yes
13	Deafness in both ears (no compensation for illness before 3 years old)		Yes
14	Blindness (no compensation for illness before 3 years old)		Yes
15	Paralysis		Yes
16	Heart valve surgery by thoracotomy		Yes
17	Severe Alzheimer's disease		Yes
18	Severe brain damage caused by external forces		Yes
19	Severe Parkinson's disease		Yes
20	Severe degree burns		Yes
21	Severe primary pulmonary hypertension		Yes
22	Severe motor neuron disease		Yes
23	Loss of language ability (no compensation for illness before 3 years old)		Yes
24	Severe aplastic anemia		Yes
25	Aortic surgery with thoracotomy or laparotomy		Yes
26	Severe infective endocarditis		
27	Severe muscular dystrophy		
28	Open surgery for acute hemorrhagic necrotizing pancreatitis		
29	Paralysis caused by polio		
30	Severe progressive supranuclear palsy		
31	Human immunodeficiency virus (HIV) infection caused by blood transfusion		
32	Craniotomy (including ruptured cerebral aneurysm clipping surgery)		
33	Severe heart failure caused by myocarditis		
34	Severe myasthenia gravis		
35	Severe medullary cystic disease		
36	Resection of pheochromocytoma		
37	Idiopathic chronic adrenal insufficiency		
38	Severe elephantiasis		
39	Ebola virus infection		
40	Severe Crohn's disease		
41	Severe chronic recurrent pancreatitis		
42	Severe chronic constrictive pericarditis		
43	Severe systemic scleroderma		
44	Severe primary cardiomyopathy		
45	The third type of osteogenesis imperfecta		
46	Primary sclerosing cholangitis		
47	Aortic dissection aneurysm		
48	Continued vegetative state		
49	Severe necrotizing fasciitis		
50	Severe hemorrhagic dengue fever		
51	Severe Kawasaki disease with coronary aneurysm		
52	Severe dementia caused by non-Alzheimer's disease		
53	Alveolar proteinosis		
54	Severe heart failure caused by pulmonary heart disease		
55	Severe autoimmune hepatitis		
56	Severe hepatolenticular degeneration		
57	Multiple root avulsion of brachial plexus		
58	Intellectual disability caused by disease or trauma		
59	Severe syringomyelia		
60	Tumors in the spinal cord		
61	Severe spinal cerebellar degeneration		
62	Sequelae of severe spinal vascular disease		

63	Progressive multifocal leukoencephalopathy
64	End-stage lung disease
65	Systemic juvenile rheumatoid arthritis
66	Biped amputation due to diabetes complications
67	Autologous hematopoietic stem cell transplantation
68	Aggressive hydatidiform mole (or malignant hydatidiform mole)
69	Hemolytic uremic syndrome
70	Severe cranial fissure meninges or meninges bulging
71	Resection of left ventricular aneurysm
72	Permanent nerve damage caused by bacterial meningococcal meningitis
73	Severe lupus nephritis
74	Pancreas transplantation
75	Severe subacute sclerosing panencephalitis
76	Severe type 1 diabetes
77	Complications of severe intestinal diseases
78	Severe Fanconi syndrome (no compensation for illness before 3 years old)
79	Severe myelodysplastic syndrome
80	Severe spina bifida spinal cord meninges or meninges bulging
81	Human immunodeficiency virus (HIV) infection caused by organ transplantation
82	Severe Eisenmenger syndrome
83	Severe coronary heart disease
84	Severe Creutzfeldt-Jakob disease
85	Fulminant ulcerative colitis
86	Permanent irreversible joint dysfunction caused by rheumatoid arthritis
87	Severe ankylosing spondylitis
88	Severe Reye's syndrome
89	Severe pulmonary lymphangiomyomatosis
90	Gangrene caused by hemolytic streptococci
91	Severe facial burns caused by accidents
92	Severe multiple sclerosis
93	Severe hand, foot and mouth disease with complications
94	Thoracotomy for cardiac myxoma
95	Severe acute disseminated intravascular coagulation
96	Severe secondary pulmonary hypertension
97	Severe arthritis
98	Severe Brugada syndrome
99	Severe hemophilia A and B
100	Severe infant progressive spinal muscular atrophy

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**Panel B: Rare Illness**

#	Name
1	Gaucher disease
2	Fabry disease
3	Mucopolysaccharidosis
4	Pompe disease
5	Langerhans cell histiocytosis

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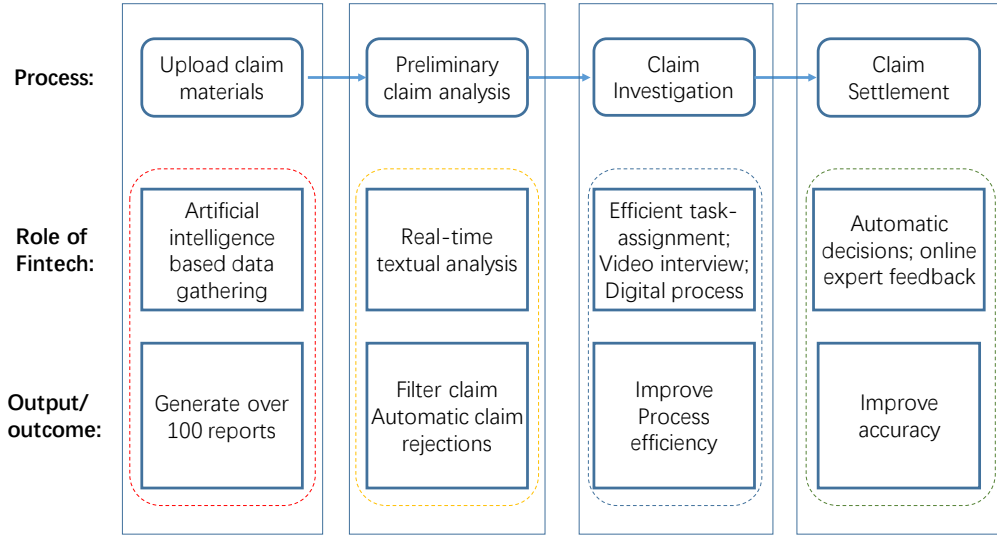
### Appendix 3. *XHB*'s Fintech-based Claim Process

Figure C1 shows how Fintech is involved in the four key steps of *XHB*'s claim process: i) claim submission and preparation, ii) preliminary claim screening analysis, iii) formal investigation, and iv) claim adjustments. In the first step, claimers upload their claim materials into the *XHB* claim system through an Alipay mobile application. All documents are converted to digital data through an optical character recognition (*OCR*) program. The system sends automatic messages to claim submitters for file replacements when submissions are not legible (either due to a poor image quality or an inappropriate file format). Sorting information based on keywords, the system generates over 100 reports that will be used in subsequent steps. This results in a more standardized and efficient claim process.

In the second step, the platform applies textual analysis on submitted files to perform a preliminary critical illness claim analysis. A claim is rejected if it does not meet the payment standards, such as a claim for an illness not on the covered illness list, pre-existing condition, or an illness occurring during the first 90-day trial period. According to Ant Financial, 50% of submitted claims are rejected in the pre-screening stage - 100,000 out of 200,000 cases submitted claims were declined in this step in 2020. As this step is purely handled by the artificial intelligence based system, it involves zero human input. This design substantially lowers *XHB*'s claim adjustment costs.

The third step is to investigate claims passing the initial screening stage. Considered to be labor intensive, the main tasks of this step includes interviewing claimants and collecting documents and witness reports from hospitals and other related parties. To improve efficiency (e.g., tracing investigators and assign one in the nearest location for a hospital visit), *XHB* has a dispatching system building on artificial intelligence (*AI*) to arrange tasks to third-party investigators. Investigators are required to constantly update their progress and communicate with the system in case they encounter any issues; the entire process is recorded in a digital form. The standardized procedure helps *XHB* to optimize human involvement, cut its labor costs, and make claim processing more stringent.

The final step is to settle claims. *XHB* settles undisputed cases instantly - either accepting the claim and making payments or rejecting the claim. It refers disputable claims to medical experts within its network. These experts are typically accessible online and they provide recommendations to the system. This procedure substantially improves accuracy of *XHB* claim handling. In 2020, *XHB* made payments to 52,682 claims, which is comparable to the total number of critical illness claims processed by the largest insurance company in China.



**Figure C1: Fintech in XHB Claim Process**

## Appendix 4. Proofs

### 4.1 Proof of Eq. (6): $\frac{\partial E u^x}{\partial N} \propto \left( \frac{\partial p^x}{\partial N} + \gamma \frac{\partial \sigma}{\partial N} \right)$

We take derivatives of the expected utility specified in Eq. (3) (in the sense that pool size would only affect the participant's expected utility in period  $t$ ). Using  $N$  to denote the aggregate number of participants for  $XHB$ , we have:

$$\begin{aligned} \frac{\partial E[u^x]}{\partial N} &= \frac{\partial E[u(w_t - \pi_t^x)]}{\partial N} \\ &= \frac{\partial u(w_t - p^x K(1 + \lambda^x) - \Pi_t^x)}{\partial N} \end{aligned}$$

where  $p^x$  and  $\lambda^x$  are the expected incidence rate and the administrative cost of  $XHB$ ;  $\Pi_t^x$  is the premium of  $XHB$ 's pricing risk.

$\Pi_t^x$  can be expressed as  $1/2A_s[K(1 + \lambda^x)]^2\sigma_x^2$ . Inserting it to the above expression, we have:

$$\frac{\partial E u^x}{\partial N} \propto \left( \frac{\partial p^x}{\partial N} + \gamma \frac{\partial \sigma}{\partial N} \right) \quad (1)$$

where  $\gamma = A_s K(1 + \lambda^x)\sigma$ .

### 4.2. Proof of Eq. (13): $\frac{\partial W_2}{\partial W_1} \Big|_X = \frac{\pi_t^x - K^x}{\pi_t^x} = 1$ .

The line EX is the  $XHB$ 's breakeven line. As plotted in Figure 3, the coordinators of E and X are respectively  $(w_t + w_{t+1}, w_t + w_{t+1} - O)$  and  $(w_t - \pi^x + w_{t+1}, w_t - \pi^x + w_{t+1} - O + K^x)$ . Scaling the difference between the payoffs in loss states ( $W_2$ ) by the difference between payoffs in no-loss states ( $w_t$ ), we have the slope of EX to be  $\frac{\pi_t^x - K^x}{\pi_t^x}$ .

Recall that  $\pi_t^x = p_t^x K(1 + \lambda^x)$ (Eq. (1) and insert it in the expression for the slope of EX. This gives us the following:

$$\frac{\partial W_2}{\partial W_1} \Big|_X = 1 - \frac{1}{p_t^x(1 + \lambda^x)}$$

Thus, we prove Eq. (13).

Eq. (14) can be proved in the same way.

### 4.3 Proof of Eq. (15)

Following Eq. (3), we have  $E[u^x] = E[u(w_{st} - \pi_t^x)] + \beta[(1 - p_s)u(w_{s,t+1}) + p_s u(w_{s,t+1} - O + K^x)]$

Similarly,  $E[u^e] = E[u(w_{st})] + \beta[(1 - p_s)u(w_{s,t+1}) + p_s u(w_{s,t+1} - O)]$

Taking the difference between  $E[u^x]$  and  $E[u^e]$ , we have Eq. (15).

Eq. (16) can be obtained in a similar way.

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## **5. Ant Financial's Online Survey on Mutual Aid Participation**

The original survey contains 12 questions. Based on the agreement with Ant Financial, we only include 5 questions relevant to this study.

1) Are you currently participating in a social security program?

- Employer-sponsored social health insurance
- Urban resident social insurance
- Public health care
- Do not participate in any of the above programs

2) Beside social security medical insurance programs, do you currently have other medical insurance?

- Commercial health insurance
- Mutual aid program
- None of the Above

3) How many online mutual aid programs have you participated in?

- Not participating in any mutual aid program
- Participating in one mutual aid program
- Participating in two mutual aid programs
- Participating in three or more programs

4. If you are currently participating in the online mutual aid program, have you also purchased online mutual aid for your family members?

- For children
- For parents
- None

5) Pick the range of your annual income.

- CNY 50,000 or less
- CNY 50,000-100,000
- CNY 100,000-200,000
- CNY 200,000-500,000
- CNY 500,000 or above

# RISK PERCEPTION AND CATASTROPHE INSURANCE DEMAND - AN ANALYSIS BASED ON EVOLUTIONARY GAME AND PROSPECT THEORY

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## **Abstract**

This research examines the hypothetical impact of people's risk perception on the demand for catastrophe insurance. First, we use the Expected Utility theory to explain the demand for catastrophe insurance. Yet, it is difficult for the Expected Utility theory to associate risk perception with insurance demand. Then, we integrate the Prospect theory to characterize the consumers' risk value functions. With the value functions describing risk perception, an evolutionary game model for the catastrophe insurance market including consumers, insurers and government is constructed. Through the analysis of the equilibrium of the evolutionary game, we find consumers' risk perception and transaction costs, insurers' spillover effect and opportunity costs, and government subsidies have influences on the market equilibrium. Finally, using prefecture-level take-up rate of flood insurance as a proxy for household insurance demand, we empirically prove part of the aforementioned theoretical findings. Furthermore, we confirm some paths of risk perception affecting demand for flood insurance: age, education, inherent risk level and financial literacy have influences on people's perception of flood experience and thus affect the demand for flood insurance. These findings provide theoretical and empirical evidence for various economic theories and important policy references for countries aiming for the future development of flood insurance.

**Keywords:** Catastrophe Insurance; Prospect Theory; Evolutionary Game; Risk Perception; Financial Literacy

# INSTITUTIONAL CONSIDERATION FOR IMPROVING THE SOUNDNESS OF INSURANCE COMPANIES IN KOREA: FOCUSING ON AN INTERNAL MODEL USING HEALTH GRADES AND INSURANCE PREMIUM DIFFERENTIATION

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## **Abstract**

The increase in life expectancy of policyholders is closely related to the health care and healthcare industries. Nevertheless, the financial supervisory structure does not deviate from the framework of the past, and it is a stumbling block to the development of Insurtech. The purpose of this study is to examine whether health rating modeling and ex-post verification are properly performed in handling insurance products that reflect health grades and health scores within the scope of supervisory authorities' regulations, and to examine whether there is a possibility to improve the soundness of insurance companies.

Therefore, the health rating modeling and ex-post verification are compared with the internal model of bank credit risk applied to model building, and whether the standards are met with the IAIS core principles, whether it can be added to the current insurance supervision laws and management status evaluation (RAAS), etc. is examined from the perspective of approval of the insurance risk-related internal model.

As a result of study, risk factor related to the solvency ratio calculation and the definition of health accident are similar. It was found that the insurance company's internal model construction standards according to the IAIS core principles do not have any problems.

**Key words:** Soundness supervision, healthcare, health grade, internal model, solvency ratio

## **1. Introduction**

The recent increase in life expectancy has drawn special attention to health care. In public insurance at the government level as well as insurance in the private sector, the calculation of insurance premiums based on the amount of medical use related to an individual's health level in common and discounts or premiums through it are rapidly developing along with the development of fintech. On the other hand, various health incentives are provided according to the vitality of the insured, and many services are being introduced in the insurance industry.

In spite of the development of the healthcare industry, the financial supervision structure does not deviate from the framework of the past. However, it is not enough to criticize the regulatory framework of the supervisory authority. Efforts must be made on several fronts for supervisors to change their regulatory framework.

In this paper, considering this reality, above all else, this paper builds a proper model for insurance products that handle insurance products that reflect health grades and health scores within the scope of supervisory authorities' regulations, and measures to improve the soundness of insurance companies in the future. Therefore, this study aims to examine the institutional aspects of the Korean supervisory authority overseeing the soundness of insurance companies in various ways in relation to health grades and health scores.

First, the solvency system(RBC), which is the most important criterion for evaluating the soundness of an insurance company, and the IAIS insurance core principles that are the basis of insurance supervision in Korea will be reviewed.

In addition, the current financial supervision regulations and financial supervision regulatory measures such as the Risk Assessment and Application System (RAAS) will be reviewed in terms of the method of calculating the required capital of insurance companies.

Therefore, in this study, the health supervision measures of insurance companies are limited to whether they are suitable for selling insurance products using health grades and health scores. In other words, it is to examine whether the method of calculating the health rating is reasonable, and whether the model is properly constructed and reasonable conformity verification has been carried out since the model applied the bank's credit evaluation model. This is to compare the credit risk internal model methodologies and suitability verification methods of banks to check whether they are suitable for the level of approval of the supervisory authority, etc., and to check whether there are any unreasonable points in continuously selling products.

The preceding studies related to this study are as follows. First of all, in terms of suggesting a method to be used for risk management that affects the risk covered by insurance, Chanhee Lee (2005) and Beomsu Lee and Kyungmo Lee (2006) described the underwriting method by classifying substandard objects in consideration of risk factors for death. Improvement plans were suggested. Changsoo Lee et al. (2009) discussed the underwriting standard setting and its effects that reflected death risk factors using life insurance policyholder data. Kwon & Jones (2006) quantified the difference in life insurance and pensions between groups with different risk levels within the same sex and age. Lemarire (2000) raised the issue that insurance companies need to reflect family history in underwriting methods. Linner (2020) suggested that insurance can be benchmarked by differentiating risk groups using polygenic scores for each disease and death factor through genetic testing. Lee hang-seok et al. (2017) proposed a differentiating plan for insurance premiums that reflected risk characteristics for each policyholder by applying the reliability theory, and designed a premium differential model for indemnity medical insurance using policyholder performance variables .

Looking at the previous studies related to the credit rating model, Hong jong-sun and Park yongseok (2005) presented a credit rating model using a decision tree model and compared and analyzed the derived results with existing rating models. Jongyoon Kim and 2 others (2019) discussed ways to evaluate creditworthiness by using personal online commerce data. Kim et al. (2019) proposed a method of deriving a score through personal credit evaluation by applying a logistic model based on online customer transaction information, which is non-financial information.

Looking at previous studies related to health grades, Yoo et al. (2017) empirically analyzed that healthy age derived based on information from various biomarkers can be usefully used to predict future mortality rates. Kang et al. (2018) used healthy age to predict an individual's health, aging status, death, and disease incidence according to age. Also, Pierleoni et al. (2019) introduced a system that can estimate the healthy age of people belonging to the elderly by wearing equipment that can measure body functions. Hyukseong Kwon and two others (2020) applied the credit rating calculation model of the bank to model the health rating and health score, and applied them to insurance products and commercialized them.

Regarding the differentiated response of each insurance company and consumer welfare in relation to the solvency system and insurance company management, Lee Sangjin (2018) suggested that economic inefficiency in the insurance market may occur if policyholders default on default rates. It was necessary to introduce a solvency capacity system. Lee, Bomi (2019) has proclaimed that premiums are determined by the mathematical and statistical techniques to reflect the risks. The sum of premiums paid by the risk group and the total amount of insurance paid by the insurer shall be equivalent in accordance with the principle of compensating benefits and the principle of equivalence. But, After the contract has been concluded, if the alteration or decrease of risks happen, the balance between the premium and magnitude of risk is upset. The Commercial Law stipulates that if there is an alteration in the risk, the premium change can be claimed.

Excluding the introduction, this thesis provides an overview of insurance company soundness (RBC) regulation in Chapter II, and the systematic review of health rating calculation and premium differential insurance business in Chapter III to model health ratings and health scores to sell insurance products. The purpose of this study is to examine whether the soundness of insurance companies can be improved with respect to insurance business behavior.

## **2. Insurance company soundness regulation overview**

### ***2.1. Insurance company solvency system (RBC)<sup>1</sup>***

#### *2.1.1. Significance of solvency regulation*

Solvency is the concept of net assets that insurance companies are required to hold in addition to assets necessary for resolution, that is, ability to meet insurance payment obligations to policyholders. It functions as a buffer for unexpected future situations. As a measure of an insurance company's financial soundness, solvency ratio is the ratio of solvency amount divided by the solvency standard amount.

Before examining the solvency system, it is necessary to examine the soundness system of insurance companies. The Insurance Business Act establishes soundness regulations to reflect the unique principles and systems unique to the insurance industry for the purpose of enhancing capital and promoting sound management of insurance companies for the continuous maintenance and existence of insurance companies. The core of the prudential regulation of insurance companies is to secure the ability to pay so that the payment of

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<sup>1</sup> Financial Supervisory Service.(2022). Introduction to Financial Supervision.

insurance money, etc. claims by policyholders can be guaranteed. In order to secure such solvency, a liability reserve is required to be accounted for, and a solvency system has been introduced and implemented.

Relevant legal regulations stipulate that the solvency amount exceeds the solvency standard amount.

It means that the solvency ratio is more than 100%. If an insurance company fails to meet the solvency ratio of 100%, it does not immediately fall into a state of insolvency, but Prompt Corrective Actions are implemented to protect policyholders and secure the soundness of the insurance company's management.

Here, the solvency amount corresponds to the net assets of the insurance company, and refers to the surplus items the company holds in excess of the amount to be refunded to the policyholder (liability reserve). It is a kind of surplus concept that insurance companies can prepare for the appearance of unpredictable risks. As it can be seen, there is a close relationship between solvency and reserves. One of the most important aspects of the soundness principle of an insurance company is the concept of a reserve. Insurance companies are obliged to account for the liability reserve. The Insurance Business Act stipulates the calculation method and accumulation method of the liability reserve. An insurance company shall calculate a liability reserve and an emergency risk reserve according to the type of insurance contract for each settlement period and record it in a separate book. Liability reserve is a legal reserve that is accumulated to cover liabilities such as insurance money, refunds, and dividends to be paid to the policyholder in the future by paying expenses (planned business expenses, etc.) out of the premiums paid annually from the policyholder when an insurance contract is concluded. The amount accumulated in excess of these reserves is the solvency amount. To determine whether an insurance company has sufficient solvency, it calculates the standard amount of solvency and compares it with the solvency amount by comprehensively considering the relevant risks such as insurance risk, interest rate risk, market risk, credit risk, and operating risk. In this way, the insurer's capital adequacy is measured.

### *2.1.2. Introduction and change of solvency system*

Unlike the current solvency system until the 1998 financial crisis, a method of evaluating solvency (life insurance company) by comparing solvency and cancellation-type liability reserves, or regulating the insurance premiums so that they do not exceed a certain percentage of policyholders' surplus (non-life insurance companies) have been operating the solvency limit.

Meanwhile, after the use of IMF bailout funds in the second half of 1998 in Korea, in response to reflections on the need to improve financial practices and management forms and the level of supervision of financial companies to meet international standards and recommendations from the IMF, the solvency system (Solvency I), which was applied in the EU at the time, was introduced in May 1999.

However, although Solvency I is simple and convenient to operate, the limitation was pointed out that it cannot calculate the required capital requirement by comprehensively evaluating various risks faced by insurance companies. Canada, the United States, and Japan switched to the RBC (Risk Based Capital) method to accurately reflect various risks,

and the EU has also been implementing Solvency II since 2016. In order to overcome the limitations of the previous EU-style solvency system (Solvency I) and introduce a risk-focused preventive and preemptive supervisory system, Korea has also adjusted the risk-based capital (RBC method) of advanced countries in accordance with domestic conditions since April 2009. A modified RBC system was introduced. After two years of parallel implementation, from April 2011, only the RBC-type solvency system was allowed.

In addition, from 2023, the new International Accounting Standards (IFRS17) on insurance contracts that evaluate insurance liabilities at market price will be implemented. At the same time, the new solvency system (K-ICS), which replaces the current RBC, will be implemented.

### *2.1.3. Insurance core principles related to IAIS risk management<sup>1</sup>*

Established in 1994, the International Association of Insurance Supervisors (IAIS) is the international standard-setting body responsible for developing and assisting in the implementation of supervisory and supporting material for insurance supervision.

In response to the requirements of the Financial Stability Board, the International Association of Insurance Supervisors (IAIS) has developed the Insurance Capital Standard (ICS) for Internationally Active Insurance Group (IAIG).

The risk management principles presented by the IAIS in relation to health grades and health scores are briefly summarized as follows.

The supervisor requires the insurer to establish within its risk management system an enterprise risk management (ERM) framework for solvency purposes to identify, measure, report and manage the insurer's risks in an ongoing and integrated manner. (ICP §16)

ERM for solvency purposes is the coordination of risk management, strategic planning, capital adequacy, and financial efficiency in order to enhance sound operation of the insurer and ensure the adequate protection of policyholders. Capital adequacy measures the insurer's assessment of residual risk of its business, after overlaying the mitigating financial effect of the insurer's established risk management system. Successful implementation of ERM for solvency purposes results in enhanced insight into an insurer's risk profile and solvency position that promotes an insurer's risk culture, earnings stability, sustained profitability, and long-term viability, as well as the insurer's ability to meet obligations to policyholders. (§16.0.1)

The ERM framework should enhance an insurer's understanding of material risk types, their characteristics, interdependencies, and the sources of the risks, as well as their potential aggregated financial impact on the business for a holistic view of risk at enterprise level. (§16.0.5)

The objective of ERM is not to eliminate risk. Rather, it is to manage risks within a framework that includes self-imposed limits. In setting limits for risk, the insurer should consider its solvency position and its risk appetite. A risk limits structure is used to establish

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<sup>1</sup> IAIS.(2019). Insurance Core Principles and Common Framework for the Supervision of Internationally Active Insurance Groups

guardrails on an insurer's risk profile to optimize its returns without endangering the ability of the insurer to meet its commitments to policyholders. (§16.0.6)

The insurer should have adequate governance and internal controls in place for models used in the ERM framework. The calculation of risk metrics should be transparent, supportable, and repeatable. (§16.0.8)

## ***2.2. Financial supervisory regulation related to insurance company internal model***

### ***2.2.1. Current financial supervision act***

The management soundness regulations of the insurance industry include limit regulations such as credit extension limits and investment limits, regulations to enhance asset soundness such as asset quality classification system and loan loss provisioning system, solvency capacity ratio, timely corrective measures, and management status evaluation system.

The prudential regulation related to health ratings is to determine how much the solvency ratio can be improved through sound risk management of insurance companies. Therefore, let's look at the prudential regulation related to the health grade.

The Insurance Business Supervision Regulations Article 7-5(Risk Management System, etc.) ① Insurance companies shall appropriately manage risks, such as timely recognition, measurement, monitoring, and control of risks arising in the course of insurance business, asset management, or other business activities. A system that can manage and evaluate and manage internal capital adequacy("Self risk and solvency evaluation system") must be in place, and the details shall be determined by the Governor.

② Insurance companies shall measure and manage major risks, such as insurance risk, interest rate risk, market risk, credit risk, and operational risk, arising from various transactions by type.

③ An insurance company shall properly reflect the risk measurement results under paragraph 2 in establishing business goals, such as calculating the solvency standard to be managed internally.

④ In order to manage risks effectively, an insurance company shall set and operate the risk burden limit and transaction limit for each guaranteed risk collateral, by transaction, by department, or by person in charge.

Let us examine the contents of the bylaws for the enforcement of insurance business supervision regulations enacted by the Governor of the Financial Supervisory Service. Insurance Business Supervision Regulations Article 5-6-2 (Self-Risk and Solubility Assessment) ① The in-house risk and solvency assessment system according to Article 7-5 Paragraph 1 of the Supervisory Regulations includes the following matters.

- i) Conducted regularly at least once a year to obtain approval from the board of directors
- ii) Identify and evaluate all significant risks that are currently being faced or that may be faced in the near future.
- iii) Evaluate the level of solvency required for future business continuity.



iv) Use an internal model for material risks (at least one) to properly reflect the risk characteristics, scale, and complexity of the company, and approve the internal model establishment plan for integrated risk management at the board of directors.

v) Use the evaluation results for business management and decision-making, such as limit setting, capital planning, performance evaluation, and dividend determination.

② Notwithstanding Paragraph 1, if the use of the internal model is insufficient, the insurance company may suspend the establishment of its own risk and solvency evaluation system as determined by the company's board of directors.

③ The Governor may evaluate the adequacy of an insurance company's own risk and solvency evaluation system through management status evaluation.

### *2.2.2. Management status assessment (RAAS)<sup>1</sup>*

The financial supervisory authority has been using the CAMEL method since the fourth quarter of 2012 as a means of monitoring soundness, and then switched to the risk-based management evaluation system of the RAAS (Risk Assessment Application System). In order to systematically and comprehensively evaluate an insurance company's risks and factors of poor management, the risk-based management evaluation system is divided into 7 evaluation categories: business management risk, insurance risk, interest rate risk, investment risk, liquidity risk, capital adequacy, and profitability. It is a system that calculates the overall risk rating by conducting quantitative and non-quantitative evaluations for each sector. Individual evaluation items are evaluated on a scale of 1 to 5, and an overall score is calculated according to the weight, and then the overall rating is evaluated in 5 to 15 steps (1+ grade to 5-grade) for each insurance company. From March 2017, a separate grade has been assigned to internal control areas that are part of business management risks. Periodic quantitative evaluation is carried out every quarter and used for supervision and inspection, such as strengthening regular monitoring of vulnerable companies and vulnerable sectors. In addition, the management status evaluation grade is used as a standard for timely corrective action. If the overall grade is grade 3 or higher, the capital adequacy evaluation grade is grade 4 or lower, or two or more of the evaluation grades in the insurance, interest rate, and investment risk areas are grade 4 or lower. If the overall rating of improvement recommendation and management status evaluation is less than 4, it is used as a standard for management improvement requests.

## ***2.3. Calculation of required capital related to insurance company internal model***

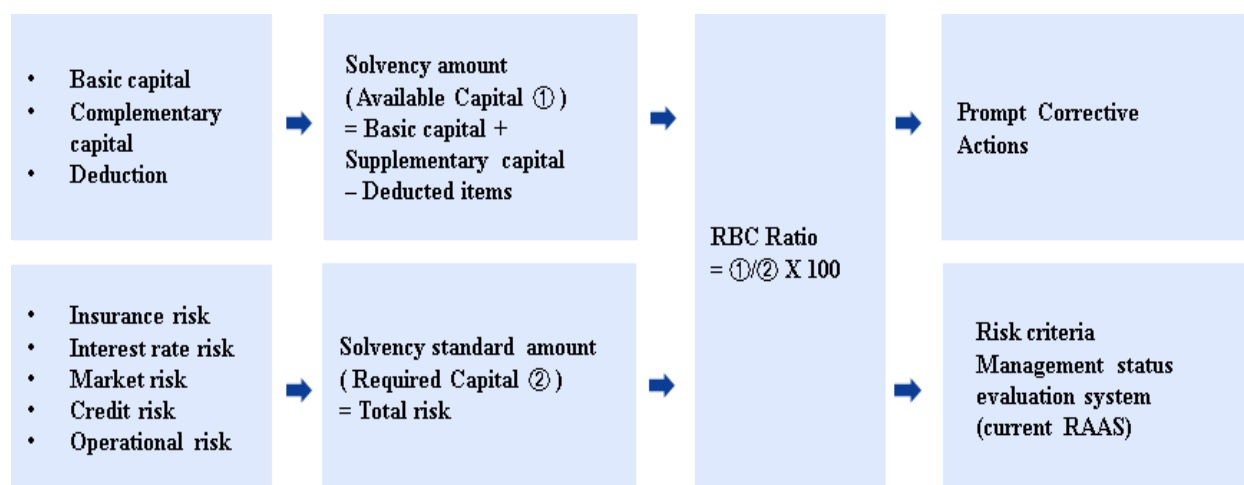
### *2.3.1. Outline of calculation of solvency ratio*

RBC calculates the amount of risk inherent in insurance companies and allows them to hold capital corresponding to the risk. The calculation structure of the solvency ratio is as follows.

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<sup>1</sup> Financial Supervisory Service .(2021). Insurance Company Risk Standard Management Assessment(RAAS) Manual

**Figure 1. Calculation structure of solvency ratio**



The solvency amount (available capital) functions as a risk buffer that allows the insurance company to maintain its solvency by compensating for unexpected losses in the event of an unexpected loss.

The solvency standard amount (required capital) refers to the required equity capital calculated by measuring the size of insurance, interest rate, market, credit, and operating risks inherent in the insurance company.

The solvency amount and solvency standard amount are calculated including companies that are connected with insurance companies, not individual insurance companies. However, if there is no consolidated company, it is prepared based on individual financial statements.

In principle, the consolidated RBC ratio is calculated on the basis of the consolidated financial statements according to International Accounting Standards No. 1110<sup>1</sup>, but the consolidated financial statements are used with some companies excluded from the scope of consolidation. Companies excluded from the scope of consolidation(1) non-insurance financial companies,(2) non-financial companies, and(3) overseas insurance companies for which the consistency, sufficiency and objectivity of data for calculating the solvency standard amount have not been secured. The available capital and required capital are calculated and added together.

The book value of the company’s capital investment excluded from the scope of consolidation shall be the value assessed by the equity method, and the accounting standards, unless otherwise stipulated in the insurance industry-related laws and regulations, follow the International Accounting Standards adopted.

### 2.3.2. Calculation of required capital for insurance companies related to health ratings<sup>1</sup>

Required capital is measured by dividing life/long-term non-life insurance risk, general non-life insurance risk, credit risk, market risk, and operating risk. Life/long-term non-life insurance risk is the risk of loss that can occur in an insurance contract, and is measured by

<sup>1</sup> Financial Supervisory Service.(2020). Amendment to the introduction of the new solvency system(K-ICS 3.0), p59~65

dividing it into death risk, longevity risk, disability·disease risk, long-term property/other risk, termination risk, project cost risk, and catastrophe risk. Life and long-term non-life insurance risk is generally measured according to the following principles.

*First*, life/long-term non-life insurance risk refers to the risk of loss due to various risk factors that may occur in insurance contracts of life insurance and long-term non-life insurance.

*Second*, life and long-term non-life insurance risk targets assets and liabilities that can directly or indirectly cause losses to the company when actuarial assumptions change.

*Third*, life/long-term non-life insurance risk is divided into death risk, longevity risk, disability·disease risk, long-term property/other risk, termination risk, project cost risk, and catastrophe risk, and the correlation coefficients between the detailed risks are reflected as follows to sum up.

**Table 1. Correlation coefficients between risks**

Division	Dead	Long live	Disability, disease	Long-term wealth	Termination	Business expenses	Catastrophe
Dead	1						
Long live	-0.25	1					
Disability, disease	0.25	0	1				
Long-term wealth	0	0	0	1			
Termination	0	0.25	0	0	1		
Business expenses	0.25	0.25	0.5	0.5	0.5	1	
Catastrophe	0.25	0	0.25	0.25	0.25	0.25	1

*Fourth*, life and long-term non-life insurance risk is evaluated by insurance contract in principle. Here, an insurance contract is a set of insurance guarantees made up of the same policy number, and may consist of one main contract and several special contracts. In addition, the required capital can be calculated by grouping insurance contracts with similar insurance risk attributes.

In this case, product groups should be classified according to the following basic principles.

① The grouping criteria should be able to be maintained stably for a long period of time, and the classification criteria should be established in consideration of risk attributes. Here, the risk attribute includes underwriting policy, payment compensation type, policyholder’s risk profile, insurance product characteristics such as guarantee structure, and business strategy linkage.

② Contracts belonging to the same group should not differ significantly in the nature of inherent risks. In other words, when an actuarial assumption is changed, the change in net asset value should occur in a similar direction.

③ The company must document the grouping standards, and when changing the grouping standards, analyze the necessity of the change and analyze the impact of the change, and follow the internal decision-making procedure based on the internal control standards.

Therefore, in order to model the health grade and measure the risk, the risk of death, the risk of longevity, and the risk of disability will be investigated in detail.

① Risk of death

i) The risk of death refers to the risk of an unexpected loss in connection with the death of the insured.

ii) The required capital for the risk of death is measured for insurance contracts in which the company's net asset value decreases due to an increase in mortality.

iii) The required capital for death risk is calculated as a decrease in the net asset value under the assumption that the mortality level increases by 12.5% during the entire insurance period(best estimated death rate  $\times$  1.125).

Required capital<sub>death</sub> = max ( $\Delta$  Net asset value | Death rate for the entire insurance period increased by 12.5%, 0)

② Longevity risk

i) Longevity risk refers to the risk of unexpected losses related to the death of the insured, just like the death risk.

ii) The required capital for longevity risk is measured for insurance contracts in which the company's net asset value decreases due to a decrease in mortality.

iii) The required capital for longevity risk is calculated as a decrease in the net asset value under the assumption that the mortality level decreases by 17.5% over the entire insurance period(best estimated death rate  $\times$  0.825).

Required capital<sub>Longevity</sub> = max ( $\Delta$  Net asset value | Death rate for the entire insurance period decreased by 17.5%, 0)

③ Disability·disease risk

i) Disability·disease risk refers to the risk of unexpected loss related to the insured's disability or disease.

ii) Required capital for disability·disease risk is measured for insurance contracts in which the company's net asset value decreases due to an increase in the risk rate of disability·disease risk collateral.

iii) The required capital for the risk of disability and disease is calculated by dividing the required capital for the straight-line compensation risk and the required capital for the loss compensation risk and then added up.

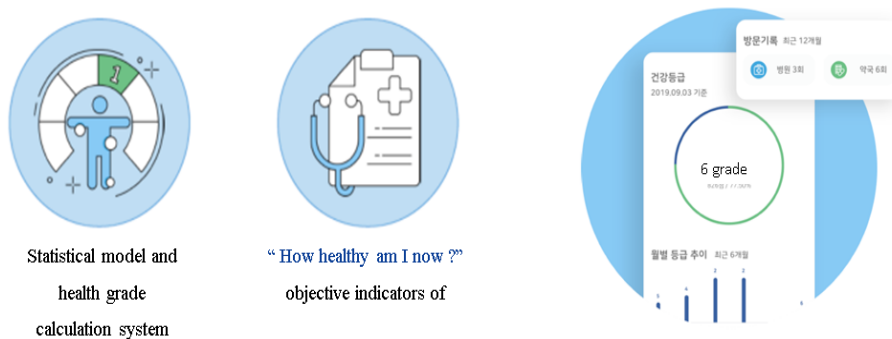
Required capital<sub>disability/disease</sub> = required capital<sub>fixed-rate compensation</sub> + required capital<sub>actual loss</sub>

### 3. Institutional consideration on the introduction of an internal model of insurance business for differentiating premiums using health grades

#### 3.1. Insurance business behavior for differentiating premiums using health grades

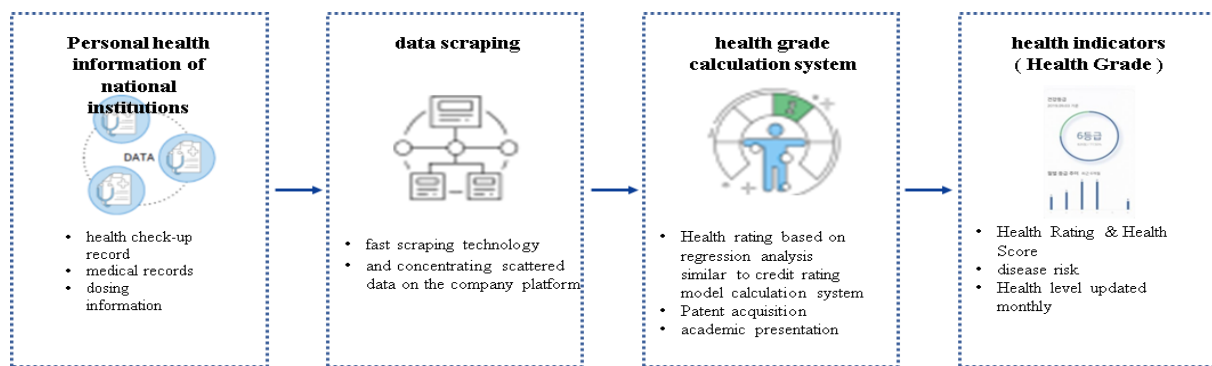
Company G prepared objective indicators based on statistical analysis of health status while developing insurance products using health grades. For this purpose, medical examination records and medical usage records were commercialized to be used as a platform to improve health and connect with financial rewards.

**Figure 2. Illustration of health grade and health score utilization**



The health rating calculation model developed a regression analysis-based system similar to the credit rating model for credit risk assessment of banks. The objective indicators such as health grade and health score were calculated, and the health grade could be updated monthly.

**Figure 3. Flow chart for calculating health grade**



The health grades created in this way were sold to domestic insurance companies as whole life insurance, a discount model for business expenses, health insurance with a discount model for business expenses, and risk differential model products, and were used for underwriting. For the launch of these products, it was reported to the Financial Supervisory Service and obtained exclusive use rights for six months with an insurance company.

#### 3.2. Health rating calculation methodology

##### 3.2.1. Definition of risk and risk rate

<Scope of health accidents>

Company G defined the scope of health accidents as deaths due to disease. The causes of death were cancer, cardiovascular disease, diabetes, and diagnosis of chronic lower respiratory tract disease. Health level was defined as the probability that the relevant health accident occurred within a certain period of time.

**Table 2. Scope of health accidents**

Range	Note	Variables affecting the occurrence of health accidents
death from disease	Excluding S and T among KCD codes	Physical characteristics, urine test, blood test, past medical history, questionnaire
Cancer, cardiovascular disease , diabetes chronic lower respiratory tract disease	Limited to cases where the same disease classification code appears twice in the same year	

\* KCD (Korean Standard Classification of Diseases)

The new solvency system (K-ICS 3.0) defines the risk rate as follows.(i) Based on the experience statistics of the company, the risk rate is calculated by dividing it by period, and the risk rate management policy such as the contract takeover policy of the future company is reflected. The period for empirical statistics should be set rationally in consideration of changes in the economic environment, etc., and applied consistently every period.

(ii) The risk rate should be calculated for each guaranteed risk collateral, and the following factors should be reasonably reflected.

① Death collateral: age, gender, occupation, elapsed period (reflecting adverse selection effect), contract underwriting policy, subscription amount size, sales channel, etc.

② Survival guarantee (annuity): age, gender, smoking, insurance premium level, annuity payment method and annuity size (reflecting adverse selection effect), contract underwriting policy, sales channels, etc.

③ Survival Guarantee (health): age, gender, smoking, occupation, elapsed period(reflecting adverse selection effect), unemployment rate, cause of disability, company's insurance accident handling practices, contract underwriting policy, sales channels, seasonal changes, etc.

④ General non-life insurance: amount covered by insurance, premium size, contract underwriting policy, seasonal change, insurance accident reporting method, economic environment change, social and institutional environment change, reinsurance subscription status, etc.

As a result, many companies are developing insurance products related to the health care industry. Along with the revitalization of the fintech industry, financial consumers' desire to improve their health and their interests with insurance companies that want to rationally calculate premiums and pursue insurance profits are in line with each other. However, in order to achieve this, it is necessary to define before developing an appropriate insurance product whether a discount on insurance premiums should be provided or premiums should be given to the sick in the case of health care. The fact that Company G developed an insurance product by modeling an individual's health grade and health score using the bank's credit rating calculation method seems to have upgraded the insurance and statistical models, health care industry and insurance product development to the next level. However, determining which stage is a health risk level comparable to an individual's bankruptcy<sup>1</sup> in the bank credit rating model can be seen as the most important factor in product development.

In the bank credit rating model for individuals, bankruptcy may correspond to the period in which an individual's life is determined to be death. However, the scope of health accidents defined in insurance products using health grades and health scores with the basic data of death collateral that corresponds to the insurance risk rate determined by the financial supervisory authority largely coincide. Rather, it can be said that the variables affecting the occurrence of health accidents are defined in more detail, which guarantees a wider range of accidents. This can be a reasonable criterion for calculating an appropriate insurance premium.

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<sup>1</sup> Banks using the internal model under Basel - define individual default as follows.

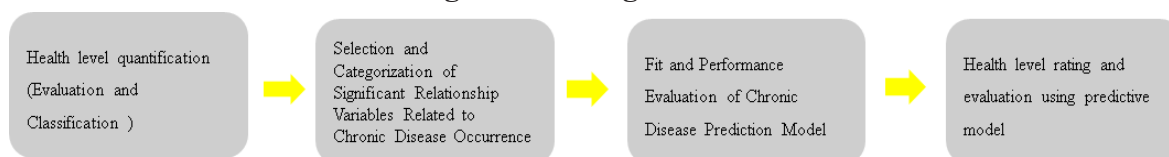
- It should be recognized as default when one of the following loss recognition events occurs(both borrower or account-based)
- Over 90 days overdue
- In case it is judged that the borrower will not be able to repay even a part of the debt if the borrower does not take action to claim repayment, such as disposition of the collateral
- In case of classification as non-profitable loan
- In case of classification or amortization of loss due to doubtful recovery or estimated loss due to credit deterioration
- In case of selling credit bonds at a risk of substantial economic loss due to deterioration in credit rating;
- Principal due to debt restructuring . If the receivable is reduced by a waiver or deferral of interest or related fees;
- In the case of a declaration of bankruptcy or a similar lawsuit filed against the borrower
- Where the borrower takes bankruptcy or similar measures to delay or avoid the repayment of debts to financial institutions;
- In case bad information provided by an external organization is recognized as default, the point at which the bank recognizes the information as default should be considered as default.

### 3.2.2. Building a rating model

< Health criteria rating model >

Company G modeled the probability of non-occurrence of health accidents by setting explanatory variables based on an individual's health information. A logistic regression model was used to build the model, and the results obtained from statistics were graded by the probability of non-occurrence of health accidents, and the rating model used in the credit rating model was applied according to the same age group and gender to be subdivided into risk groups.

**Figure 4. Rating flow chart**



In order to classify health scores according to health scores, the health scores standardized by age group are divided into 5-point intervals so that the data within each grade zone is sufficient and the difference in the incidence of health accidents between grade zones can be clearly seen. As a result, both male and female models were classified into 9 grades. In the case of the male age group, the score range for most sections was divided into around 30 points, and in the case of the female age group, the score range for each section was mostly divided into around 40 points. In the case of the male representative age group, the health accident incidence rate by grade was clearly divided within the range of 6.8% to 65.2% by grade and 15.4% to 75.2% by grade in the female representative age group. < Appendix table 1, 2 >

#### ① Comparison between bank credit rating system and rating model

Almost all banks use the credit rating and credit rating model for their lending business after getting the internal model approval from the Financial Supervisory Service. Credit ratings and ratings follow the segmentation process of retail exposure to credit loans in Basel II credit risk.<sup>1</sup> They are graded through a segmentation process as follows.

First, retail exposures must be identified.

Banks should segment their retail exposures into groups with homogeneous risk characteristics. Within retail exposure types such as residential mortgages, qualifying revolving transactions, and other retail, exposures are classified and classified by individual product line. Banks should look for exposures with similar loss characteristics, such as average loss rates or default rates. By grouping exposures can be identified and credit ratings determine the appropriate risk factors using statistical modeling, expert judgment, or an appropriate combination of both.

<sup>1</sup> Financial Supervisory Service . (2008). Under Basel II Best Practices for Integrated Risk Management (Volume 1 Credit Risk)



Although banks have a considerable degree of flexibility in the segment determination process, factors affecting credit ratings must be considered when determining segmentation criteria. Each segment is assigned a respective PD, LGD, and EAD.

*Second*, the segmentation system requirements must be met.

Segmentation systems must create segments that can properly differentiate risks within retail exposure types and reliably calculate risk metrics. Banks must demonstrate the degree of segmentation within the segmentation system and the distribution of exposures between segments. Here, granularity refers to how precisely the portfolio is classified into differentiated pools. A bank should have considerable flexibility in determining the degree of segmentation and conduct its own internal analysis to determine the appropriate level of segmentation for the purpose of producing a homogeneous segment. However, concentration of exposure to single or multiple segments does not, in itself, imply a flaw in the segmentation system. For example, a bank may have fewer risk segments than other banks as it lends itself to a narrow risk range. However, banks with a concentration of exposure in a particular segment should clearly document that the segmentation criteria are carefully described. Banks must also demonstrate that there is little difference in risk between exposures within a segment and that the segmentation method can yield reliable risk metrics.

*Third*, the results of the statistical credit approval model or credit rating model are directly integrated into the segmentation process.

Statistical results are directly integrated into the segmentation process, which is combined according to professional judgment when setting the segmentation criteria. Therefore, a bank can use the bank's own or external credit score as a segmentation criterion. In this case, the bank should conduct conformity verification for the rating selection and prove that it has an appropriate control structure for the credit rating system. In addition, if the credit score (CSS) is used as the segmentation standard, the adequacy of the credit rating model should be checked. If data from an external institution is used among the data used to develop the credit rating model, the reliability of the data and whether it can represent the customer of the bank should be checked. The discriminating power of the credit rating model should be maintained to the extent that risk characteristics can be differentiated not only at the time of development but also at the time of operation. The credit rating model should maintain stability enough to be applicable to current customers.

*Fourth*, it should be possible to utilize the relationship between internal and external credit ratings.

It should be able to demonstrate that there is a strong relationship between the internal ratings risk drivers and the measures used to manage credit risk, where comparable comparisons are possible. For example, even if a bank uses its own credit rating for credit approval or account management, it is possible to explain that the credit rating of a generic credit bureau has a strong correlation with its own credit rating and shows longer-term stability. If possible, credit ratings from private credit information agencies may be used for segmentation purposes.

## ② Insurance company internal model operating system

In order to effectively reflect the various risks inherent in insurance companies, the risk category is divided (insurance, interest rate, credit, market, operation) and sophisticated measurement methods are used. The Financial Supervisory Service establishes an internal model to properly reflect the risk characteristics, scale, and complexity of insurance companies according to the insurance company's risk-based management assessment (RAAS) system. It is evaluating whether the detailed standards for the internal model must conform to the quantitative and qualitative standards of ISAS, and are approved through the supervisory authority's approval process, followed by post-verification.

The purpose of internal model is to evaluate whether or not it conducts its own risk and solvency assessment (ORSA) in accordance with Article 7-5 of the Insurance Business Supervision Regulations and Article 5-6-2 of the Regulations on the Implementation of Insurance Business Supervision. In order to properly reflect the risk characteristics, scale, and complexity of the insurance company, the internal model is used for material risks (at least one), and the internal model construction plan for integrated risk management is approved and used by the board of directors. It stipulates that the company conducts its own risk and solvency assessment on a regular basis at least once a year for approval.

Meanwhile, in consideration of the need to introduce a simple standard model that can be commonly applied to all insurance companies, a risk factor common to the industry was applied. As it was necessary to request a differentiated capital level by appropriately reflecting the risk factors inherent in individual companies, the Financial Supervisory Service prepared the internal model approval standards and procedures for the RBC interest rate risk.

< Detailed standard for internal model and approval procedure >

- Detailed standard for internal model

To ensure international consistency, quantitative standards\* and qualitative standards\*\* are regulated by reflecting the internal model system of the IAIS Insurance Core Principles (ICP)

\* *statistical adequacy, calculation standards*

\*\* *utilization verification, documentation standards*

- Internal model approval process

Application for approval of the insurance company's internal model → Examining whether it meets the quantitative and qualitative standards and notify the insurance company → The approved insurance company reports the results of the post-test

### ③ IAIS insurance core principles and insurance company internal model<sup>1</sup>

Some insurers may use internal models as part of their ERM process in order to generate sophisticated risk metrics to inform management actions and capital needs. Internal models may enhance risk management and embed risk culture in the insurer. They may provide a common measurement basis across all risks (example: same methodology, time horizon, risk measure, level of confidence) and strengthened risk based strategic decision-making across the organization. (§16.0.7)

Regardless of how sophisticated they are, models cannot exactly replicate the real world. Risks associated with the use of models (modeling and parameter risk), if not explicitly quantified, should be acknowledged and understood as the insurer implements its ERM framework, including by the insurer's Board and Senior Management. (§16.2.6)

Models may be external or internal. External models may be used to assess catastrophes or market risks. Internal models may be developed by an insurer to assess specific material risks or to assess its risks overall. (§16.2.7)

Internal models can play an important role in facilitating the risk management process and the supervisor should encourage insurers to make use of such models for parts or all of their business, where it is appropriate. (§16.2.8)

An insurer may consider that the assessment of current financial resources and the calculation of regulatory capital requirements would be better achieved through the use of internal models, where permitted. (§16.2.9)

If used, an internal model may provide an important strategic and operational decision-making tool and should be used to enable the insurer to integrate its risk and capital management processes. (§16.2.10)

To be effective, an internal model should address all the identified risks within its scope, and their interdependencies, and assess their potential impact on the insurer's business given the possible situations that could occur. The methods by which this analysis could be conducted range from simple stress testing of events to more complex stochastic modeling, as appropriate. (§16.2.11)

The insurer's internal model should be calibrated on the basis of defined modeling criteria that the insurer believes will determine the level of capital appropriate and sufficient to meet its business plan and strategic objectives. (§16.2.12)

In constructing its internal model, an insurer should adopt risk modeling techniques and approaches that are appropriate to its risk strategy and business plans. (§16.2.13)

An internal model used to determine economic capital may enable the insurer to allocate sufficient financial resources to ensure it continues to meet its policyholder liabilities as they fall due, at a confidence level appropriate to its business objectives. To fully assess policyholder liabilities in this way, all liabilities that should be met to avoid putting

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<sup>1</sup> IAIS.(2019). Insurance Core Principles and Common Framework for the Supervision of Internationally Active Insurance Groups

policyholder interests at risk need to be considered, including any liabilities for which a default in payment could trigger the winding up of the insurer. (§16.2.14)

Where a risk is not readily quantifiable, the insurer should make a qualitative assessment that is appropriate to that risk and sufficiently detailed to be useful for risk management. (§16.2.16)

The regulatory capital requirements are established in an open and transparent process, and the objectives of the regulatory capital requirements and the bases on which they are determined are explicit. In determining regulatory capital requirements, the supervisor allows a set of standardized and, if appropriate, other approved more tailored approaches such as the use of (partial or full) internal models. (§17.6)

Where a supervisor allows the use of internal models to determine regulatory capital requirements, the supervisor establishes appropriate modeling criteria to be used for the determination of regulatory capital requirements, which require broad consistency among all insurers within the jurisdiction. (§17.12)

Where a supervisor allows the use of internal models to determine regulatory capital requirements, the supervisor requires prior supervisory approval for the insurer's use of an internal model for the purpose of calculating regulatory capital requirements. (§17.13)

As a result, health rating and health score modeling applied the bank's credit risk internal model and graded the results obtained from statistics as the probability of non-occurrence of health accidents. It was applied and subdivided into risk groups. In order to model the credit rating, it is necessary to classify the retail exposure of the bank, meet the segmentation system requirements, directly integrate the results of the credit rating model, and even utilize the relevance of internal and external credit rating measurements.

Classification according to health score was standardized by age group, and the difference in the incidence of health accidents between grades was shown. As a result, both male and female models were classified into 9 grades. This is judged to mean that the health grade classified based on the rating model can properly reflect actual experience data.

According to the insurance industry supervision regulations, the detailed standards of an insurance company's internal model must conform to the quantitative and qualitative standards of the ISAS, and approval is made through the approval process of the supervisory authority. In order to properly reflect the risk characteristics, scale, and complexity of the insurance companies, an internal model for material risks is used, and a plan to build an internal model for integrated risk management is approved and used by the board of directors, and the board meets regularly at least once a year. As such, it is stipulated to conduct an in-house risk and solvency assessment and approve it. In this context, for the launch of health grade and health score-related insurance products, they are reported to the Financial Supervisory Service and sold.

In order to reflect health grades and health scores in insurance products, it is essential to reflect them in the insurance company's internal model. In accordance with the IAIS standards, regulatory capital requirements must be established in an open and transparent manner, specifying the purpose and rationale for enactment. In determining regulatory

capital requirements, supervisors need to allow for standard methods as well as methods using internal models, whether full or partial.

In addition, if the supervisory authority permits the use of the internal model for calculating the required capital, the supervisory authority will make it mandatory for insurers to obtain prior approval from the supervisory authority for the use of the internal model for the purpose of calculating the required capital, and the insurer will be required to obtain the regulatory capital purpose. When building an internal model as an insurer, it should be mandatory to adopt risk modeling techniques and approaches that are appropriate to the nature, scale, and complexity of current risks and are linked to the insurer's risk strategy and business objectives.

Therefore, in order to vitalize the healthcare industry, it is also necessary to change the quantitative methodology for the internal model.

### ***3.3. Validation of the fit of the model***

- Transition probability between classes

Company G calculated the health grades by year through a rating model using the health check-up data of 203,805 holding National Health Insurance Service qualification until 2013 out of 211,541 health checkups in 2009(111,403 men, 92,447 women). Changes in grades and the composition ratio of health grades were confirmed. However, if a health checkup was not received between 2010 and 2013, the results of the previous year's health checkup were used and reflected in the transition matrix calculation process.

As a result of the study, the average value of the transition probability between health grades in two adjacent years from 2009 to 2013 is summarized. For both males and females, the more extreme the grade, the higher the probability that the current grade will be maintained even after one year. That is, it can be seen that the probability of transition to another grade decreases as the grade goes from grade 5 to the extreme grades to grades from both extremes. < Appendix table 3, 4 >

- Stability of the model

Company G made use of PSI (Population Stability Index) and the Herfindahl - Hirschman Index (HHI) to evaluate the stability of the model. The stability test of the model checks whether the causal relationship between the risk factors used in the model and the health accident is significantly changed according to the change in the time point of the target group compared to the time of model selection. To verify that it is robust.

As a result of the study, the composition of personnel by year and grade and the PSI and HHI prepared based on this are summarized. The PSI value was 0.019 for men and 0.044 for women, suggesting that the distribution of the composition ratio by health grade is quite stable. In addition, the HHI value was 0.117 for men and 0.116 for women, indicating that the concentration was not large. < Appendix table 5, 6 >

#### ***3.3.1. Basel Commission's conformity verification criteria for retail credit rating system***

To obtain regulatory approval of a retail credit rating system under Basel II, banks must verify that their risk segmentation process can segment retail exposures into asset

classes with homogeneous risk characteristics. That is, the accuracy and validity of the risk measurement elements should be verified.

Conformity verification is to check whether the risk segmentation method and risk quantification procedure are logical and sound. The suitability verification of the risk segmentation system can be evaluated independently, but the accuracy, logic, and statistical power of the segmentation system depend on the accuracy and validity of the risk metrics estimated based on the segmentation which are closely related.

The job of developing and testing the segmentation and quantification procedures should be performed in the form of on-going validation and additionally checked by an independent third party. A bank must establish a policy that includes all processes for conformity verification, and must perform comprehensive conformity verification for risk segmentation and quantification at least once a year.

Banks should use a variety of conformity verification methods and means. A bank should prepare procedures to reasonably guarantee the accuracy of the quantification system, and the continuous verification procedure to confirm and guarantee the accuracy consists of three elements: model design, procedure verification, and post verification.

Model design evaluates development evidence about evaluation of logic or conceptual soundness of quantification methodology.

Procedure verification should be followed by continuous monitoring of system implementation and reasonableness.

Post verification should evaluate the acceptable level for these differences by comparing the estimated value with the actual value, and if the acceptable level is exceeded, remedial actions should be requested.

### *3.3.2. Core principles related to IAIS insurance company internal model verification*

If an insurer uses its own internal model as part of its risk and capital management processes, the insurer should validate it and review it on a regular basis. Validation should be carried out by suitably experienced individuals in a different department or persons other than those who created the internal model, in order to facilitate independence. The insurer may wish to consider an external review of its internal model by appropriate specialists; for example, if the internal review cannot be performed with sufficient independence, an external review may be warranted. (§16.2.15)

Where a supervisor allows the use of internal models to determine regulatory capital requirements, the supervisor requires the insurer to validate an internal model to be used for regulatory capital purposes by subjecting it, at least, to three tests: “statistical quality test”, “calibration test” and “use test” and the insurer to demonstrate that the model is appropriate for regulatory capital purposes and to demonstrate the results of each of the three tests. (§17.13)

Where a supervisor allows the use of internal models to determine regulatory capital requirements, the supervisor requires the insurer to conduct a “calibration test” to demonstrate that the regulatory capital requirement determined by the internal model satisfies the specified modeling criteria. (§17.15)

Where a supervisor allows the use of internal models to determine regulatory capital requirements, the supervisor requires the insurer’s Board and Senior Management to have overall control of and responsibility for the construction and use of the internal model for risk management purposes, and ensure sufficient understanding of the model’s construction at appropriate levels within the insurer’s organizational structure and the insurer to have adequate governance and internal controls in place with respect to the internal model. (§17.16)

Therefore, validation of the rating model is essential. For the use of the model, conformity and post-verification must be accompanied. Since the health rating and health score were based on the credit rating of the model itself, the verification must be done in the same way.

Verifying the credit rating of a bank,<sup>1</sup> the internal model is verified. Although the standard is not absolute, it was examined as a verification means for modeling health grades and health scores. PSI (Population Stability Index) and Herfindahl-Hirschman Index (HHI) were used for the inter-grade transfer rate and model stability. Whatever verification method is used, it must be used consistently and conform to the standards of the verification method.

In terms of the transition probability between grades, the transition probability between health grades in the two adjacent years from 2009 to 2013 shows that the higher the grade, the higher the probability that the current grade will be maintained even after one year.

As a result of the stability study prepared based on the composition of personnel by year and grade, the PSI value was 0.019 for males and 0.044 for females, indicating a fairly stable distribution of the composition ratio by health grade. Appearing the absence of problems in these quantitative evaluation factors is reasonable to say that it is worth examining to improve the soundness of insurance companies along with the continued use of health grade and health score modeling.

#### 4. Implication

Many companies are developing insurance products related to the healthcare industry. Along with the revitalization of the fintech industry, the interests of financial consumers who want to improve health and the interests of insurance companies that want to rationally calculate premiums and pursue insurance profits are in line with each other. However, for this, it is necessary to define prior to developing an appropriate insurance product, what

<sup>1</sup> status of general conformity verification

quality	KS ( (Kolmogorov-Smirnov)	AR(Accuracy Ratio)	Population Stability Index(PSI)
Green(titrate)	greater than 50%	greater than 40%	less than 0.10
Yellow(good)	20%~50%	20% to 40%	0.1~0.25
Red(review)	less than 20%	less than 20%	greater than 0.25

\* Green (very good), Yellow(fair or good), Red (bad).

level of health care must be taken to receive a discount on insurance premiums and at what rate a premium should be paid to the sick. The development of insurance products by modeling the individual health rating and health score of Company G using the bank's credit rating calculation method seems to have upgraded insurance and statistical models, health care industry and insurance product development to the next level.

A health risk stage comparable to default in the bank credit rating model can be seen as the most important factor in product development. In the bank credit rating model for individuals, bankruptcy may correspond to the period in which an individual's life is determined to be death. The definition of health accident defined by the financial supervisory authority in insurance products using the basic data of death collateral corresponding to the risk rate and health grade and health score is quite similar. It is judged that reasonable standards were applied in calculating the appropriate insurance premiums by classifying the scope of health accidents as health accidents as important factors that may or may not be close to the limit situation. It can be seen as a product that responds to this era of Insurtech.

The results obtained from statistics are graded by the probability of non-occurrence of health accidents by applying the bank's credit risk internal model, and the rating model used in the credit rating model is applied according to the same age group and gender. Therefore, it was divided into risk groups. Classification according to health score was standardized by age group, and the difference in health accident incidence between grade sections was shown. As a result, both male and female models were classified into 9 grades.

According to the insurance industry supervision regulations, the detailed standards of an insurance company's internal model must conform to the quantitative and qualitative standards of the ISAS, and approval is made through the approval process of the supervisory authority. In order to properly reflect the risk characteristics, scale, and complexity of the insurance company, an internal model for material risks is used, and a plan to build an internal model for integrated risk management is approved and used by the board of directors, and the board meets regularly at least once a year. As such, it is stipulated to conduct an in-house risk and solvency assessment and approve it. In this context, for the launch of health grade and health score-related insurance products, they are reported to the Financial Supervisory Service and sold.

Verification of the health rating model is taken for granted. For the use of the model, conformity and ex post verification must be accompanied. Since the model itself is based on the credit rating, the verification must be done in the same way.

For the modeling of health grades and health scores, PSI (Population Stability Index) and Herfindahl-Hirschman Index (HHI) were used as verification means for the transition rate between grades and for model stability.

As a result of the stability study prepared based on the composition of personnel by year and grade, there was an absence of problems in these quantitative evaluation factors. It is judged to be worth reviewing to improve the soundness of insurance companies along with the continued use of health grade and health score modeling.



**Appendix table 1. Classification and composition ratio according to health score(male 35-49 year old age group)**

Health rating	calculated score	number of data	Data share (%)	health accident number of occurrences	health accident Incidence (%)
One	1000 or less ~ over 964	6,721	10.0	460	6.8
2	964 or less ~ 941 or less	9,396	14.0	892	9.5
3	941 or less ~ 910 or less	10,098	15.0	1,242	12.3
4	910 or less ~ 884 or less	8,742	13.0	1,296	14.8
5	884 or less ~ 856 or less	8,068	12.0	1,526	18.9
6	856 or less ~ 828 or less	7,395	11.0	1,740	23.5
7	828 or less ~ 801 or less	6,722	10.0	1,912	28.5
8	801 or less ~ 753 or less	6,051	9.0	2,168	35.8
9	753 or less ~ 300 or less	4,034	6.0	2,629	65.2
total		67,227	100.0	13,865	20.6

**Appendix table 2. Classification and composition ratio according to health score (female 45-54 year old age group)**

Health rating	calculated score	number of data	Data share (%)	health accident number of occurrences	health accident Incidence (%)
One	1000 or less - over 952	4,651	10.0	715	15.4
2	952 or less - 912 or less	6,517	14.0	1,220	18.7
3	912 or less - 865 or less	6,970	15.0	1,692	24.3
4	865 or less - 827 or less	6,058	13.0	1,639	27.1
5	827 or less - 792 or less	5,583	12.0	1,906	34.1
6	792 or less - 756 or less	5,119	11.0	1,955	38.2
7	756 or less - 720 or less	4,653	10.0	2,118	45.5
8	720 or less - over 656	4,187	9.0	2,208	52.7
9	656 or less - 300 or less	2,793	6.0	2,099	75.2
total		46,531	100.0	15,552	33.4

**Appendix table 3. Probability of metastasis between grades(male, %)**

Health rating		Health rating after 1 year								
		1	2	3	4	5	6	7	8	9
Current health level	One	39.3	24.4	16.3	8.5	4.7	3.4	2.1	1.1	0.3
	2	16.2	30.1	22.0	13.3	7.8	5.2	3.1	1.8	0.6
	3	8.7	18.1	26.8	17.1	12.3	8.0	5.1	2.9	1.0
	4	5.1	12.3	19.2	22.4	15.8	12.5	7.2	4.1	1.4
	5	3.1	7.7	14.3	17.7	21.2	16.8	11.1	6.0	2.1
	6	1.9	4.8	9.9	13.8	17.1	23.4	16.7	9.4	3.0
	7	1.2	3.2	6.6	9.0	13.0	18.7	26.5	17.1	4.8
	8	0.7	2.0	3.6	5.3	7.8	12.0	18.9	36.5	13.1
	9	0.3	0.8	1.7	2.5	3.6	5.3	7.7	18.6	59.4

**Appendix table 4. Probability of metastasis between grades (female, %)**

Health rating		Health rating after 1 year								
		2	3	4	5	6	7	8	9	
Current health level	One	41.9	24.4	14.9	8.0	4.8	3.3	1.8	0.7	0.2
	2	14.3	31.8	21.8	13.0	8.2	5.4	3.3	1.8	0.5
	3	7.6	17.6	26.5	17.6	12.6	8.8	5.5	2.9	0.9
	4	4.3	11.7	18.8	21.7	16.5	13.2	8.0	4.5	1.4
	5	2.6	7.5	14.0	17.1	20.7	17.5	12.1	6.7	1.8
	6	1.6	4.7	9.4	13.2	17.0	23.4	17.3	10.4	2.9
	7	0.9	2.9	6.0	8.9	12.8	17.9	28.3	17.4	4.9
	8	0.5	1.5	3.3	4.8	7.6	11.6	18.0	38.7	14.0
	9	0.2	0.7	1.4	2.4	3.0	4.8	7.3	19.2	60.9

**Appendix table 5. Composition ratio by grade by year (male, %)**

Health grade	2009	2010	2011	2012	2013	PSI	HHI
One	11.0	8.8	8.8	8.5	8.1	0.009	0.008
2	14.5	12.9	12.9	12.5	12.4	0.003	0.017
3	15.4	15.3	15.1	15.0	14.9	0.000	0.023
4	13.1	13.5	13.6	13.4	13.2	0.000	0.018
5	11.7	12.1	12.1	12.5	12.4	0.000	0.015
6	10.8	11.9	11.8	12.0	12.2	0.002	0.014
7	9.7	10.5	10.4	10.6	10.6	0.001	0.011
8	8.3	9.0	9.2	9.3	9.6	0.002	0.008
9	5.6	5.9	6.1	6.3	6.6	0.002	0.004
total	100.0	100.0	100.0	100.0	100.0	0.019	0.117

**Appendix table 6. Composition ratio by grade by year (female, %)**

Health grade	2009	2010	2011	2012	2013	PSI	HHI
One	10.4	8.8	8.1	8.1	6.8	0.015	0.007
2	14.3	13.3	12.9	12.3	11.3	0.007	0.016
3	15.4	15.0	14.5	14.7	13.6	0.002	0.021
4	13.0	13.4	13.0	13.2	12.6	0.000	0.017
5	11.7	12.7	12.5	12.2	11.8	0.000	0.015
6	11.0	11.6	11.9	12.3	13.0	0.003	0.014
7	9.6	10.2	11.0	10.8	12.2	0.006	0.012
8	8.9	9.0	9.8	9.9	11.3	0.006	0.010
9	5.7	5.9	6.4	6.3	7.4	0.006	0.004
total	100.0	100.0	100.0	100.0	100.0	0.044	0.116

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**ONE SIZE DOES NOT FIT ALL:  
THE VALUE OF INFORMATION AND ENTRY STRATEGY  
OF RATING AGENCY**

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**Abstract**

This paper investigates the entry strategy of rating agencies when the value of information to buyers is heterogeneous. Extending Doherty, Kartasheva, and Phillips (2012), we show that an entrant may target a low information value group and provide coarser and more economic ratings that still satisfy the needs of information users. We empirically examine this model using the U.S. property-casualty insurance market as a testing environment. Demotech, which has a coarser discrete rating scheme than AM Best rates mostly insurers in personal lines, risk retention groups, and small mutual firms. S&P, on the other hand, has a finer discrete rating scheme than AM Best and rates firms in high information value groups. Our results indicate that the value of information to users can play a significant role in rating agencies designing rating schemes and users selecting rating agencies.

**Keywords:** Ratings Agency, Discrete Rating, Value of Information, Insurance, Demotech

# CAN YOUR INSURANCE PREMIUM BE REDUCED, IF YOUR RISK GETS LOWERED, THANKS TO DIGITALIZATION?: FOCUSING ON LAW AND PRACTICE IN EUROPE AND KOREA

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## **Abstract**

This is a review paper to explore recent development in law and practice of premium adjustment following risk reduction of insurance policyholders, focusing on Europe (Germany, Italy) and Korea. Differently from rapid process of digitalization, substantially using consumer data in financial markets, insurance law and practices are slowly catching up with the technological innovation. While the insured's risk increases are reflected in insurance premium in most countries by insurance contract laws, the risk reduction has not been adjusted in existing system, but may be done in the near future law, owing to the Principles of European Insurance Contract Law ('PEICL') although Germany or Italy have not adopted the principle yet. In case of Korea, however, some practices and regulatory initiatives are being shown in that direction for financial consume protection, improvement of health condition of policyholders, and symmetric treatment of policyholders, while legal foundation has not changed yet after recent submission of draft law without success. That is, in both Europe and in Korea, digitalization is supporting financial consumer protection with respect to premium adjustment followed by insurance risk reduction while process and speed of innovation differs across the countries.

**Keywords:** Insurance premium, insurance law, practice, digitalization

## **1. Introduction**

### ***1.1. Motivation***

Can your insurance premium be reduced, if your risk becomes lower for any reason? This question may be differently responded either in normative perspective or in descriptive one. In principle, the answer should be yes but in practice may be no, depending upon country where you live or upon which insurance product that you have, although the opposite case, where risk becomes larger, is usually answered yes in both normative and in descriptive case. The difference between the questions and answers are the motivation of this research - there should be no difference between two questions, if we consider fairness of transaction and such as in the age of digitalization and consumerism where data is increasingly popular and useful while financial consumers are getting subject to more legal or de-facto protection. But that is not the case in reality as will be seen below.

Ever since 2010, when the global financial crisis broke out, efforts for financial consumer protection (FCP hereafter) have been strengthened while the rapid development of IT technology called the Digitalization has dramatically transformed financial market.

Since the FCP was molded in the summit declaration for the first time in history at the G20 summit held in Korea in 2010, law amendments and administrative reorganizations have been carried out in that direction in most countries. For example, the CFPB was established in the US, the insurance law was amended in the UK, and the Principles of European Insurance Contract Law (2009) was announced by the EU whereas Korea conducted such reforms as expansion of the Financial Consumer Protection Agency and the enactment of the Financial Consumer Protection Act. In line with these institutional changes, financial industry and consumer groups in those countries have incorporated financial consumer protection issues to business strategies and business areas.

## ***1.2. Digitalization***

Digitalization has increased availability of financial services to consumers. The new technology represented by AI, Big Data, Cloud computing, Cryptocurrency, and Driverless car brought various changes including distribution channels and accessibility to financial markets in developed countries as well as in developing countries. In developed countries, financial products and services began to be served by online platforms, while in developing countries with low access to financial institutions, financial transactions using mobile phones have become possible, and financial transactions have come to provide benefits, thanks to 5 billion mobile phones available in the world of 7 billion inhabitants. The low cost and broad customer service offering has contributed to the so-called financial inclusion which means that increasing number of people can have access to financial services.

In addition, digitalization in finance has enhanced affordability, cost and price advantage, of the service to consumers. The use of increased credit information has enabled to lower bank loan rates, credit card fees, and insurance premium. Based on sophisticated risk measurement and control system, such as digital cameras or sensors, financial intermediaries can reduce risk loadings, fees or commissions. For example, digital body sensors to monitor steps and blood flow at all times, thereby motivating them to lower insurance premiums. The ability to accumulate and utilize data was enriched by digitalization, developing risk assessment and control function that would never be possible without data.

On the other hand, there are also critical views regarding the digitalization in finance. Some experts and civic observers say that strict risk identification makes the distinction between low-risk and high-risk consumer groups clearer or wider, outweighing the burden on high-risk groups. Moreover, that high-risk groups tend to belong to low income class people, may cause the possibility of further aggravating social polarization and instability, and ultimately increase the redistributive burden on the government. As a result, the issue of fairness related to financial digitalization often emerges as an issue for consumer activists. (See the 2022 Consumer International Conference)

Differences of risk exist among financial consumers, but they also occur to individuals themselves due to temporal changes of the risk. For example, the credit risk situation changes due to a change in an individual's occupation or income, and the loan interest rate may be adjusted accordingly. In Korea, banks used to reflect risk increases in credit interest rate, but since a few years ago, the bank began to respond to request of consumers to reduce loan interest rate when they show their income, debt, or job changes in positive direction, owing to a new legal basis for bank customers to exercise their right to lower interest rates.

This study aims to examine the differences between countries in laws and practices related to changes in insurance risk. In particular, based on the examples of Europe (focusing on Germany and Italy) and Korea, I compare in laws and practices the ways how each country adjusts to reduction of insurance risk and how the country motivates reduction of insurance risk. To this end, the German, Italian and EU model laws and Korean institutions and recent trends are reviewed through literature and case studies, while leaving case studies of the other countries, such as the United States and Japan, to another research.

As revealed through the research below, the speed at which digital insurance risk information prospers at different countries is different, but in terms of direction, the insurance market is evolving in a direction that more accurately reflects risks. To put it more specifically, it can be seen that the legal system is changing its practice in the direction that the right to claim a reduction in insurance premiums is gradually expanding.

## **2. Financial consumer protection in Digitalization (General trend)**

Contemporary people live in a digital economy or data economy where data, growing at an unprecedented rate, are becoming an integral part of the daily lives of most people everywhere<sup>1</sup>. According to European Commission (2018), data economy is a digital ecosystem om which data is gathered, organized, and exchanged by a network of venders for the purpose of deriving value from the accumulated information. For example, the individual life underwriting landscape is experiencing rapid Insur-tech driven change. Characterized as a “paradigm shift”, more and more companies are implementing automated or “accelerated” underwriting programs that forgo biological specimen collection in favor of predictive models that use analytics and third-party datasets to underwrite and classify the risk of life insurance applicants (Shapo, 2020) Financial digitalization offers several benefits and concerns as follows.

### ***2.1. Efficiency & Effectiveness Benefits of FCP in Digitalization***

There are various advantages to digitalization including increased efficiency, increased productivity, lower operational costs, improved customer experience, higher agility, enhanced employee morale, improved communication, increased transparency, improved competitive advantage, and faster decision making. We may summarize those benefits in the following way.

The first benefit may be named as Lower cost advantage. Mostly based on platform effects, cost reduction in the current business landscape is more a matter of necessity than a matter of choice. While searching for every **opportunity to cut costs**, companies often rely on the most obvious, ‘traditional’ methods to support an increase in savings, but researches show that in the past years, this kind of cost-reduction amounted only to about **2 percent of the total costs**. Squeezing a 2 percent savings from ‘traditional’ levers – by layoffs – creates more problems than it solves. For example, there is a form of **wider social costs** through a backlash from communities, customers, and workers as well as politicians<sup>2</sup>.

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1 World Bank (2021), Data for Better Lives, World Bank Group Flagship report, p.4.

2<sup>1</sup> <https://innovationcloud.com/blog/the-major-impact-of-digital-transformation-on-cost-reduction.html>

Thirdly, digital transforming offers financial consumers an opportunity to reform themselves, by providing health data and information based on sensors... Digital transformation is shaping the future of healthcare. Radically interoperable data, artificial intelligence (AI), and open, secure platforms will drive much of this change. Digital health monitoring plays a vital role in this transformation, allowing easy access to relevant data, improving quality of care and delivering value to patients, healthcare practitioners, hospitals, and governments<sup>1</sup>.

## ***2.2. Financial Inclusion Benefits***

Digital financial inclusion involves the deployment of the cost-saving digital means to reach currently financially excluded and underserved populations with a range of formal financial services suited to their needs that are responsibly delivered at a cost affordable to customers and sustainable for providers<sup>2</sup>. As a result, millions of formerly excluded and underserved poor customers are moving from exclusively cash-based transactions to formal financial services - payments, transfers, savings, credit, insurance, and even securities - using a mobile phone or other digital technology to access these services. And the picture is continuing to shift rapidly with the emergence of ever more new technologies.

Possibly one can simply categorize risk types of financial consumers into the following three groups: High risk, Low risk and Unknown. While the first two group of consumers have enough data information to show them as such, the last unknown risk groups are those who have no or little data to prove themselves such as the Thin Filer. Without additional data or information, the unknown risk can be excluded from the financial system or simply classified into the High risk group.

Thanks to alternative data or proxy data, the unknown risk group may be transformed into high risk or low risk group, and upon their individual choice, they may participate on the financial system. For instance, those who have had no financial transaction under their name may use some non-financial data or digital footprints such as their records of telephone bill payment, school tuition payment etc to show their quasi-credibility, resulting in increased financial inclusion owing to new data or data usage. For instance, there are about 10 million thin filers in Korea (college students, housewives, and self-employed) for which digital credit review service is being developed for the first housing purchase<sup>3</sup>.

## ***2.3. Fairness (Welfare) concerns***

Almost all countries have legal limits to use underwriting criteria for insurance underwriting and recent changes are taking place due to development of modern information technology or Bio-technology. In U.S.A, for example, by providing more accurate information about insureds' current and changeable health status, while avoiding the perceived unfairness of immutable genetic information, the use of epigenetic testing in life

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<sup>1</sup> <https://www2.deloitte.com/be/en/pages/life-sciences-and-healthcare/articles/digital-health-monitoring.html>

<sup>2</sup> <https://www.worldbank.org/en/topic/financialinclusion/publication/digital-financial-inclusion#:~:text=Digital%20financial%20inclusion%20involves%20the,customer%20and%20sustainable%20for%20providers.>

<sup>3</sup> Cho, Man (2022), p.27.



insurance underwriting would conform to the fundamental regulatory norms of information transparency and symmetry; accurate risk classification; sound risk pool construction; and a resulting alignment of interests between insurers and insureds (Napio. 2020).

Obviously there are high risk consumers and low ones in financial/insurance markets of which the formers are supposed to pay higher price - interest rate or insurance premium- for the sake of efficiency or sustainability of the markets. Due to technical or practical reasons, however, difference across risk level cannot be distinguished so much that sort of pooling prices should prevail in real world market. That is, the same interest rates or insurance premium may be applied to some differing risk classes identically.

Thanks to digitalization or data economy, however, financial institutions may differentiate risk classes much easily than before to bring more segmentations in risk groups. Banks or insurers with capacity for more diverse risk classification can compete against others for larger markets and profits as consumers will gather for the financial intermediaries with the differentiation for lower cost or higher value.

However, severe classification may face fairness problem. As is often the case with high risk group consumers, they may belong to poor income or wealth class well who are unable to meet the cost or price.

#### ***2.4. Regulatory concerns***

Financial digitalization brings extra cost or concerns to the financial market participants and regulators. UNCTAD (2018) reported that financial digitalization comes with such issues of regulation as fraud, dispute resolution, alternative recourse, transparency, disclosure of information, data privacy, security of network, agent behavior, user errors, Network downtime, protection of trust accounts. Financial regulators usually aim to enhance player competition, consumes usage and trust of financial system while protecting data, fund, privacy of consumers.

### **3. Risk Reduction & premium adjustment in law**

Unlike an insurance principle that the insured's risk level should be reflected into (pure) premium, risk may not be effectively evaluated in real world. For instance, in Marine Insurance Act (1906), which is the oldest insurance law applying to many countries, any increase of risk such as deviation, change of destination port, alteration of port of departure should be informed to the insurer for additional premium payment, while there is no specific comments or suggestions for any risk reduction. That is, traditional insurance law may be enacted for the sake of insurer protection rather than consumer protection as follows in several countries.

According to Lee (2005), there are certain difference in underwriting of life insurance across nations such that continental European countries or Japan have few discount practices for super-standard healthy insured, while U.S.A. and U.K offer discount rate for the good risk customers due to severe competition in insurance market. Once Japan tried to provide discount for non-smokers but in vain, due to lack of statistics to support the group decades ago. In the U.S.A. or U.K., however, market competition enabled some insurers to offer specially low-priced products to super-standard group of consumers.

### *3.1. EU*

#### (1) Germany - conservative position

According to German Insurance law §41 (reduction of the premium) If a higher premium has been agreed due to certain risk-increasing circumstances and if these circumstances ceased to exist or became insignificant after the policyholder's application or after conclusion of the contract, the policyholder may request that the premium be reduced appropriately from the time the request is received by the insurer. This also applies if the assessment of the higher premium was caused by incorrect information about such a circumstance based on an error on the part of the policyholder. That is to say, policyholders in Germany cannot request their premium to be reduced below base premium, but they can request a review of their specially set risk loading, if their health status has improved. The loadings are generally specified in the contract together with the triggering diagnosis<sup>1</sup>.

One example case that is often referenced in literature is having allergies at the time of contract initiation, and successfully undergoing treatment after which the allergies no longer persist. In theory this person could now cancel the contract, undergo another underwriting and switch to another insurer to not receive the allergy-loading (although switching is quite difficult in Germany and it is possible that the individual has new/other health conditions that would come up in new underwriting) or via §41 request the loading to be dropped because the reason for the loading has dissipated.

Bayesrdorffer (2014) provides a little more information that was not stated clearly in the legal texts, According to him, 95% of German insured are covered by a normal (standard) terms and conditions and the rest 5% of them are so-called substandards to be covered by extra premium (surcharge). In order to drop the loading or surcharge by the substandard class customer, the initial cause has to go away completely without leaving residual health consequences any more. For example, if someone has a loading for obesity, not until obesity-related health conditions (hypertension, ischemic heart disease, ...) and loses weight happens, this person will be eligible for a loading reduction. Loadings are levied for all diagnoses that are expected to result in treatment or examination costs. Most common cause of risk surcharges: Hypertension (high blood pressure), Obesity, Metabolic disorder, Thyroid disease, Diseases of the spine or joints, Diseases of the skin, respiratory diseases, hay fever, Allergies, Mental diseases, Knee diseases, Lipometabolic diseases, Gastrointestinal diseases. As a matter of fact, any chronic disease generally has a very limited chance of succeeding in the loading reduction. The billing system in Germany requires a diagnostic code (ICD) for every doctor's appointment. This means, that a substantial fraction of the billing data includes suspected but not confirmed diagnoses. If the insurer bases his decision on the billing data and the insured can later prove, that a suspected diagnosis was false, the loading will be reduced. The approach is comparable to the practice in life insurance i.e. to give a discount on risk loadings for healthy behavior or proof of risk reduction (step count, BMI etc.).

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<sup>1</sup> Information provided by Mr. Hee Jong Jun with the Cologne Re in Germany.

## (2) Italy<sup>1</sup>

According to the Italian civil code, a risk reduction is defined as a reduction in the probability of occurrence of an uncertain event linked to the insurance contract. The risk reduction is governed by the Article No. 1897 of the Italian Civil Code, which says “*If the policyholder communicates to the insurer changes that produce a decrease in risk such that, if it had been known at the time of the conclusion of the contract, it would have led to the conclusion of a lower premium* (for example, the fact that the insured vehicle is fitted with a modern anti-theft system that reduces the risk of theft), *the insurer, from the due date of the premium or the premium instalment, following the abovementioned communication, may only require the lower premium, but may withdraw from the contract within two months from the day on which the communication was made*”. Consequently, the insurance company, once the premium or the next instalment is due, must ask the client for a lower amount than the previous one. However, this is without prejudice to the insurer’s right to withdraw from the contract within two months of being informed of the reduction in risk.

However, aggravation of risk or termination of risk is a different matter. According to Article No. 1898 of the Italian Civil Code, “*the policyholder is obliged to provide the insurer with an accurate statement of the risk to be insured and to notify all changes that lead to an increase in risk during the life of the policy*”. If the aggravation of the risk is too great, the insurer may choose to withdraw from the contract or certify the risk by increasing the premium charged for the cover. On the other hand, there is termination of the risk when the insured no longer fears that the event for which she or he decided to take out the insurance contract will occur (and therefore decides to terminate the insurance contract).

To sum, Italian consumers have option to report risk reduction for premium discount, but duty to report risk increase to insurers. It seems reasonable to have both option and duty, as the former can offer consumer benefits while the latter insurer benefits. There is no reason to offer both duties to consumers or both options to them.

## (3) EU<sup>2</sup>

In insurance system, personal line is more heavily regulated than commercial line in most countries. The nature of an insurance product or contract is delineated by its terms and conditions set out in insurance policy including several clauses. For mass risks or personal line insurance, terms will typically be developed through standard terms and conditions for the relevant market; while for large risks or commercial line insurance which are less common than personal line, here is more scope for specific negotiation between insurer and insured which are large sized corporation. In mass risk insurance or personal line insurance, where standard terms and conditions are heavily used, unfairness review plays a significant part in the development process of the products.

In European Union, each Member State has developed its own laws for protection against unfair terms. The modes of enforcement in local courts together with consumer organisations, supervisory authorities, ADR (Alternative Dispute Resolution) bodies play

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<sup>1</sup> This section is based upon opinion and information provided by Mr. Vincenzo Senatore in Italy.

<sup>2</sup> This section is based upon opinion and information provided by Mr. Vincenzo Senatore in Italy.

a role in the process of enforcement of terms and conditions of insurance policies. For example, in France there are two sets of controls: administrative control by the supervisory authority and judicial control. In the UK, the Financial Conduct Authority may conclude that a particular term is unfair even if there is no judicial finding to that effect; in practice that will have an effect on an insurer's use of any similar clause thereafter. In Germany, there is an ex-ante duty of disclosure towards the supervisory authority only in relation to health insurance and compulsory insurance, but ex-post judicial control is still possible. In other Member States, undertakings are asked by regulators not to use certain clauses. Such clauses are easily accessible as they were published on the regulator's website.

The European countries may differ in terms of dispute management system. For example, it was noted that, the adoption of ombudsman services to determine disputes and complaints (which services are typically not limited to insurance matters) has an impact on the approach to unfairness since an ombudsman in some jurisdictions (e.g. in the UK) will often apply concepts of fairness unrelated to contractual interpretation or controls. This is not the case in, for example, Germany where the ombudsman is bound to apply the law and is not entitled to "make" new law. We may call this difference between common law regime of the UK and statute law one of Germany. Even in European continent, the wider impact of a judgment or finding classifying a term as unfair varies across different Member States. For example, in Spain a recent judgment which declared several clauses unfair applied to all market participants. In Spain, Italy and Portugal, if a case is brought by a consumer association and succeeds, this will have a general effect on the market.

Another critical difference across member countries can be seen in product design rules or regulations in the EU. Although mandatory caps on duration and differences between such caps from country to country were noted in the past as being of particular importance, in the majority of cases, product characteristics may not be affected for the time being by such differences, although for some insurance business it will require change and will have an effect on product design and accordingly upon pricing in the EU. For some insurance categories (for example: health insurance) the option to alter the premium during the contract period is an essential part of the product concept such that national rules affecting this would have a decisive impact upon whether the product can be offered in a jurisdiction. For policies providing for a high death benefit in particular the pre-contractual disclosure of data relating to the age, health, lifestyle and profession of the person at risk by the policyholder is crucial for the assessment of the risk by the insurer. The laws around the insured's duty of disclosure and the connected remedies are not yet harmonised in the EU. And the rules on how that data may be procured differ between the Member States.

The PEICL (Principles of European Insurance Contract Law) was born in 2009 as an effort to harmonize the member countries which differ substantially in insurance contract and consumer protection by its nature. Any member country can choose to adopt the PEICL as its national law, but conservatism located in local insurance system and tradition refrain from taking the new principle into domestic laws in most member countries.

When it comes to reduction of risk, the PEICL has article 4:301 in the section three as follows - Consequences of the Reduction of Risk.

(1) If there is a material reduction of risk, the policyholder shall be entitled to request a proportionate reduction of the premium for the remaining contract period.

(2) If the parties do not agree on a proportionate reduction within one month of the request, the policyholder shall be entitled to terminate the contract by written notice given within two months of the request.

With regard to the premium, the PEICL distinguish between non-payment of a first or single premium (Article 5:101 PEICL) and non-payment of a subsequent premium (Article 5:102 PEICL). In both cases, the policyholder is protected against a potential discharge of the insurer through information duties impose on the insurer as well as minimum periods of payment. However, the protection of policyholder is higher in case of non-payment of a subsequent premium than in case of non-payment of a first or single premium.

The PEICL leave the enforcement of rights to be brought in Court as individual actions. Certainly, any kind of alternative dispute resolution mechanism, as well as any Ombudsman proceedings (guaranteed in many Member States), will remain available to policyholders, even if the contract was subject to the PEICL. Moreover, consumer organisations will play an important role in collectively enforcing the PEICL. In addition to these enforcement measures provided for by the PEICL, national supervisory boards may actively enforce the PEICL using their powers under national supervisory law.

#### (4) Korea

Recently Korea has achieved an enormous advancement in financial consumer protection to discuss or introduce new law, regulation or institution. Korea was the host country of the G20 Summit in 2010 when the first summit declaration ever was made for the sake of global financial consumer protection. After ten years' debates since then, a rare integrated law of the FCP was enacted in 2021 while the FSS (Financial Supervision Service), the financial watchdog in Korea, came up with a quasi- independent FCP division with a vice chairperson of the FSS in charge.

It was in July 2017 right after new president of Korea began his official term that the FSS announced its new initiative to offer premium discount to the non-smoking insured with normal blood pressure and the BMI index<sup>1</sup>. The special clauses of private health condition, usually added to death coverage insurance and developed earlier, was not so popular among the insured due to complexity of body examination or report process and risk of personal information dissemination. With a new process of premium discount request, both new or existing consumers can enjoy a premium reduction after easier proof of health conditions. The initiative was based upon not law but on contractual clauses.

As far as the legal right to claim reduction in insurance premiums is concerned, a member of national assembly in Korea recently submitted a draft law but in vain so far. In 2019, a draft bill to include the right to claim a reduction in insurance premiums was submitted by a parliamentary member of the National Assembly, The draft was aimed to revise the Commercial Code No.647 which still specifies that when insurance premium

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<sup>1</sup> Official announcement of the FSS, on the 4<sup>th</sup> of July, 2017, titled 'Healthy people can easily purchase private health insurance with premium discount from July 2017'.

was set to forecast any special risks, and the risks disappear for any reason, the insurance policyholders will be entitled to claim for reduction of the premium upcoming laterwards. Basically the draft aimed to remove ‘special’ and to generalize the risk applied to the law. That is to say, the congressman’s idea was that any risk should be adjusted in principle in any case.

In spite of fairness and reason of the draft, the effort to modify the Korean commercial code failed. Under the current law, insurance premium surcharge may be requested by the insured if the surcharge was included just for a special risk type, as is the case of Germany. That is, only a special surcharge for special risk could be lifted but normal risk level cannot be further discounted into super standard level risk as in the PEICL of the EU. The draft was an effort to generalize risk reduction and premium discount in any case. Anyhow, the draft was suspended due to opposition from the insurance industry associations at the time, to session closing of the National Assembly, and to failure of the member in the following election. At that time, it was an rational and symmetrical argument for insurance consumers and market development that the insurance premium rate should be lowered when the risk decreased, just as the premium rate increased when the risk increased. On the other hand, the industry’s objection was that it is difficult to adjust rates for unstable issues such as health, and rates have already been set due to a number of collective characteristics.

In addition to that, the right to claim a rate cut was supported by academic argument (Lee, Bomi, 2019) and regulator’s initiative to augment consumer health conditions and fair contract in insurance market echoed by a few insurers in Korea such as Samsung fire and marine selling private health insurance products. In 2017 right after a new president took office, Korean FSS led an initiative called ‘the third people-realizable 20 reform agenda in financial practice’ no. 5 premium discount for healthy policyholders who may submit his or her regular checkup reports to insurers for discount. Previously insurers made request to applicants to take their own checkup in spite of availability of regular checkup reports. And the insurers examine whether the applicants are non-smokers, normal blood pressures and weights (BMI index). Very recently, several insurtech startups are appearing to utilize individual health data and information and to classify them for more correct and sophisticated premium level for business purpose, which may also contribute to motivation of policyholders’ self health care.

#### **4. Summary and Conclusion**

This review paper examined European (focusing on Germany and Italy) and Korean cases on how to reflect changing consumer risks in prices (insurance premium) in the so-called era of the data economy, where data is actively used in the composition, price, and sales of financial products. Traditionally, when consumer risk increases, insurers quickly reflect it in the price, whereas when the risk decreases, they passively reflect it in the price. While the tradition or practice goes against principle of fair trade and consumer protection, it is also undesirable in terms of motivation for revitalizing the financial market and reducing consumer risk.

According to literature review and case examination of this research, each country regulates insurance products according to its own local laws and terms and conditions so that both Italy and Germany have their own insurance contract laws. And the EU PEICL

(Principle of European Insurance Contract Law), which is proposed by the EU but not enacted in every member countries yet (for example not in Germany but in Italy) has been introduced in the direction of standardizing and protecting consumer rights and interests. According to the PEICL, if there is a significant reduction in risk, the policyholder may request a proportional reduction of the premium for the remaining contract period. If the parties do not agree on such a reduction request, the policyholder may terminate the contract by written notice. That is risk reduction followed by premium reduction will be a new normal in EU in the future.

When it comes to Korea, a member of national assembly submitted a draft to revise the Korean Commercial Code No.647 in order to introduce symmetrical treatment of policyholders who have experienced risk reduction, but in vain, due to objection from industry association and lack of time to discuss the agenda during parliamentary session. Nevertheless, Korean insurance market began to change into the direction as some Korean insurers accept policyholders' request for premium discount based on risk reduction, encouraged by financial supervision agent of Korea, FSS, which advocates financial consumer protection as well as health condition, using concepts data economy and digitalization. And some startups in health care and insurance area are collecting and developing consumer data and information in the area to use in risk classification while leading to better health condition of the policyholders. That is, that practices in Korea are more customer oriented than law per se now implies that Korean law may be also changing for financial consumer protection in the near future..

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# ROLE OF THE PRIVATE PENSION PROGRAMS

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## **Abstract**

This paper presents the role of private pension programs. We start by classifying OECD countries according to income sources of the elderly. Next, we establish the theoretical background of saving for retirement for a theoretical analysis. The main goal of the article is to identify barriers to the development of private pension programs and suggest necessary conditions for developing and promoting private pensions. In this article, factors that hinder the development of private pension programs are classified into institutional, social and economic factors. We focus on key factors that seem to be reasonable and those that can lead to improvement if efforts are made in a variety of appropriate ways. To mitigate problems connected with unfunded public pension schemes, multipillar systems for incomes in retirement need to be reinforced. This means that funded private pension plans should play a greater role in securing old-age income at the cost of public PAYG schemes. The government should provide financial consumers not only with well-functioning capital markets and insurance markets but also with comprehensive information about pension products. Tax incentives and subsidies for employers and employees can extensively promote the enrollment of private pension products. Furthermore, financial knowledge is a decisive factor that can affect the participation and returns of private pension products. Providing proper financial education and more financial information not only for students but also for financial consumers is necessary.

**Keywords:** Private pension programs, OECD, saving, retirement



**FINANCIAL IMPACT OF COVID-19  
ON THE LIVELIHOOD OF URBAN POOR:  
A STUDY ON DHAKA METROPOLIS SLUM DWELLERS  
OF BANGLADESH**

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**Abstract**

This research explored urban slum dwellers' financial implications during COVID-19 in Bangladesh. Specifically, the study investigated financial implications using 51 attributes grouped in seven categories related to work/job, wage/earning, stakeholder, savings/expenditure/debt, food, family well-being, and offspring. The study noted that during COVID-19 the households are affected in almost all the areas. Notable attributes are expenditure surpassed income, spending more, cannot save anymore, spending from savings, spend more as commodity price hiked, income reduced due to lock down, other income generating activities reduced, difficulty in payment of utility and other bills, pay extra fare to reach workplace, spending more on transportation, failed to repay loan, family members living without required medical care/services, not getting enough work. Group mean wise the saving/expense/debt related financial implication is the major concern for the slum dwellers followed by general, work/job, wage/income, and stakeholder related financial implications. Least impacted implications are food and offspring related. Overall, COVID-19 ruthlessly impacted the financial wellbeing of the households.

**Keywords:** COVID-19, family well-being, food, income loss, offspring, savings/expenditure/debt, slum, wage/earning, work/income

# SOCIOECONOMIC STATUS EFFECT ON SPEECH PRODUCTION BY KOREAN-AMERICAN BILINGUALS

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## **Abstract**

This study investigates the extent to which family socioeconomic status (SES) relates to bilinguals' speech production. Socioeconomic status and education can impact how language develops over time. The socioeconomic status is commonly determined by combining educational level, occupational status, and income level (Jeynes, 2002). Differences in the amount of parents' language input can give rise in different degree of children's language development. Children at the age of 4 from professional families hear a total of 45 million words on average, while children living in poverty hear 13 million words on average (Hart and Risley, 1995). As a result, on average, children from lower-SES families show slower vocabulary growth compared to their higher-SES peers (Arriaga et al. 1998). Most research on the relation between SES and language development has focused on monolingual speakers. However, more and more children today are being raised bilingually. In this study, I will examine how much Korean American parents' SES affects their bilingual children's production of Korean and English by conducting a phonetic experiment.

**Keywords:** Socioeconomic status, speech production, Korean-American bilinguals, language development

# PROTECTION OF FINANCIAL CONSUMERS: INTERNATIONAL EXPERIENCE AND RECOMMENDATIONS FOR VIETNAM

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## **Abstract**

Financial consumer protection is of paramount importance to the healthy and transparent development of the financial sector, promoting financial inclusion and economic growth in each country. An effective financial consumer protection framework is a necessary condition to expand access and usage of financial services, bring practical benefits, and create foundations for financial consumers to have necessary information to select the right financial products or services and make the best use of them. Many countries around the world are very interested in this field through promulgating their own legislation on consumer protection of financial services. In Vietnam, financial consumer protection has also received much attention in recent years. The article focuses on analyzing the best practices and practices of financial consumer protection in the world, from which, draws lessons learned and proposes several recommendations to further promote financial consumer protection in Vietnam.

**Keywords:** Financial consumer protection, good practices, financial education...

## **1. Good practices on financial consumer protection**

At present, in the world, the establishment of a financial consumer protection framework does not have a common compulsory regulation for all countries. Some international organizations such as the OECD, the G20 Ministerial Conference or the World Bank (WB) have set out practices and principles in the process of building a consumer protection framework for countries to refer and adapt to suit the specific conditions and circumstances of each country. Specifically, after the global economic crisis in 2008, the OECD developed the G20 High-Level Principles on Financial Consumer Protection in 2012. Many countries around the world has applied these principles and achieved certain success. Similarly, the World Bank also published “Good practices for Financial Consumer Protection” - the latest edition published in 2017, to provide international guidance on how to establish financial consumer protection policy. From there, policy makers will draw up specific laws suitable for their own country to protect consumers of financial services.

### ***1.1. G20/OECD Financial Consumer Protection Principles***

To ensure that policies and regulations for financial consumer protection are developed in accordance with the rapid development of financial markets, the Organization for Economic Co-operation and Development (OECD) worked with the Group of Twenty (G20) to develop G20 high-level principles on financial consumer protection in 2011.

These are voluntary principles. The G20 requires member countries as well as interested countries to use these principles as a foundation to evaluate their existing financial consumer protection framework and supplement necessary actions as well as regulations.

The ten principles of the G20/OECD cover comprehensively, from the legal framework, management, supervision, the role of supervisory agencies to issues related to fair treatment, transparency, competition... Nowadays, these principles are still used and applied in many countries. For example, the second of the G20 high-level principles on consumer protection in financial services indicates that there should be a supervisory body with the necessary enforcement powers, responsible for financial consumer protection. These agencies operate most effectively when their responsibilities are clearly defined to ensure effective governance and independent operation, transparency and full authority, necessary resources, capacity, specific and transparent implementation framework; clear and consistent management process.

### ***1.2. World Bank's Good Practices for Financial Consumer Protection***

Based on surveys and research experiences of 35 countries that have implemented financial consumer protection effectively since 2006, in 2012, the World Bank published *Good Practices for Financial Consumer Protection*. The book covers the main issues arising in financial consumer protection with separate chapters for different financial areas such as banking, securities and insurance. The publication consists of three parts: (i) Part 1 recommends 39 common good practices for financial consumer protection; (ii) Part 2 brings together good practices related to key financial sectors such as banking, securities, insurance and non-bank credit; (iii) Part 3 presents Good Practices in Retirement Funds and Credit Reporting (still in the early stages of development).

Continuing the success of the 2012 edition, the WB has published the 2017 edition with more detailed revisions and additions to content related to best practices for each important financial sector. Above all, this release addresses emerging issues in financial consumer protection with the appearance of digital channels, innovative products and business models, and new types of financial service providers. This edition also complements and expands on international principles and guidelines, such as: Insurance Core Principles and Common Framework for the Supervision of Internationally Active Insurance Groups from International Association of Insurance Supervisors (IAIS); Guidelines of the G20/Organization for Economic Cooperation and Development (OECD) Task Force on financial consumer protection; Principles of the Basel Committee on Banking Supervision (BCBS), International Organization of Securities Commissions (IOSCO), International Organization of Pensions Supervisors (IOPS), International Financial Consumer Protection Organization (Fin-CoNet), the International Network of Financial Services Ombudsman Schemes (INFO Network), The International Telecommunication Union Telecommunication Standardization Sector (ITU-T), Digital Financial Services... In terms of structure, based on the synthesis and analysis of the lessons of experienced countries, the WB collected the successful practices for four basic types of financial products and services: Deposit and Credit Products and Services (of banks and non-bank credit institutions); Insurance; Private Pensions and Securities. These good practices are focused on 5 areas: (i) legal and supervisory framework; (ii) disclosure and transparency; (iii) fair treatment and business conduct; (iv) data protection and privacy; and (v) dispute resolution mechanisms. Each

practice provides detailed explanation of its intent and purpose and country examples of implementation, containing consideration of trade-offs, conflicts of interest, and compliance costs.

Till now, many country-level policymakers and regulators still utilize these editions as a guideline as well as a comprehensive reference or assessment tool to support developing their own financial consumer protection framework.

## **2. Financial consumer protection practices over the world and lessons learned for Vietnam**

According to the results of a World Bank survey on financial consumer protection practices in 124 countries<sup>1</sup>, countries have made many efforts to strengthen financial consumer protection in different levels. There are 2 key aspects in these efforts: (i) legal framework; and (ii) organization of enforcement and supervision, specifically as follows:

### ***2.1. Legal framework***

The surveyed countries have four common approaches to develop a legal framework for financial consumer protection:

(1) Develop regulations on consumer protection in specialized financial laws (such as Banking Law, Securities Law, Insurance Law...). The majority (76%) of surveyed countries apply this approach. Consumer protection provisions within other financial sector law (e.g. banking law)

This approach requires close coordination between sector regulators as some types of service delivery may fall outside the scope of financial consumer protection regulations. This will be a big challenge for regulatory agencies in the context of rapid development of science and technology with many new types of financial services, technology applications, multi-disciplinary and multi-field linkages (such as crowdfunding, peer-to-peer lending, bank insurance, etc.).

(2) Develop general consumer protection law with explicit references to financial services (accounting for 34%). (General consumer protection law with explicit references to financial services.)

(3) Develop a separate law on consumer protection in the financial sector (accounting for 21%)

Developing a standalone financial consumer protection law helps to avoid gaps or conflicts between different laws. This approach is often adopted by countries with highly developed financial markets.

(4) Develop a general consumer protection law with no specific references to financial services (accounting for 62%).

It is worth mentioning that many countries apply multiple approaches simultaneously. For example, Angola has established not only consumer protection legislation with references to financial services but also consumer protection provisions within other

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<sup>1</sup> World Bank Group. (2017). Global Financial Inclusion and Consumer Protection Survey, 2017 Report.

financial sector laws. This suggests that these approaches are not mutually exclusive and can be used in combination to enhance financial consumer protection.

## ***2.2. Organization of enforcement and supervision***

Closely related to the legal framework for the protection of financial consumers is the institutional structure of the authorities responsible for regulating and supervising financial consumer protection. The survey results of the World Bank show that there are 5 main models among surveyed countries, specifically:

(1) Integrated Single Financial Sector Authority: The model has a single agency responsible for managing all aspects of the financial sector, including prudential and financial consumer protection supervision. This type of model is relatively common, with the usage rate of 30%.

(2) Integrated Sectoral Financial Sector Authority Model: Under this model, responsibility for overseeing financial consumer protection fall under a number of financial authorities. Each authority is in charge of all aspects of supervision in a specific financial sector (for example, banking sector, insurance sector,.. etc.). This is the most popular model with a percentage of 45%.

(3) Dedicated Financial Consumer Protection Authority Model: This model requires a specialized agency responsible for protecting financial consumer regulation and supervision. This is the least common model (3%) and it appears only in high-income countries.

(4) General Consumer Protection Authority Model: One or more authorities who take charge of general consumer protection supervision, are responsible for financial consumer protection supervision. This model is only used by 8% of total surveyed countries.

(5) Shared Financial Sector and General Consumer Protection Authority Model: With the usage rate of 9%, this model allows one or several regulatory agencies in the financial sector and one or several general consumer protection agencies sharing responsibilities for supervising financial consumer protection.

## ***2.3. Lessons Learned***

*Firstly, the necessity of building and improving the legal framework to protect consumers of financial services.*

An effective financial consumer protection framework supports financial consumers reduce risks in financial transactions; expand access to and usage of financial products and services; obtain enough information to make the best decisions. Besides, this also promotes financial institutions become more socially responsible and make more efforts to deliver diversified, reliable financial products and services at low cost. This is one of the ways to help strengthen consumer confidence in the official financial sector, contributing to the healthy and sustainable development of the financial market.

As a result, countries around the world are making more efforts to develop and strengthen regulatory frameworks and specialized supervisory departments to protect financial consumers more effectively. Based on its economic, political and social characteristics, each country has its own approach in building and improving the legal framework of financial consumer protection: most developed countries tend to develop their standalone

financial consumer law and have an independent agency in charge of receiving and handling complaints (the case of the US, Canada); while some developing countries often provide financial consumer protection provisions in specialized laws.

Regardless of the approach, financial consumer protection regulations still cover the following key elements: (i) disclosure requirements on the underlying benefits, risks, and terms of financial products; (ii) regulations on Know your customer and customer information security; (iii) regulations on fair treatment of financial customers such as prohibited acts in financial transactions, regulations on responsible business; (iv) regulations on receiving and handling complaints as well as necessary compensation solutions (different regulations should be applied for internal and external complaints); (v) regulations on handling violations of financial consumer protection and remedies for damage to financial consumers; (vi) regulations of financial education.

*Second, besides the legal framework, institutional arrangements are a key factor to ensure that the regulated providers of financial services and products will act in the best interests of their customers and treat them fairly.*

Similar to legal framework, there is no standard model that applies to all countries in institutional arrangements. In case of a specialized agency for financial consumer protection, this agency will also be responsible for the supervision and enforcement of all regulations and practices related to financial consumer protection. This approach will help all types of financial institutions follow the laws, regulations and necessary guidelines on financial consumer protection without difficulty. At the same time, inspection and supervision data of financial institutions will also be aggregated, unified and centralized, facilitating more effective research and more reasonable supervision measures in terms of activities of financial institutions as well as more detailed regulations and essential guidelines on financial consumer protection.

In the case of multiple agencies responsible for financial consumer protection regulation and supervision, it is necessary to clearly define the responsibilities of each authority (especially in aspects of receiving and handling complaints and disputes) and develop an efficient mechanism for coordination and information exchange.

As can be seen, many countries still continuously try their best to properly apply international best practices and recommendations such as enacting financial consumer protection laws and establishing a specialized financial consumer protection agency. However, based on the level of development as well as the economic and political characteristics of each country, it might be difficult for many countries to apply international best practices accordingly. However, these countries still make their own efforts to promote financial consumer protection such as integrating financial services consumer protection provisions into specialized financial laws or regulations, providing guidance under their respective national laws and apply a number of supervision models to protect financial consumers, such as integrated single financial sector authority model or integrated sectoral financial sector authority model or dedicated financial consumer protection authority, general consumer protection authority model, shared financial sector and general consumer protection authority model...

### **3. Current status of financial consumer protection in Vietnam**

#### ***3.1. Legal framework***

If compared with other countries in the world, in terms of the legal framework of financial consumer protection, Vietnam simultaneously applies 02 approaches: (i) formulate general consumer protection law without specific provisions for the financial industry<sup>1</sup>; and (ii) develop specific provisions on consumer protection within the financial sector laws (Law on Credit Institutions 2010 (amended and supplemented); Law on Insurance Business 2000 (amended and supplemented); Law on Securities 2019....).

The Law on Protection of Consumer Rights 2010 has mentioned many necessary requirements for consumer protections such as principles of consumer protection; provisions on consumer information protection, consumer rights, prohibited acts as well as responsibilities of organizations and individuals in financial transactions/contracts; handling administrative violations; complaint handling and dispute resolution.

However, after over 10 years of implementation, the Law on Protection of Consumer Rights 2010 has also shown many shortcomings, such as: (i) several regulations are only suitable for “traditional” transactions, not for a number of electronic or high-tech ones due to the rapid changes in the industrial revolution 4.0; (ii) the Law has not yet defined its relationship with other specialized financial laws and the responsibilities of other agencies and organizations in coordinating the implementation and supervision of the Law; (iii) many new methods of infringing upon the interests of consumers have just appeared but have not been added to the on prohibited acts section in this law; (iv) its content on customer information protection and provision of information concerning product or service for customer is no longer appropriate due to the presence of new products or services; (v) lack of an effective mechanism to monitor the registration and performance of model contracts as well as general terms and conditions of model contracts; (vi) Dispute settlement methods between consumers and product and service providers have not been adequately regulated; (vii) The current mechanism of receiving and handling requests for support at state agencies seems poorly designed (only clearly stipulated at the District-level People’s Committees), making it impossible to determine the responsibilities of the state agencies in this mechanism.

In particular, the Law on Protection of Consumer Rights has not mentioned “financial consumers” or “financial transactions”, while these terms are quite different from common consumers or product and service transactions with several special features. This might impact negatively on trust and confidence in financial markets, thereby affecting the performance of economy and macroeconomic policies.

Besides that, the contents of financial consumer protection are also scattered in specialized financial laws, such as: Law on Credit Institutions 2010 (amended and supplemented) for banking sector; Securities Law 2019 for security sector; Law on Insurance Business 2000 (amended and supplemented) for insurance sector. In fact, if compared with international practices of the World Bank and OECD/G20, the general consumer protection law with

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<sup>1</sup> Law No. 59/2010/QH12 dated January 17, 2010 on the protection of consumer rights 2010.



no specific references to financial services (Consumer Rights Protection Law 2010) and financial consumer protections provisions in specialized financial laws and documents under the specialized financial laws have provided similar subjects of financial consumer protection, such as: (i) regulations on disclosure and transparency of information about financial products and services; (ii) regulations on collecting and analyzing customer data to provide appropriate financial products and services; (iii) regulations on fair treatment of financial customers; (iv) regulations on data security and customer personal information protection; (v) regulations on the mechanism for receiving and handling complaints and disputes of financial consumers; and (vi) regulations on penalties for violations of the provision on financial consumer protection.

However, several provisions on financial consumer protection in banking sector have not kept pace with the rapid development of science and technology as well as the digitalization process, thus affecting the interests of financial consumers when using high-tech financial products and services (peer-to-peer lending; virtual assets, virtual currency....). In addition, regulations on receiving and handling complaints and disputes have not been specified in the Law on Credit Institutions 2010 (amended and supplemented). The State Bank has just issued regulations on receiving and handling complaints and disputes related to bank card activities<sup>1</sup>, the process of opening and using payment accounts<sup>2</sup>, payment services<sup>3</sup>, and payment intermediary services<sup>4</sup> and consumer lending activities of financial companies<sup>5</sup>.

### ***3.2. Organization of enforcement and supervision***

In terms of financial supervisory arrangements, Vietnam is currently applying a sectoral model, whereby each financial sector authority is in charge of the prudential and conduct of business supervision of its own financial field. To specify, banking activities are under the direct supervision of the Banking Supervision Agency (under the State Bank); insurance activities are under the direct supervision of the Insurance Supervisory Authority (under the Ministry of Finance); securities activities are under the direct supervision of the State Securities Commission (under the Ministry of Finance).

The responsibilities of the above agencies are based on specialized financial laws, including the Law on State Bank of Vietnam 2010, the Law on Credit Institutions 2010 (amended and supplemented), the Law on Securities 2019 and the Law on Insurance Business 2000 (amended and supplemented).

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1 Circular No. 19/2016/TT-NHNN dated June 30, 2016 of the Governor of the State Bank of Vietnam on bank card operations and Circular No. 17/2021/TT-NHNN dated November 16, 2021 amending and supplementing a number of articles of the Circular No. 19/2016/TT-NHNN dated June 30, 2016 on bank card operations.

2 Circular No. 23/2014/TT-NHNN dated August 19, 2014 guiding the opening and usage of payment accounts at payment service providers (amended and supplemented according to Circular 02/2019 /TT-NHNN dated 28/2/2019 and Circular 32/2016/TT-NHNN dated 26/12/2016).

3 Circular 46/2014/TT-NHNN dated December 31, 2014 guiding non-cash payment services.

4 Circular No. 39/2014/TT-NHNN dated 11/12/2014 guiding payment intermediary services (amended and supplemented by Circular No. 23/2019/TT-NHNN dated 22/11/2019).

5 Circular No. 43/2016/TT-NHNN dated December 30, 2016 stipulating consumer loans of financial companies (amended and supplemented by Circular No. 18/2019/TT-NHNN dated November 4, 2019).

For the supervision of financial consumer protection, in addition to the three agencies mentioned above, there is also the participation of Vietnam Competition and Consumer Authority (under the Ministry of Industry and Trade) and Vietnam Consumer Protection Association (VINASTAS).

Thus, if compared to the four models mentioned above, Vietnam has been following Shared Financial Sector and General Consumer Protection Authority Model. Accordingly, many financial supervisory agencies (State Bank of Vietnam, Ministry of Finance) and a general consumer protection agency (Ministry of Industry and Trade) share responsibilities for supervising financial consumer protection. Each of the above authorities has established dependent units with the function of supervising, receiving and handling complaints and denunciations related to the specialized fields that the agency supervises. However, there is no appropriate coordination mechanism among agencies in resolving disputes and complaints, and protecting the interests of financial consumers when conflicts occur.

**Table 1. Regulatory bodies, regulatory areas and laws relevant to financial consumer protection**

<b>Regulatory bodies</b>	<b>Regulatory areas/objects</b>	<b>Law</b>
Banking Supervision Agency (under the State Bank)	Banking services / Credit institutions and foreign bank branches	Law on Credit Institutions 2010 (amended and supplemented)
Insurance Supervisory Authority (under the Ministry of Finance)	Insurance services/ Insurance companies, brokers/dealers	Law on Insurance Business 2000 (amended and supplemented)
State Securities Commission (under the Ministry of Finance)	Securities services/ broker-dealers; fund management companies; fund managers.	Law on Securities 2019
Vietnam Competition and Consumer Authority (under the Ministry of Industry and Trade)	All fields/State supervision of consumer rights protection	Consumer Rights Protection Law 2010

*Source: Author's compilation*

#### **4. Some recommendations**

Through the above analysis, it can be seen that the Law on Protection of Consumer Rights only refers to consumers in general, the regulations on protecting the interests of financial consumers in Vietnam are scattered in different parts of the specialized financial, showing certain gaps in the enforcement of financial consumer protection, requiring the improvement of the Law. As a result, regulatory responses to the rising of many digital financial products and services are still in the progress and financial consumers are not really assured of their legitimate interests. On the basis of lessons learned from the international best practices and analysis from the current legal framework of financial consumer protection in Vietnam, there are several recommendations as follows:

#### **4.1. The legal framework**

*Long-term solution: Developing a standalone law on financial consumer protection.*

As analyzed above, provisions on protecting the interests of financial consumers in Vietnam are scattered in specialized financial laws. This requires close coordination of regulatory agencies because some types of financial services and products might hardly fall within the scope of these regulations, especially when many new types of financial services and products appear due to the rapid development of science and technology these days. The development of a separate law on financial consumer protection will help fill the legal gaps and resolve conflicts between the specialized financial laws.

*Short-term solution: Amending the Law on Consumer Rights Protection 2010 in the direction of having a separate chapter regulating financial consumer protection. Integrate provisions on financial consumer protection in each specialized financial law and sub-law documents.*

Currently, the Ministry of Industry and Trade has submitted to the Government a proposal to develop a Law amending and supplementing a number of articles of the Law on Protection of Consumer Rights 2010 (expected to be submitted to the National Assembly for approval by the end of 2022). This is a good opportunity for regulatory agencies such as State Bank of Vietnam and the Ministry of Finance to propose additional general principles on protecting the interests of financial consumers. Based on these general principles, the agencies (SBV and the Ministry of Finance) will review, supplement provisions, policies or guidelines on financial consumer protection in their regulated areas.

In addition, State Bank of Vietnam and the Ministry of Finance need to proactively propose amendments and supplements to current specialized financial laws (Law on Credit Institutions, Law on Securities, Law on Insurance Business) in order to integrate necessary provisions on financial consumer protection.

#### **4.2. Organization of enforcement and supervision**

*Long-term solution: Establishing a single agency dedicated to financial consumer protection in Vietnam*

The current trend of high-income countries is to establish a specialized financial consumer protection agency, responsible for consumer protection of all types of financial products and services. The establishment of such a specialized agency will ensure no conflicts of interests between regulatory agencies in terms of financial consumer protection and support protecting consumers of all types of financial services and products more efficiently. Therefore, in the long term, when Vietnam's financial market has developed and Vietnam has become a high-income country, it is necessary to set up a specialized financial consumer protection agency. Accordingly, this agency will operate independently and be responsible for overseeing the implementation of financial consumer protection policies at all types of financial service and product providers.

*Short-term solution: Taking advantage of available resources to build a concurrent agency responsible for financial consumer protection in its regulated financial field, and establishing coordination mechanisms between agencies.*

In the context of reducing payrolls, State Bank of Vietnam and the Ministry of Finance will review their overall organizational structure to assign a current subordinate unit or department be responsible for financial consumer protection in its regulated financial sector (the State Bank may assign the Banking Supervision Agency to concurrently supervise the credit institutions and enforcement of financial consumer protection in these institutions; the same will apply for the State Securities Commission and the Insurance Supervisory Authority). At the same time, State Bank of Vietnam and the Ministry of Finance must work together to develop a MOU on coordination between these financial consumer protection agencies to ensure the best benefits for financial consumers.

However, it is worth taking note that the agencies responsible for supervising financial consumer protection must at least ensure that there is a clear guideline on complaint-handling procedures for their regulated institutions to deal with complaints by any actual or potential customers. And if necessary, the agencies also are in charge of handling the disputes between financial consumers (individuals, organizations) and financial product and service providers.

### **Conclusion**

Many international studies have demonstrated the importance of financial consumer protection in the sustainable development of the financial system, in promoting financial inclusion as well as in creating a precondition for economic growth. This explains the trend of strengthening financial consumer protection solutions in many countries around the world.

In order to keep up with world trends and improve financial consumer protection, thereby promoting financial inclusion and moving towards an economically sustainable development, Vietnam needs to make more efforts in applying new solutions to strengthen financial consumer protection.

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# STABILIZE MARKET SENTIMENT TO PROTECT INVESTORS IN THE VIETNAMESE STOCK MARKET

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## Abstract

With a large proportion of retail investors, the Vietnamese stock market is still heavily influenced by sentiment factors rather than fundamental factors. Therefore, the issue of stabilizing market sentiment is increasingly essential to protect their investors and ensure the development of market securities. This study shows three popular types of sentiment among Vietnamese investors: heuristics and biases, overconfidence, and emotions. The PCA is employed to illustrate changes in sentiment in the Vietnamese stock market. The results show that the index reflects the impact of several political and economic events on investor sentiment in the stock market. This study summarises policies that the government has implemented to solve objective and subjective reasons for fluctuations in investor sentiment. Moreover, this study also recommends several improvements in policies to stabilize investor sentiment and protect vulnerable investors in the Vietnamese stock market.

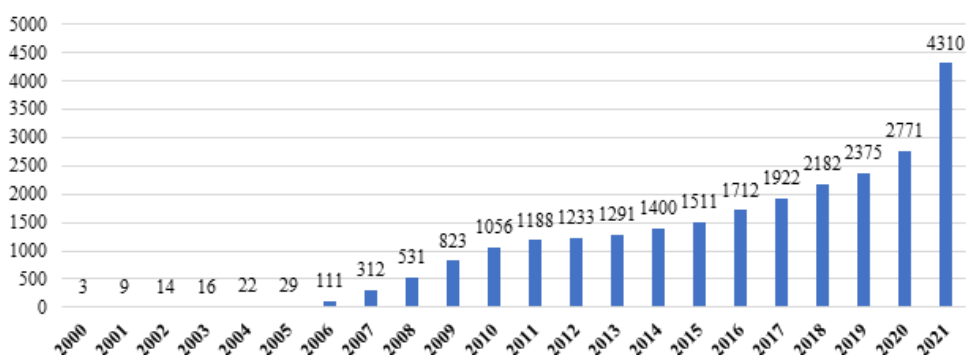
**Keywords:** Investor sentiment, Investor protection, The Vietnamese stock market

## 1. Introduction

After more than 20 years of development, the Vietnamese stock market has had many milestones. However, like in many other frontier and emerging markets, most investors in the Vietnamese stock market are retail investors. This group is vulnerable because they are strongly influenced by sentiment rather than fundamental factors (Ackert & Deaves, 2010). Therefore, the issue of stabilizing market sentiment is increasingly essential for many frontier and emerging countries to protect their investors and ensure the development of market securities.

Figure 1.1 illustrates the rapid increase in the number of domestic investors in the Vietnamese stock market, especially in 2006, 2007, and 2021. The number of individual investors accounts for approximately 97 percent of the total number of domestic investors.

**Figure 1. Number of domestic investor accounts**



*Source: State Securities Commission, 2022*

Comparing the number of individual and institutional investors, investors in the Vietnamese stock market are mainly retail investors. According to the State Securities Commission - SSC (2022), in December 2021, the number of domestic individual investor accounts was 4,257,724, while the number of domestic institutional investors was 12,977. Some reasons for the low proportion of institutional investors are the competing capability of investment funds in Vietnam is not enormous compared to other financial products such as bank deposits, stocks, bonds, and insurance. These amateur investors with inadequate financial awareness, which leads to decisions depending on sentiment. This has raised concerns about which sentiments are popular in the Vietnamese stock market and what the government do to stabilize market sentiment and protect the vulnerable group of investors.

This study provides a detailed view of investor sentiment in the Vietnamese market. This is the basis for completing policies to protect investors in the Vietnamese market. Key research questions are:

RQ1: What sentiments are popular in the Vietnamese stock market?

RQ2: How is the market sentiment in the Vietnamese stock market?

RQ3: What is the cause of these sentiments?

RQ4: What policies are being implemented to stabilize sentiment and protect investors in the Vietnamese market?

## **2. Literature review**

### ***2.1. Investor sentiment***

#### *Heuristics and biases*

Heuristics are shortcuts to deciding by using specific information and sometimes lead to bias (Ackert & Deaves, 2010). In many studies, heuristics and biases are often expressed in herding behaviours and anchoring. Regarding herd behaviours, Keynes (2018) pointed out that investors ignore their information and other fellows' decisions under incomplete information. Research by Kim & Nofsinger (2008) said that herd behaviours affect eastern investors' cognitive biases compared to western investors'. Regarding anchoring, when people are uncertain, they often anchor their decision on available data and slowly adjust it. Anchoring can even appear even when the anchor is unimportant if the anchor is available. Although heuristics can help investors save time when making decisions, the negative impact of heuristics is that people can be biased (Ackert & Deaves, 2010).

#### *Overconfidence*

Overconfidence is a phenomenon in which investors believe that they can estimate stock values better than others, so they often overstate the accuracy of their information (Ackert & Deaves, 2010). Many studies suggest that investors' overconfidence can lead to an increasing number of transactions and increased trading volume in the market (Kyle, 1985; De Long et al., 1990). Thus, overconfidence is the reason to use market turnover to measure market sentiment.

## *Emotion*

According to Ackert & Deaves (2010), emotion is one of the behavioural science foundations because emotions sometimes motivate people to make decisions at critical moments. Some signs of overconfidence are loss aversion, fear of missing out, and the disposition effect.

- Loss aversion: People often appreciate losses more than gains. When they lose something, their feelings of regret are stronger than happy when they receive something of the same value.

- Fear of missing out: The fear of missing out was first introduced by McGinnis (2004) when researching business decision work. The fear of missing out is when a person is worried about missing a reward that other people will achieve. This behaviour encourages a person constantly to track social networks and stay in touch with others (Przybylski et al., 2013).

- Disposition effect: This is an anomaly that an investor tends to sell profitable securities and hold losing securities (Odean et al., 1998). This effect is particularly prominent during bear markets.

### **2.2. Measures of investor sentiment**

Many studies refer to the definition of investor sentiment (Bormann, 2013). The general point of definitions in these studies is the subjective attitude of investors, which leads to deviation in decision making. The investor sentiment index is employed to measure investor sentiment. According to (Zhou, 2018), there are three types of sentiment index, including (1) Survey-based sentiment index, (2) Text-based index and media-based index, and (3) Market-based sentiment index.

Firstly, the **survey-based sentiment index** is determined by surveys of investors. Some notable extensive surveys are the American Association of Individual Investors survey, ING Investor Dashboard Sentiment Index, and Investors Intelligence survey.

Secondly, the text-based index and media-based index are determined by data mining tools. For example, the positive and negative words about the stock market in the New York Times were analyzed to gauge sentiment in the stock market (García, 2013). Jiang et al. (2019) also collected textual data to construct an index for market sentiment. The information collected includes public financial information and private information of the company's managers. The strength of this data is that sentiment can be built on investor sentiment for a short time, even by the minute.

Finally, the **market-based sentiment index** is determined by proxies related to investor sentiment. Several proxies are used to determine sentiment are the closed-end fund discount (Zweig, 1973; Lee et al., 2002); Volatility Index, put-call ratio, option premiums, and open interest (Pan & Poteshman, 2006).

## **3. Methodology**

### **3.1. Data collection**

The study uses data on the Vietnamese stock market collected from the Fiinpro database system, the website of the Hanoi Stock Exchange and the Ho Chi Minh City



Stock Exchange, and digital newspapers of the government's organizations such as the Government News, Thanh Nien, Tuoi Tre Online and other official websites.

Data to measure sentiment on the Vietnamese stock market are collected from 2010 to 2020 with monthly frequency. Following Baker & Wurgler (2006), the investor sentiment index is constructed from five proxies: market turnover, number of IPOs, average first-day return on IPOs, equity share of new applying, and the log difference in book-to-market ratios between dividend payers and dividend non-payers. We do not use the closed-end fund discount to construct a sentiment index for the Vietnamese stock market because of the limitations of closed-end funds in Vietnam.

### **3.2. Data analysis**

The study uses trend analysis and comparative analysis methods to analyse Vietnam's stock market changes.

In addition, the study also uses the Principal Component Analysis (PCA) to construct a sentiment index for the Vietnamese stock market. PCA is a method of reducing the dimensionality of the data space. Many variables are correlated while ensuring the maximum possible variance of the data (Jolliffe, 2002). The sentiment index equation is:

$$\text{SENT} = a \times \text{NIPO} + b \times \text{RIPO} + c \times \text{TURN} + d \times \text{S} + e \times \text{P}^{\text{D-ND}} \quad (1)$$

where: SENT is the investor sentiment, NIPO is the number of IPOs, RIPO is the average first-day return, TURN is the market turnover, S is equity share in new issues,  $\text{P}^{\text{D-ND}}$  is Value-weighted dividend premium, RMRF is the market premium, SMB is the size premium, HML is the value premium

## **4. Result and Discussion**

### **4.1. Current situation of investor sentiment on the Vietnamese stock market**

#### *4.1.1. Heuristics and biases*

Herding behaviors

According to Nguyen Hong Phong (1963), the Vietnamese people's collective-community mentality is one of the national characteristics. This character is also reflected in the Vietnamese stock market, where many investors buy because their friends buy and sell because others sell. According to Doan Anh Tuan and Hoang Mai Phuong (2017), the Herding behaviours in the Vietnamese stock market tends to be stronger in the bear market drops than in the bull market.

According to Vu Thi Loan and Nguyen Thi Hien (2021), the actions of domestic investors are significantly affected by foreign investors. The net selling by foreign traders, which contributes to herding on Vietnam's stock market, will have adverse effects on the position of the Vietnamese stock market in the world, whether the reason for this net selling comes from foreign investors or the Vietnamese economy.

## Anchoring

*Anchoring to rumours:* With the support of technology, the more accessible investors access information, the stronger the Vietnamese stock market is influenced by rumours. For example, the stock market dropped considerably by rumours when Mr Tran Bac Ha, the chairman of the board of directors of the Bank for Investment and Development of Vietnam (BIDV), was arrested.

The interesting point is that the anchoring bias in the Vietnamese stock market has changed over time. For example, in the past, the Vietnamese stock market was strongly influenced by rumours about the arrest of crucial officials or errors in the companies' accounting activities. However, investors have recently been strongly affected by rumours about the M&A information rather than the arrest information. This proves that the content of rumours changes over time, depending on the economy.

*Anchoring to influential people:* In the Vietnamese market, there is a common term to refer to large investors who influence the market and have the ability to manipulate the stock market price: "driver". Taking advantage of investor sentiment, drivers make investors have biases, guiding investors' actions. Although the Vietnamese market has had many "mature" steps, the influence of drivers is still very significant because the market still continuously has many new investors entering the market for the first time.

*Anchoring to internal company information:* Investors are likely to be affected by inside information, especially transactions of companies' senior managers. For example, the price of shares of FLC Group JSC (FLC) dropped sharply after the undisclosed sale of Mr Trinh Van Quyet, the old chairman of the board of directors of FLC, in January 2022. However, on March 31, information appeared on the social network that the new chairman of the board of directors was buying and collecting FLC shares, causing the trading volume on April 1 to increase 100 times compared to the previous day (Tuoi Tre News, 2022). This has shown that "inside information", whether verified or not, dramatically influences investors in the Vietnamese stock market. According to Mr Nguyen Huu Tai (2021), insider trading and disclosing false information are the most common fraudulent acts on the Vietnamese stock market from 2007 to 2018. However, inside trading can harm investors because information can be delayed.

### Mistakes between valuing investment in a company and valuing a company's assets

Many investors assume that a company with many assets means a good investment, even though the company is operating at a loss. For example, in 2021, many real estate companies experienced a massive decrease in income, but their stock prices still increased considerably (Tien Phong News, 2021). Many investors invest in real estate stocks based on the land area and the number of projects the company owns. However, the usual transaction will harm the stock price if this transaction is not executed. For example, the event that Tan Hoang Minh Group Joint Stock Company withdrew from the Thu Thiem land auction caused many stocks in the real estate industry to hit floor prices in January and February 2022. The previous year witnessed massive investment in real estate stocks, although their business results were unfavourable.

The valuation of real estate companies depends not only on the market value of the land companies own but also on property rights to land, the ability to implement projects and sell products, and reasonable discounted cash flow methods.

#### *4.1.2. Overconfidence*

Nguyen Thi Nhung et al. (2021) showed no evidence that overconfidence affects trading volume on the Vietnamese stock market. The research sample of stocks is the VN30, the group of companies with the top capitalization on the HSX (Bluechips). However, these results may change if we consider all companies on the two exchanges, especially the medium-capitalization stocks (Midcap) and small-capitalization (Penny). Overconfidence often occurs during periods of market booms. According to Pham Luu Hung (2022), the SSI securities company witnessed a decrease in the number of customers using consulting services in 2020 and 2021. However, at the beginning of 2022, when the stock market encountered many problems, the number of customers coming to SSI bounced back again.

In addition, overconfidence also causes investors to reduce the degree of diversification. It can lead investors to invest in only one industry with different stocks. For example, the fact that Tan Hoang Minh Group Joint Stock Company withdrew from the Thu Thiem land auction caused all stocks in the real estate to witness a rapid reversal and decrease in price in January and February 2022. This makes many investors lose due to investing merely in stocks of real estate companies in the previous period of expansion.

#### *4.1.3. Emotion*

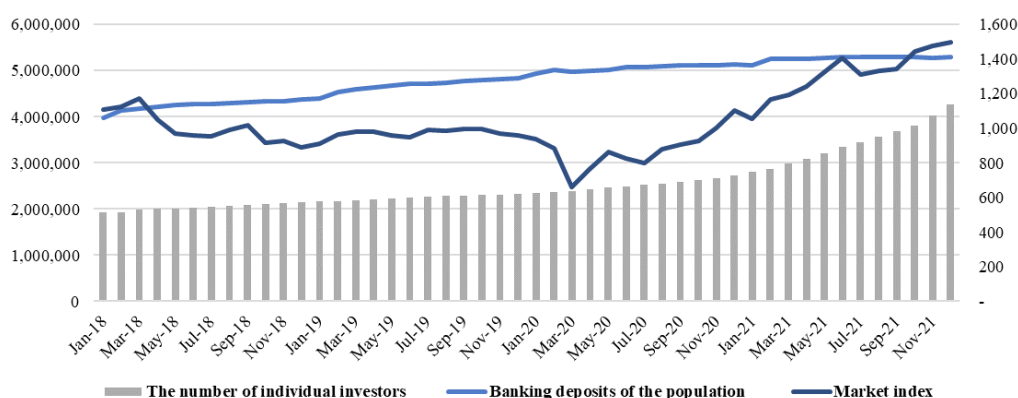
##### Loss aversion

In the Vietnamese stock market, there is always a fear of loss. For example, on January 10, 2022, due to a technical problem, the HSX was blocked, and the electronic board stood still and did not jump while the HNX and Upcom were still trading usually. This incident impacted investors' fear of loss. Many people continuously sold off despite not knowing the actual price of the traded shares (Public Security News, 2022). If the market was quite good in the morning session with an increase in the VNIndex by 5.64 points, the incident in the afternoon session caused the VNIndex to drop deeply to 24.77 points at the end of the session.

##### Fear of missing out

According to Trinh Thi Phan Lan (2021), the fear of missing out has been influential not only for individual stocks but also for the entire Vietnamese stock market in the period 2020 to 2021, especially in the second half of the year 2021. Figure 4.1 shows that between 2020 and 2021, the market index and the number of individual investors increased more rapidly than the number of population banking deposits. This contrasts with the difficulty in business operations of many companies during the pandemic. There seems to be a fear of missing out on the Vietnamese stock market during this period when investors fear losing rewards on the stock market.

**Figure 2. The market index, The number of individual investors, and The banking deposits of the population**



Source Authors' compilation

### Disposition effect

Tran Thi Hai Ly and Huynh Ngoc Thuong (2012) surveyed 100 investors in the Vietnamese stock market and showed that 80% tended to sell profitable stocks earlier than losing shares. This effect tends to be stronger among female investors or those with small account values. Phan Tran Trung Dung and Nguyen Quang Loc (2019) proved similar results. Research results show that the group of profitable stocks are sold faster than the losing stock. In contrast, losing stocks were held longer than non-losing stocks, although the trend became evident only for stocks withholding periods of more than 50 days.

### 4.2. The sentiment index in the Vietnamese stock market

This study uses the PCA to form a composite index that captures the common component of five proxies. However, because each proxy includes both sentiment and non-sentiment-related components, Baker and Wurgler (2006) suggested regressing each of the raw proxies on fundamental variables. This paper regressed each of five raw proxies on a dummy variable for recession, the industrial production index, employment, consumer price index, and total retail. The residuals from these regressions, labeled , are used to form a cleanser investor sentiment index. Table 4.1 describes the descriptive statistics and the correlation matrix of sentiment components.

**Table 1. Data of Sentiment components**

					Correlation matrix of sentiment components					
	Mean	SD	Min	Max		NIPO	RIPO	TURN	S	P
Panel A: Raw data										
NIPO	38.23	25.97	10.00	142.00	NIPO	1				
RIPO	7.05	7.06	-9.04	19.62	RIPO	0.38***	1			
TURN	-2.94	0.22	-3.39	-2.52	TURN	0.13	-0.04	1		
S	0.62	0.06	0.51	0.73	S	0.51***	0.59***	0.00	1	
P	23.53	21.19	-39.25	69.17	P	-0.36***	0.72***	0.07	0.55***	1

					Correlation matrix of sentiment components					
	Mean	SD	Min	Max		NIPO	RIPO	TURN	S	P
Panel B: Controlling for Macroeconomic variables										
	0.00	12.43	-24.69	33.93		1				
	0.00	5.62	-14.18	13.16		0.37***	1			
	0.00	0.15	-0.29	0.40		0.43***	-0.03	1		
	0.00	0.06	-0.11	0.12		0.523***	0.24**	-0.07	1	
	0.00	14.78	-45.69	34.88		0.44***	0.46***	-0.12	0.53***	1

Adopting the PCA with the residuals, the first principal component explains 45.91% of the sample variance of the orthogonalized variables. The investor sentiment index for the Vietnamese stock market from 2012 to 2020 is:

**Figure 3. Investor sentiment for the Vietnamese stock market from 2012 to 2020**



Figure 4.2 illustrates the investor sentiment for the Vietnamese stock market from 2012 to 2020. It can be seen that the sentiment index reflects the impact of several events on the Vietnamese stock market.

In 2013, rumours about Mr Tran Bac Ha’s arrest led to a large scale security market sell-off, causing the prices of 430 stocks to decline, of which 148 stocks hit floor prices on February 21, 2013 (Figure 4.2). This event wiped out billions of US dollars in market value (Tuoi Tre News, 2013). In August 2017, this rumour was spread again, negatively affecting banking stocks and the blue-chip stocks such as VNM, PLX and SAB.

The market sentiment also dropped in the last half of 2014 when China set up an oil rig in the East Sea and 2018 after the stock market bubbles in 2017. The sentiment also increased significantly in 2020 when many Vietnamese people were investing in the stock market.

In general, the investor sentiment in the Vietnamese stock market widely fluctuates, and it is strongly influenced by political and economic events. This impacts negatively on vulnerable investors in the market.

### ***4.3. Reasons for investor sentiment in the Vietnamese stock market***

#### ***4.3.1. Objective reasons***

Some of the reasons for investor sentiment in the Vietnamese stock market are Asymmetric information in the market, Information overload and The nature of Eastern culture.

*Firstly, asymmetric information* was proposed by Akerlof, Spence and Stiglitz, making these scientists receive the 2001 Nobel Prize in Economics. This study assumes a difference in the information obtained between the subjects participating in the transaction. This phenomenon often occurs in developing countries (Anayiotos & Dunaway, 1994). According to Dang Thi Bich Ngoc (2018), companies listed on the Vietnamese stock market often disclose information periodically at the request of the SSC. However, unusual information is not disclosed on completeness and timeliness, leading to asymmetric information between internal managers and external investors. Popular information that is not disclosed on time is the business expansion projects, the future products and business plans. According to Ho Chi Minh City Stock Exchange, the number of information disclosure violation cases in HSX was 104 cases in 2017, 68 cases in 2016 and 90 cases in 2015. According to Labor News (2021), by mid-December 2021, more than 270 sanctioning decisions were issued by the State Securities Commission, mainly due to failure to register transaction reports of insiders and majority shareholders. This number is 26.5% higher than the whole of 2020. In addition, the quality of published information is also a big problem. The difference in the financial statements before and after the audit also significantly affects investor sentiment. Asymmetry information often leads to heuristics and biases in the decision-making of individual investors. In addition, the information asymmetry will also lead to insider transactions, which strongly affect vulnerable investors.

Some of the reasons for investor sentiment in the Vietnamese stock market are: Asymmetric information in the market, Information overload and The nature of Eastern culture.

*Secondly, in terms of information overload*, technology has recently made it easier for investors to access a large amount of information relating to politics, economy, society, and individual companies. With the support of technology, investors can now easily find information to answer their questions. This easy access also has the downside that investors are overloaded with accurate and inaccurate information, affecting the decision-making process. According to Mitchell & Lusardi (2011), people who experience higher information overload are less confident in their choices and less satisfied with their decisions. This is why many investors in the Vietnamese market, even though they can gain much information about listed companies themselves, are still not confident in making investment decisions in stocks of good companies if this stock is not recommended by “drivers”. In addition, information overload can create inaccurate rumours, creating noise (Black, 1986). For example, information overload will cause inaccurate rumours, leading to the stock market price not accurately reflecting the company’s intrinsic value, negatively affecting the sustainable development of the stock market.

*Third, regarding the nature of eastern culture*, Kim & Nofsinger (2008) studied the differences between eastern and western cultures regarding collectivism and individualism that lead to heuristics and biases of individual investors. They further emphasized that Asian countries have a perfect background for studying behavioural finance. Collectivity is one of the most fundamental features of Vietnamese culture. Although collectivism has many

positive points, it leads to the individual’s consciousness being often lost (Nguyen Huu Dat, 2000; Dao Thi Phuong, 2015). This is the reason for anchoring to influential investors.

#### 4.3.2. Subjective reasons

Some of the subjective reasons for investor sentiment in the Vietnamese stock market are Knowledge and financial capacity of investors, and Demographic characteristics.

*Firstly, in terms of knowledge and financial capacity of investors:* By the end of 2021, over 90% of investors in the Vietnamese stock market will be domestic individual investors. According to Dang Cong Hoan (2022), the limited knowledge and financial capacity of individual investors is partly reflected in the change in the market share of securities companies. Table 4.2 describes the market share of securities companies on the HSX in 2021. Accordingly, VPS securities company rose from eighth place in 2019 to first place with 16.14 percent of the total market share in 2021, while SSI had merely 11.05 percent. The analysis method of these two companies has many differences. SSI tends to employ fundamental analysis, and they regularly deliver business analysis reports to clients. Meanwhile, VPS focuses on competition through fee competition policies, high leverage products, and a team of young brokers; their primary approach is technical analysis. VPS does not seem to provide many in-depth analytical reports on the business aspect of the business. This choice of investors reflects the “disengagement” from the primary purpose of the stock market and indirectly encourages short-term transactions (Dang Cong Hoan, 2022).

**Table 2. The market share of securities companies on the HSX in 2021**

No	Name of company	Abbreviations	Market share
1	VPS Securities	VPS	16.14%
2	SSI Securities	SSI	11.05%
3	VNDIRECT Securities	VNDS	7.46%
4	Ho Chi Minh City Securities	HSC	6.71%
5	Viet Capital Securities	VCSC	4.87%
6	Techcom Securities	TCBS	4.57%
7	Mirae Asset Securities Vietnam	MAS	4.44%
8	MB Securities	MBS	4.27%
9	FPT Securities	FPTS	3.38%
10	KIS Vietnam Securities	KIS	2.89%

*Source: Financial Times Vietnam, 2022*

*Second, regarding demographic characteristics,* there is currently no regulation on the age to open a securities account. Circular 120/2020/TT-BTC dated December 31, 2020, of the Ministry of Finance regulates that investors who open securities accounts are responsible for identifying fully and accurately information when opening a trading account. However, securities companies often stipulate that the minimum age to open a trading account is 18. Currently, the Vietnamese stock market is attracting many young investors. This trend makes many securities companies shift their focus to young investors in the market. In 2021, VPS securities company launched the “Zinvest - Z investment”

program exclusively for young customers. The target group of this program is customers aged between 18 and 25 at the date of account opening (customers born between 1996 and 2003) (VPS, 2021). According to Nhan Dan News (2022), young investors today have more knowledge and skills to invest than investors in the 2006-2007 period. However, due to lack of experience, many young investors lack discipline and cannot control their sentiment when making transactions.

Regarding gender, according to some recent surveys, the number of female investors is not higher than that of males. Specifically, according to a survey by Vietnam Indochina Research Company (2021), the percentage of women/men participating in the survey is 55%/45%. According to a survey by Vo Thi Hieu et al. (2020), the percentage of women/men participating in the survey is 62%/38%. This happened not only in the Vietnamese stock market but also in the US stock market due to the economic effects of the Covid-19 epidemic (Saigon Economic Newspaper, 2021). The different characteristics of gender will lead to different risk appetites and trading habits among investors.

#### ***4.4. Policies to stabilize investor sentiment on the Vietnamese stock market***

The Vietnamese government has introduced many policies to stabilize investor sentiment on the Vietnamese stock market. These policies aim to address the objective and subjective reasons for investor sentiment in the market.

*Firstly, regarding asymmetric information*, the Law on Securities 2019 has used a chapter (Chapter VIII) to address the issue. Accordingly, the subjects that must disclose information include public companies, institutions that issue corporate bonds to the public, securities companies, securities investment fund management companies and their branches, Vietnam Stock Exchange and its subsidiaries, Vietnam Securities Depository and Clearing Corporation; majority shareholders, founding shareholders, insiders, and some other subjects. The disclosure of information should be done on the following principles: complete, accurate, and timely. The information disclosure of the organization must be made by the legal representative or the person authorized to disclose information. The subjects disclosing information must take responsibility before law for the contents of disclosed information. When disclosing information, it must simultaneously report to the State Securities Commission (SSC) and the organization where such securities are listed or registered for trading on the contents of the disclosed information. The subjects disclosing information are responsible for preserving and keeping announced and reported information according to law provisions.

Circular 96/2020/TT-BTC dated November 16, 2020, of the Ministry of Finance, was issued to provide more detailed guidance on information disclosure on the Vietnamese stock market. Accordingly, the subjects must disclose information on their websites, the SSC's information disclosure system, the stock exchange website, and other mass media following the law. Which media depends on the specific content of the information. Subjects must publish periodic information, unusual information, and information on demand. The SSC is an agency that supervises, inspects, and handles violations of information disclosure on the stock market. The Securities Law 2019 stipulates the principles of criminal prosecution for crimes in the securities sector, such as forging registration dossiers for offering, knowingly misinforming or concealing the truth, and using inside information to buy and



sell securities. According to Nguyen Thi Hai Ha (2017), the legal framework regarding information disclosure in the Vietnamese stock market has been gradually improved. At the same time, the application technology, such as the implementation and use of the Securities Trading Supervision system (MSS System) and Information Disclosure System (IDS), has made storage more accessible and more affordable. The ability to search for information is more accessible than before. The information processing speed is also faster compared to the previous period. The scope of management and monitoring is expanded, increasing the ability to detect transactions with abnormal signs. However, current regulations on information disclosure often only focus on the time limit for information disclosure; the monitoring and checking of information after disclosure is still loose. There are no explicit provisions for protecting investors' interests against damages caused by listed companies' information disclosure violations. These are some of the policy issues that need to be resolved in the future to eliminate asymmetric information.

*Second, regarding information overload*, it is necessary to pay more attention to financial communication. At the same time, investors need to improve their ability to detect information risks. Some solutions proposed by Nguyen Son (2018) are promoting official communication and enhancing information transparency. Currently, the SSC has also coordinated with functional units of the Ministry of Finance and press agencies such as Nhan dan News, Securities Investment News, and Vietnam Television ... to orient the information on the stock market to investors (Nguyen Tien Dung, 2017). In addition, good quality companies should communicate to promote their business activities or new projects. The communication sessions of companies owning value stocks are usually aimed at institutional investors and professional investors, while retail and inexperienced investors often access information on social networks. This leads to a group of investors being overloaded with information on social networks but still lacking accurate and necessary information in their investment process.

*Thirdly, regarding the nature of Eastern culture*, over the years, the government has issued many legal documents to regulate relations in the securities markets, creating a favourable legal basis to protect individual investors. For example, Decree 156/2020/ND-CP dated December 31, 2020, of the Government clearly states that market manipulation can lead to criminal prosecution. However, the elimination of adverse effects of herding behaviour requires legal improvement and changes in the knowledge and financial capacity of investors.

*Fourth, regarding investors' knowledge and financial capacity*, the Securities Training Center of SSC has currently focused on training practice certificates. However, many non-specialists need to learn about investment, while there is currently no standard of knowledge for this group of investors. This demand can be met by coordination between SSC and securities companies to provide basic knowledge to investors (Dang Cong Hoan, 2022).

*Fifth, regarding demographic issues*, the entry of young and female investors into the market does not negatively affect the market; however, it is necessary to have policies to support this group of investors to enhance investment skills and knowledge. Many universities now have included the stock investment course in their curricula. At the same time, many securities contests were also organized, such as the "Stock Market Training" contest of the University of Economics - Vietnam National University Hanoi and the "Investor bravery" contest of the Banking Academy. This is a valuable opportunity for young investors to acquire knowledge and experience trading in the real stock market.

## 5. Conclusion

After more than 20 years of development, the Vietnamese stock market has also made many new strides. Investors have more knowledge and experience in transactions in the market. However, with many individual investors, the Vietnamese stock market is still heavily influenced by sentiment factors rather than fundamental factors.

There are three popular types of sentiment among Vietnamese investors. Firstly, heuristics and biases are manifested through herding behaviours, anchoring, and mistakes between valuing investment in a company and valuing a company's assets. Second, overconfidence often occurs during periods of market booms. In addition, overconfidence also causes investors to reduce the degree of diversification. Third, Vietnamese investors often act on emotions. Some of the primary emotions that dominate Vietnamese investors are loss aversion, fear of missing out and the disposition effect.

The investor sentiment in the Vietnamese stock market comes from two main reasons. For objective reasons, the Vietnamese stock market still has asymmetric information. Besides, the development of technology has investors overloaded with information in recent years. In addition, the influence of Eastern culture acting in collective action is also the cause of difficult-to-change sentiments in the Vietnamese market. For subjective reasons, the Vietnamese stock market consists of many individual investors, who are vulnerable groups of investors due to limitations in investment knowledge and financial capacity. In addition to demographic characteristics, personality traits also lead to investor psychology problems.

With an important role for the economy in general and enterprises' production and business activities in particular, the Vietnamese stock market is often interested in by the government. Many policies have been put in place to stabilize investor sentiment on the Vietnamese stock market. However, these policies still need to be improved and put into practice to protect a large group of vulnerable investors.

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# BANK PROVISIONING PRACTICE DURING THE PANDEMIC: EVIDENCE FROM THE COVID-19 OUTBREAK

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## **Abstract**

We investigate whether, and to what extent, banks exploit their discretion over loan loss provisions to achieve their management purposes during the pandemic. Using a sample of US banks during the current COVID-19 outbreak, we find that banks are more eager to use discretionary loan loss provisions in response to the worsening pandemic situation. We find in particular that banks use discretionary loan loss provisions to manage regulatory capital, smooth income and signal private information to outsiders. Overall, this paper enriches the literature on bank discretionary behaviour during the difficult time, especially during the current COVID-19 pandemic and therefore it has important implications for banking supervisor and bank stakeholders.

**Keywords:** Loan loss provisions; Pandemic, COVID-19

# AUDIT COMMITTEE AND POSSIBILITY OF FINANCIAL STATEMENT FRAUD

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## **Abstract**

The accuracy and integrity of financial statements are controversial topics among the users of financial accounting information, especially investors. Many studies have shown that the audit committee, in particular, plays an important role in ensuring the accuracy and integrity of financial statements of business entities in the financial sector, as well as reducing the possibility of fraudulent financial statements. This study investigated the relationship between the audit committee's quality factors and the possibility of fraudulent financial statements by comparing revenue and profit before and after the audit of 100 companies listed on the Hanoi Stock Exchange (HNX) from 2014 to 2018. Years of experience, gender, plurality, size, and number of meetings are all indicators of the Audit Committee's quality. The findings indicate that containing experienced teams, having more women and staffs are in charge of several positions improve the quality of the audit committee and prevent fraud in the financial statements. Furthermore, the size of the Audit Committee also helps to reduce the probability of financial statement fraud. However, the number of meetings has an adverse effect on the Audit Committee's quality and increases the risk of financial statement fraud.

**Keywords:** Audit Committee's quality, Prevent Fraud, Financial Statement, Hanoi Stock Exchange



# INTRODUCTION TO RISK-BASED INTERNAL AUDITING AND LESSONS LEARNT FOR COMMERCIAL BANKS IN VIETNAM

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## **Abstract**

*Background:* It is essential for Vietnam Commercial Banks to improve roles and effectiveness of internal auditing (IA), which will ensure their safe and sound development in the market economy and meet international standards for financial institutions. From only involving in periodic inspecting and monitoring, modern internal auditors are expanding on risk-based activities and assisting enterprises to make strategic decisions.

*Scope and approach:* The paper aims to give insight in the current approach in the banking internal audit system. Furthermore, the need for modern approach in risk-based auditing is discussed by introducing contemporary model in developed countries. Using structured questionnaires and interview, the author collects recommendations from Vietnam banking and auditing experts about risk-based auditing trend in Vietnam.

*Key findings and conclusions:* Moving to risk-based auditing will lead to more effective corporate governance in every organisations, especially in risky and highly regulated industries. A new paradigm in risk based auditing is needed to ensure sustainable development for commercial banks, however, for emerging economies like Vietnam, a lot of preparation in knowledge, system and resources should be available before comprehensively applying this audit system.

**Keywords:** Commercial Bank, Internal auditors, risk-based.

# FINTECH'S IMPACT ON THE PERFORMANCE OF COMMERCIAL BANKS IN VIETNAM

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## **Abstract**

With the powerful explosion and miracle of technology, the world has been witnessing great transformations in every industry, especially the emergence of new business models, challenging the traditional ones. traditional business models, reshaping production, distribution and consumption trends. An industry that needs to constantly change to match the market trend is the banking industry. Information technology applications are likened to new waves, changing the entire system of supply and operation models of financial services. The emergence of Fintech - a typical representative of the digital evolution has created great chances in the financial market of market participants, especially customers. The study examines the influence of Fintech on the performance of commercial banks listed on the stock exchange in Vietnam. In this research paper, the authors use a randomly research sample of 30 commercial banks listed on four Vietnamese stock exchanges in the period from 2015 to 2020. Descriptive statistical method, model Linear Regression, and tests consider defects in the model to give experimental results for the study. Research results show that: there is a negative relationship between interest expense, bad debt ratio, and the development of POS machines with the performance of commercial banks. In contrast, mortgage loans have a positive relationship with the performance of commercial banks. In addition, the number of ATMs also represents a better part of the operational efficiency of commercial banks in Vietnam.

**Keywords:** Fintech, Interest expense, Mortgage loan, Commercial banks

## **1. Introduction**

Nowadays, 4.0 technology revolution has led to many changes in all fields, digital technology is a tool that can be considered the most optimal. It is the process of transforming the model from traditional to modern by applying new technology. In the current trend, commercial banks are stepping up the application of advanced technologies to provide innovative financial products and services, such as artificial intelligence (AI), machine learning (ML), advanced data analytics, distributed ledger technology (DLT), cloud computing, and application programming interfaces (APIs).

At the seminar “Banks & Fintech: Opportunities & Challenges” (2021) held by VPBank, it said that the bank cooperates with Fintech to create added value in services provided to customers, such as offering new forms of payment. In addition, at this seminar, Deputy Governor of the State Bank of Vietnam Ms. Nguyen Kim Anh also emphasized,

with the importance and opportunities, benefits that Fintech offers such as the ability to optimize usefulness, reduce costs, create values and experience for users, Fintech is considered to be the development trend of all factors in banking and financial activities globally. Fintech is also forecast to bring opportunities for development cooperation as well as formulas for the operation of the banking system. It is clear that the banking industry group in Vietnam has also embarked on the renovation process and achieved remarkable achievements, contributing to that success must mention Fintech (financial technology). However, studies on this topic are quite new and do not have any objective opinions. Therefore, this study explores the influence of Fintech on the performance of commercial banks in Vietnam in the period 2015-2020 to show the positive effects that Fintech brings.

The study is structured in 5 parts with Part 2, the theoretical basis of CEO talent, financial reporting fraud, and the relationship between these two factors. Section 3 presents the data methodology. This is followed by section 4, which presents the empirical results of the study, and finished by section 5 giving concludes.

## **2. Literature review and hypothesis development**

### ***2.1. Fintech and Operational efficiency of banks***

Fintech is a combination of Technology and Financial, taking advantage of new technologies and techniques such as: Big data, AI, and Cloud... to use in financial services and operations, as a tool to change business methods The bank's business is in line with the global development trend. In deeper understanding, Fintech means the application of modern technology, the most advanced technology in the fields of finance, accounting, auditing, and investment.

The target groups of Fintech include financial institutions such as banks, and credit institutions that cooperate extensively with Fintech companies. These institutions also directly invest in Fintech companies or research activities to actively hold technology and dominate the market.

The remarkable development of many new technologies over the past two decades has allowed banks to improve their access to finance. The Fintech wave has created tremendous changes to business models, barriers to market entry and exit, customer behavior as well as competitive strategies of enterprises. Fintech has made remarkable contributions to increasing the level of access to financial resources of financial participants in the market, regulating the flow of working capital, reducing transaction costs and increasing the connection between supply and demand in financial markets.

Fintech not only reduces costs but also opens up many possibilities to access financial resources for many customers. Modern distribution channels such as POS, ATM, Internet Banking, Mobile Banking, Call -Centre, and Facebook Banking, help financial institutions save costs, moreover create convenience and initiative for customers.

According to KPMG's (2015) Mobile Banking report, Mobile Banking is the most cost-effective transaction channel. By expanding the customer base as well as saving costs, Fintech services will increase the total assets of Fintech organizations. In addition, other entities also benefit from Fintech.

Businesses can save 25 trillion labor hours each year by switching from cash to digital payments. According to Pham Thi Huyen (2019) Widespread adoption and use of Fintech could increase the GDP of all emerging countries by 6% or \$3.7 trillion by 2025. This value is equivalent to the size of the German economy or greater than the total GDP of African countries.

“Without Fintech (financial technology), mobile banking of banks would not be able to develop as it is today,” said Pham Tien Dung (2019), Director of the Payment Department of the State Bank of Vietnam, assessing the trend of mergers and acquisitions. cooperation between banks and Fintech.

Indeed, Fintech may have made a positive change for the Russian economy, helping Vietnam to integrate with the world. Vietnam has also achieved significant numbers in the process of bringing customers to Fintech in the early stages. “Vietnam Fintech market reached \$4.4 billion in transaction value in 2017 and is expected to reach nearly \$9 billion by 2020” - (Tran Trong Triet, 2020). According to research by Tomorrow Marketers, 2020 “Fintech companies in the payment sector always attract the most investment capital”. With the number of financial transactions made via mobile phones increasing, as of March 31, 2019, this number nearly doubled compared to 2018. According to the State Bank of Vietnam's forecast in 2020, the total value of payments via electronic means in Vietnam is expected to increase nearly 4 times, from 16 billion USD in 2016 to 70.9 billion USD in 2025.

Thus, Fintech plays a significant role in changing consumer habits in banking and finance as well as the face of Vietnam's economy in general. It can be said that cooperation deals between banks and fintech companies have continuously increased in both quantity and scale.

## ***2.2. Hypothesis development***

The relationship between Fintech technology and the performance of banks has long been a topic of interest in the economy. In this study, we want to further expand the issue of whether Fintech affects the performance quality of banks. Banks in Vietnam are also starting to apply new technology platforms to the development of banking products and services to generate revenue and expand market share in the financial market in the future. hybrid (Nguyen Thi Hien, Pham Thu Huong, 2019). However, the impact of bank-level factors such as asset underperformance, capital adequacy and insolvency risk on the bank's performance (Hersugondo, Anjani and Pamungkas, 2021).

The 2008 global financial crisis is considered by many researchers to be the turning point for the new financial era created by Fintech. It was this crisis that was also an important catalyst as the public perception of the stability of banks was changed, and the level of confidence in the handling of financial services was shaken. An increasing number of companies in both developed and developing countries are providing financial services

that provide money and are supported by customers because of the convenience and lower cost of traditional financial services. Thus, reputation is not a decisive factor in choosing a financial service provider. This argument is also proven in a study on customer satisfaction for consumer lending services (Tran Thi Hien Dung, 2014).

*H1: Interest expense has a negative impact on the performance of commercial banks*

Shadow banking's share in the residential mortgage sector nearly doubled from 2007 to 2015, with growth particularly strong among online "fintech" lenders; studied how two forces, regulatory differences and technological advantages, have contributed to this growth (Greg Buchak et al., 2018). Fintech lenders charge 14-16 basis points upfront and seem to offer convenience rather than cost savings to borrowers. They seem to use different information to set interest rates than lenders do. A quantitative model of mortgage lending shows that regulation solves about 60% of shadow banking growth, while technology accounts for about 30%.

*H2: Mortgage has a positive effect on the performance of commercial banks in Vietnam*

Bad debt is money that a bank lends to a customer, but when it is due for debt recovery, it cannot be recovered due to subjective factors from the customer such as a business or credit institution that makes a loss. Bankruptcy leads to the inability to pay the bank's borrowed debt when it is due. Bad debt has a negative impact on the flow of capital into the economy. The higher the bad debt ratio, the greater the risk and loss of capital flows of commercial banks. In a worst-case scenario, a high NPL ratio in the banking system could indicate the existence of systemic risk, which in turn could affect deposits and limit the activity of financial intermediaries, resulting in negative effects on investment and economic growth (Ahmed et al., 2006).

*H3: Bad debt (bad debt ratio) negatively affects the performance of Vietnamese commercial banks*

Currently, not only in advanced countries, but consumers in Vietnam can also experience contactless payment (touchless payment) by simply touching a bank card (NH) or smartphone on the device. The POS or mobile device of the place that accepts the card can pay bills and other financial services. The trend of non-cash payments is increasing, and Vietnamese people have fewer opportunities to use cash. Contactless payment methods including contactless cards, e-wallets - QR codes, and online purchases are very popular.

*H4: The number of POS machines in banks negatively affects the performance of commercial banks in Vietnam.*

Internet infrastructure based on relatively old technology inhibits the achievement of the expected performance of banks in developing countries (Alam et al., 2007; Gutu 2014). Internet Banking has often been activated by major banks in some developing countries (Malhotra and Singh, 2006 and 2009). Large-scale private banks with high deposit volumes, low branches and fewer fixed assets tend to be internet banking aimed at driving a low market share. When banks provide additional services, operating costs decrease and revenue increases (Dubois et al., 2011; Brush et al., 2012).

*H5: The number of ATMs of banks positively affects the performance of commercial banks in Vietnam.*

### 3. Data and methodology

#### 3.1. Data

In this study, we collect data manually from financial statements and annual reports for the last 5 years from 2015 to 2020 of 30 commercial banks listed on the Vietnam Stock Exchange.

ROA, ROE, and ROS are dependent variables that are measured on the bank performance. NIM is net profit margin, which is a dependent variable measured by net interest income on profitable assets as previously studied by Hersugondo, Anjani, & Pamungkas (2021). Fintech is measured by the characteristics of applying financial technology at commercial banks, including 5 independent variables: Interest Cost, Equity Loan, NPL, POS, and ATM. These data are collected directly through financial statements and annual reports of banks. According to research by Bartlett et al (2021), Interest Cost is the interest expense, loans made by FinTech lenders have a 35% lower probability of default than comparable loans from financial institutions non-FinTech lenders. The variable Equity Loan is a mortgage loan measured by the Natural Logarithm of Secured Loans, the borrower still has the right to own that property until the debt is paid off and the bank will keep the relevant documents (Buchak et al., 2018). The NPL variable is the bad debt ratio (Beck, Jakubik and Piloiu (2013); the POS variable is the Natural Logarithm of the Number of POS Machines and the ATM variable is the number of ATMs of each Bank as measured by the natural logarithm of the Number of Automated Tellers of each Bank (Akhisar et al, 2015).

In this paper, we control other variables of operating size (Firm Size) , time of operation (Firm Age) and financial leverage (Leverage). These variables are established by the group based on the available formula through data on total assets, year of establishment and total liabilities during the study period. About the Auditing company name (BIG4) is used dummy variable for quantification, the group collects information through the consolidated financial statements Auditing of the Banks, the Big 4 Auditing company is one in four big Auditing company or Auditors, including PricewaterhouseCoopers (PwC), Ernst & Young (E&Y), Klynveld Peat Marwick Geordeler (KPMG), Deloitte Touche Tohmatsu Limited (Deloitte).

#### 3.2. Methodology

In this study, in order to evaluate and explain the impact of interest costs, mortgage loans, bad debt ratio, number of machines accepting bank cards to pay service bills, number of ATMs, etc. automatic withdrawal of each bank, comparison of the size, number of years of establishment, financial leverage and comparison of the difference in operating efficiency when the banks use Big4 audit in the company's financial statements. company. The research equation is set up as follows:

$$\text{Bank performance} = \beta_0 + \alpha_1 * \text{Fintech} + \alpha_2 * \text{Firm size} + \alpha_3 * \text{Firm age} + \alpha_4 * \text{Leverage} + \alpha_5 * \text{Big4}$$

Specific definitions of variables used in the study are summarized in Table 1.

**Table 1. Summary of research variables and methods of measurement**

<b>Variable</b>	<b>Measure</b>
<b>Bank Performance</b> ROA	Return on total assets is computed as (Total profit before tax and interest)/ Total assets
ROE	Return on equity is (Total profit before tax and interest)/ Equity
NIM	Net profit margin is Net Interest Income / Average Earning Assets
ROS	The ratio of profit after tax to sales is Profit after tax/Revenue
<b>Fintech</b> Interest Cost	Interest expenses is Natural Logarithm of the Total Continuity of Interest that the borrower has to pay on the debt over the life of the loan.
Equity Loan	Mortgage loan is Natural Logarithm of Secured Loans, the borrower retains ownership of that property until the debt is paid off and the Bank will keep the relevant documents.
NPL	NPL ratio is computed as (Profit after tax in the period)/(Revenue in the period)
POS	Natural Logarithm of Number of POS Machines
ATM	Natural Logarithm of the Number of Automated Tellers of each Bank.
Control variables	
Firm size	Natural logarithm of total assets
Firm age	Natural logarithm of the number of years of company establishment
Leverage	Financial leverage is Total liabilities/Total assets
BIG4	Dummy variables equal to 1 if firm use Big4 service and 0 otherwise

#### 4. Empirical results

In Table 2, the regression results of the ROE model show that the overall variables used in the model are reasonable. With the coefficient of determination R<sup>2</sup> of the ROE model reaching 0.42 - higher than the other 3 models, it shows that the ROE model is the most suitable, so our group decided to re-test and correct the errors in the model. The figure contains the ROE variable.

Based on the Coefficient values of Fintech variables in the model regression results table by the ROE method of the ROE model. Interest Cost = -0.34 shows that the lower the interest expense, the higher the Bank's performance. As evidenced by the fact that banks today are applying for loans with low-interest rates, and 0% interest rates through Fintech loans application to promote attracting the number of customers to increase the Bank's operational efficiency. Equity Loan = 0.48 shows that the higher the Mortgage Loan, the better the Bank's performance, this positive influence is due to the Bank's use of technology to shorten the time, distance and cumbersome procedures. while ensuring

safety and security. NPL = -0.78 shows that the lower the NPL ratio, the higher the Bank's performance. The increase in bad debt will cause the Bank to use capital inefficiently, reduce profits, incur cash flow risks, or become insolvent for the bank's payments. POS = -3.5 shows that the smaller the number of POS machines, the higher the Bank's operational efficiency. The number of POS machines that are rarely used is due to the high taxes and management costs of POS machines, so many retail stores or cashier locations limit their use. ATM = 3.6 shows that the more ATMs, the better the Bank's performance. In Vietnam, most companies pay their employees by transferring money to a bank card, so the number of bank cards is increasing day by day, leading to an expansion of the number of ATMs. The result for the other dependent variables has unchanged, the tables below will show some of particular results.

**Table 2. OLS regression results (for ROA)**

	(1)	(2)	(3)	(4)	(5)	(6)
Constant	-5.2289*** (-4.9937)	-4.7475*** (-5.333)	-3.8781*** (-4.5339)	-4.6075*** (-0.3198)	-6.3531*** (-6.0707)	-4.5064*** (-4.0529)
Interest Cost	-0.0672 (-0,9132)	-0.0892 (-1.115)				
Equity Loan	0.057*** (3.949)		0.0626*** (4.4905)			
NPL	-0.058 (-1.193)			-0.0162 (-0.3198)		
POS	-0.3973*** (-4.4978)				-0.1743*** (-2.9377)	
ATM	0.4778*** (4.1077)					0.0208 (0.2518)
Firm Size	0.7052*** (4.3111)	0.651*** (4.8182)	0.4738*** (4.7435)	0.5544*** (5.341)	0.8201*** (6.0342)	0.5342*** (4.0989)
Firm Age	0.3875* (1.9255)	0.5126** (2.3348)	0.3518* (1.6684)	0.5556** (2.5399)	0.5263** (2.4731)	0.5524** (2.5315)
Leverage	0.09** (2.0827)	0.0506 (1.0996)	0.0508 (1.1715)	0.059 (1.277)	0.0963** (2.0642)	0.0547 (1.1716)
Observations	180	180	180	180	180	180
Adjusted R-Squared						
t statistics in parentheses * p<0.1, ** p<0.05, *** p<0.01						



**Table 3. Results of multi-collinearity test (after ROE retest)**

	<b>Coefficient Variance</b>	<b>Uncentered VIF</b>	<b>Centered VIF</b>
Constant	1.096107	623.8537	NA
Interest Cost	0.005410	140.9296	2.151866
Equity Loan	0.000208	2.302328	1.311067
NPL	0.002384	4.626057	1.219957
POS	0.007798	39.28669	5.158302
ATM	0.013528	39.69480	4.190990
Firm Size	0.026729	1007.824	4.122412
Firm Age	0.040513	47.16712	1.108076
Leverage	0.001866	2.791946	1.432977
BIG4	0.009687	3.859439	1.157832
Obs.	180	180	180

According to Freund, Wilson & Sa (2006), the VIF index of the variables is less than 10, the model does not appear multicollinearity. Based on the Variance Inflation Factors table, after re-testing of the ROE model, it shows that the VIF value < 6 (the highest is 5.16 - corresponding to the Centered VIF column) along with the conclusions obtained from the side autocorrelation matrix table. Above, we see that the research model does not have multicollinearity defects.

Based on the results of the regression model by the OLS method of the ROE regression model (Table 2), the Durbin-Watson stat value of the ROE variable is 0.6887. Realizing that these values are all close to 1, it can be concluded that this model has autocorrelation.

To overcome this phenomenon, the group used the solid standard error method to solve the autocorrelation problem based on the idea of Newey - West (1987) to adjust for the standard errors of OLS.

**Table 4. Results of overcoming autocorrelation (after ROE retest)**

Dependent Variable: ROE

Included observations: 180

HAC standard errors & covariance (Bartlett kernel, Newey-West fixed bandwidth = 5,0000)

<b>Variable</b>	<b>Coefficient</b>	<b>Std. Error</b>	<b>t-Statistics</b>	<b>Prob.</b>
OLD	-77.04386	20.44896	-3.767617	0.0002
INTEREST COST	-0.332300	0.483116	-0.687827	0.4925
EQUITY LOAN	0.478109	0.243846	1.960699	0.0515
NPL	-0.776398	1.019486	-0.761558	0.4474
POS	-3.506036	1.518092	-2.309501	0.0221
ATM	3.606618	2.019338	1.786040	0.0759
FIRM SIZE	10.00310	2.994101	3.340937	0.0010
FIRMAGE	5.179823	4.889395	1.059400	0.2909
LEVERAGE	1.246191	0.375789	3.316198	0.0011
BIG4	0.780346	1.992826	0.391578	0.6959

**Table 5. Results of PSSS change phenomenon test**

Heteroskedasticity Test: White				
F-statistics	5.506647	Prob. F(53,126)	0.0000	
Obs*R-squared	125.7224	Prob. Chi-Square(53)	0.0000	
Scaled explained SS	136.3474	Prob. Chi-Square(53)	0.0000	
Test Equation:				
Dependent Variable: RESID^2				
Method: Least Squares				
Date: 02/19/22 Time: 21:34				
Sample: 1 180				
Included observations: 180				
Collinear test regressors dropped from the specification				
Variable	Coefficient	Std. Error	t-Statistics	Prob.
Old	6762,099	3491,879	1.936521	0.0550
InterestCost^2	-23.14165	29.63789	-0.780813	0.4364
InterestCost*EquityLoan	9.259467	17.03504	0.543554	0.5877
InterestCost*NPL	6.889169	46,68207	0.147576	0.8829
InterestCost*POS	-240.4287	124.1399	-1.936756	0.0550
InterestCost*ATM	388.5256	164.8457	2.356905	0.0200
InterestCost*FirmSize	196.0130	209.3202	0.936426	0.3508
InterestCost*FirmAge	65.03452	332.8225	0.195403	0.8454
InterestCost*Leverage	31.09830	39.69464	0.783438	0.4348
InterestCost*Big4	-247.7950	143.3709	-1.728349	0.0864
InterestCost	-1258.069	1195,900	-1.051985	0.2948
Equityloan^2	2.496713	2.141945	1.165629	0.2460
Equityloan*NPL	-3.6768108	2.171496	-1.692892	0.0929
Equityloan*POS	5.724239	3.037172	1.884727	0.0618
Equityloan*ATM	7.246353	4.282468	1.692097	0.0931
Equityloan*FirmSize	-30.92874	17.56068	-1.761250	0.0806
Equityloan*FirmAge	-32.85620	8.206941	-4.003464	0.0001
Equityloan*leverage	-2.643166	16,64683	-0.158779	0.8741
Equityloan*big4	12.35530	3.601390	3.430704	0.0008
Equity loan	186.9693	51.78516	3.610481	0.0004
NPL^2	2.939059	4.518266	0.650484	0.5166
NPL*POS	-26.85372	17.34586	-1.548134	0.1241
NPL*ATM	-0.241082	19.03138	-0.012668	0.9899
NPL*Firmsize	19.57914	51.00345	0.383879	0.7017
NPL*Firmage	77.54505	30,62919	2.531737	0.0126
NPL*leverage	22.59190	24.19551	0.933723	0.3522
NPL*BIG4	-33.59216	16.28543	-2.062713	0.0412

NPL	-233.6479	209.0299	-1.117772	0.2658
POS^2	22.05261	12.0565	1.836852	0.0686
POS*ATM	-51.19978	35.71989	-1.433369	0.1542
POS*FIRMSIZE	185.3497	119.2607	1.554156	0.1227
POS*FIRMAGE	-269.9375	97.27776	-2.774914	0.0064
POS*LEVERAGE	142.3418	218.7521	0.650699	0.5164
POS*BIG4	20.10655	36.19469	0.555511	0.5795
POS	351.5064	487.8279	0.720554	0.4725
ATM^2	59.13174	48.43313	1.220894	0.2244
ATM*FIRMSIZE	-438.7268	168.1716	-2.608805	0.0102
ATM*FIRMAGE	88.96655	131.3786	0.677177	0.4995
ATM*LEVERAGE	-194.4222	313,7342	-0.619704	0.5366
ATM*BIG4	-80.18919	46.40613	-1.727987	0.0864
ATM	964.0349	663.6797	1.452561	0.1488
FIRMSIZE^2	-74.08806	191.1574	-0.387576	0.6990
FIRMSIZE*FIRMAGE	359.3818	372.3220	0.965245	0.3363
FIRMSIZE*LEVERAGE	-80.21488	206.5920	-0.388277	0.6985
FIRMSIZE*BIG4	246.1245	167.3940	1.470331	0.1440
SIZE	-393.1678	1607.803	-0.244537	0.8072
FIRMAGE^2	388.0584	105.4974	3.678368	0.0003
FIRMAGE*LEVERAGE	-142.1653	217.4734	-0.653714	0.5145
FIRMAGE*BIG4	-54.04293	72.47145	-0.745713	0.4572
FIRMAGE	-3728.051	1078.226	-3.457579	0.0007
LEVERAGE^2	3.491607	19.42569	0.179742	0.8576
LEVERAGE*BIG4	34.08670	101.1027	0.337149	0.7366
LEVERAGE	455.4620	1266,243	0.359695	0.7197
BIG4^2	-141.3210	459.5108	-0.307547	0.7589
R-squared	0.698458	Mean dependent var		36.34520
Adjusted R-squared	0.571619	SD dependent var		56.83455
SE of regression	37.19868	Akaike info criterion		10.31375
Sum squared residue	174351.5	Schwarz criterion		11.27164
Log likelihood	-874.2374	Hannan-Quinn criteria.E		10.70213
F-statistics	5.506647	Durbin-Watson stats		1.521877
Prob(F-statistics)	0.000000			

The results of the test of variance based on the White test for the ROE model after retesting, show that the p-value of ROE = 0 <, rejecting H0. In conclusion, the ROE model has the phenomenon of variable variance.

To overcome this phenomenon, the team estimated the standard error of the regression coefficients with the White-Hinkley matrix (HC1).

**Table 6. Results of overcoming PSSS changes (after ROE retest)**

Dependent Variable: ROE

Method: Least Squares

Date: 02/19/22 Time: 21:47

Sample: 1 180

Included observations: 180

White-Hinkley (HC1) heteroskedasticity consistent standard errors and covariance

Variable	Coefficient	Std. Error	t-Statistics	Prob.
OLD	-77.04386	13.73075	-5.611044	0.0000
INTEREST COST	-0.332300	0.401756	-0.827118	0.4093
EQUITY LOAN	0.478109	0.190142	2.514490	0.0128
NPL	-0.776398	0.689516	-1.126005	0.2618
POS	-3.506036	1.167752	-3.002381	0.0031
ATM	3.606618	1.559793	2.312241	0.0220
FIRM SIZE	10.00310	2.071893	4.828000	0.0000
FIRMAGE	5.179823	2.806256	1.845813	0.0667
LEVERAGE	1.246191	0.282371	4.413307	0.0000
BIG4	0.780346	1.228687	0.635106	0.5262
R-squared	0.417872	Mean dependent var		9.428611
Adjusted R-squared	0.387053	SD dependent var		7.923730
SE of regression	6.203562	Akaike info criterion		6.542077
Sum squared residue	6542,312	Schwarz criterion		6.719464
Log likelihood	-578.7869	Hannan-Quinn criteria.		6.614000
F-statistics	13.55908	Durbin-Watson stats		0.618491
Prob (F-statistics)	0.000000	Wald F-statistics		17.74450
Prob (Wald F-statistics)	0.000000			

After overcoming the two phenomena of autocorrelation and variable variance, the standard errors are changed in an increasing direction compared to the original model. Take a good example of which is Equity Loan, according to research by Buchak.G and colleagues (2018), which mentions that “Compared to other shadow banks, Fintech lenders serve more reliably borrowers and are more active in the refinancing market. Fintech lenders charge 14-16 basis points upfront and seem to offer convenience rather than cost savings to borrowers.” And this is true with the hypothesis H2 that the group initially made “The higher the mortgage, the better the bank’s performance”.

## 5. Conclusion

The study examined the influence of Fintech on the performance of 30 commercial banks listed on stock exchanges in Vietnam in the period 2015 - 2020. The results show that there is a positive relationship between Fintech and the operational efficiency of the commercial banks. Besides, we also come to the conclusion that the more commercial banks apply Fintech, the better the performance of commercial banks and provide Fintech measurement criteria that show that the effectiveness of using Fintech is directly proportional to the quality activities of commercial banks.

Research also indicates that when commercial banks decide to use Fintech to ensure operational efficiency, banks and Fintech companies themselves need to change their thinking in competition and be ready to cooperate in order to maximize their strength for mutual development and mutual benefit. And in order to contribute between these two fields, it requires close coordination of regulatory agencies, especially the role of commercial banks in providing solutions to complete the Fintech ecosystem (Pham Thi Huyen, 2019; Hersugondo, Anjani and Pamungkas, 2021) as well as change the environment. The new banking system is suitable for the digital age (Dubois et al., 2011; Brush et al., 2012; Ahmed et al., 2006; Greg Buchak et al., 2018). Banks themselves need to upgrade their technology infrastructure and modernize their operating processes to have the best platform when combined with Fintech companies. In addition, banks need to issue regulations and procedures to strictly control the provision of data to Fintech companies, putting customer information security on the top.

The study is expected to help people see more clearly about the influence of Fintech on the performance of commercial banks in Vietnam. In addition, the research team also has limitations in data collection as well as not diversifying variables, research time is still limited and some other Fintech criteria have not been considered. influence the Bank's operations. This is also considered as a suggestion for the group's further studies.

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# PERCEPTION OF FACTORS AFFECTING ENTREPRENEURIAL INTENTION AMONG STUDENTS AT VIETNAM NATIONAL UNIVERSITY, HANOI

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## **Abstract**

In recent decades, the research field of entrepreneurship phenomenon has significantly increased in both quantity and quality. In Vietnam, although many new types of businesses have emerged, the interest in studying entrepreneurs seems not to be thoroughly investigated. This research aims to evaluate the factors affecting the intention to start a business of students at Vietnam National University, Hanoi. The authors make use of mixed methods including both quantitative research method and qualitative research method. The qualitative research method is employed to identify meanings, confirmations, adjustments, and compliments for concept-measurement variables in the conceptual model. Quantitative research is conducted from a sample of 236 students of Vietnam National University, Hanoi. Questionnaires have been sent to students to evaluate the measurement scale and appropriateness of the research model. The study identifies six independent variables: (1) *Support for startups*, (2) *Perceived feasibility*, (3) *Entrepreneurial educational environment*, (4) *Personal characteristics*, (5) *Access to finance*, (6) *Attitude towards entrepreneurship behavior*. However, the results of multiple regression analysis show that 04 out of 06 independent variables having the effect in descending order, as follows: *Support for Startups* (0.526), *Entrepreneurial educational environment* (0.419), *Perceived feasibility* (0.000), *Attitude towards entrepreneurship behavior* (-0.066). The study shows the difference in entrepreneurial intention of Hanoi National University students by genders, school-year levels and training majors using independent T-test and ANOVA analysis. From this research, the authors make some recommendations to enhance entrepreneurial intentions of students at Vietnam National University, Hanoi. In addition, some limitations of the research and suggested research directions for future are also mentioned.

In recent decades, the research field of entrepreneurship phenomenon has significantly increased in both quantity and sophistication. In Vietnam, paradoxically, while creating a new business venture has become a tendency, the interest in studying entrepreneurs seems not to be thoroughly investigated. This research aims to evaluate the factors that affect the entrepreneurial intention of information technology (IT) students in Vietnam. The authors make use of mixed methods including both quantitative research method and qualitative research method.

The qualitative research method is employed to identify meanings, confirmations, adjustments, and compliments for concept-measurement variables in the conceptual model. Quantitative research is conducted from a sample of 424 IT senior students

across many universities in Vietnam. Questionnaires have been sent to students to evaluate the measurement scale and appropriateness of the research model.

Results from multiple regression highlighted have independent variables affecting the dependent variable, the entrepreneurial intention, in a descending order as following: entrepreneurial educational environment, personal characteristics, perception of feasibility, entrepreneurial supports, and financial accessibility. In addition, this research has proved that the variable attitudes towards entrepreneurship partially mediated among the interrelationship of the aforementioned variables. From this research, the authors make some recommendations to enhance entrepreneurial intentions of IT students in Vietnam

**Keywords:** Startup, Entrepreneurship Intention, Students, Vietnam National University Hanoi



# FACTORS INFLUENCING CONSUMERS' DECISION TO BUY CARS IN HANOI CITY

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## **Abstract**

The study was carried out with the goal of discovering and analysing the factors which affect consumers' cars buying decision in Hanoi and the degree of influence of those factors, then giving the marketing suggestions based on consumption trends for manufacturers. The authors make use of mixed research methods including both qualitative and quantitative ones. The qualitative research method is employed to identify meanings, confirmations, and adjustments for concept-measurement variables in the conceptual model. Quantitative research is conducted from a sample of 290 customers in Hanoi. Among six factors in the proposal research model, *Perceived risk, Reference group, Brand, Consumer's demand and motivation, Vehicle characteristic perception, Economic feeling*, the research results showed that 02 out of 06 factors, perceived risks and reference group, have the most influence on customers' car buying decisions in Hanoi.

**Keywords:** Car, factors influencing on the decision to buy cars, Hanoi City, automobile market.

# ANALYSIS OF FACTORS AFFECTING THE BANKING CHOICE OF GEN Z CUSTOMERS

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## **Abstract**

The purpose of this study is to discover and identify groups of factors affecting Gen Z's bank choice and rank them according to their importance. Based on the quantitative approach, the sampling survey method was used for the survey subjects who are customers of Gen Z banks. Based on 197 eligible questionnaires processed Using SPSS software version 20.0, seven groups of factors affecting Gen Z's behavior in choosing a transaction bank were identified. Total of seven groups of factors, the group "Staff" of the bank is rated the highest, while the influence from activities "Advertising, Marketing" is said to have the least influence.

**Keywords:** Bank, choice, Gen Z

## **1. Introduction**

With the appearance of domestic and international banks, monetary and banking activities in Vietnam developed strongly, creating fierce competition in the financial and banking markets. However, the explosion of commercial banks has put individual customers in front of many opportunities to choose from a wide range of products and services. This forces banks to adjust their operations and constantly improve their competitiveness. The increasingly fierce competition in the banking sector and the similarity of services offered by banks, make it increasingly important for customers to choose a financial service provider. In recent years, young individual customers have gradually become potential customers of commercial banks because of the dynamism in their approach to products and services in the financial and banking sector, especially the individual customer group is Gen Z.

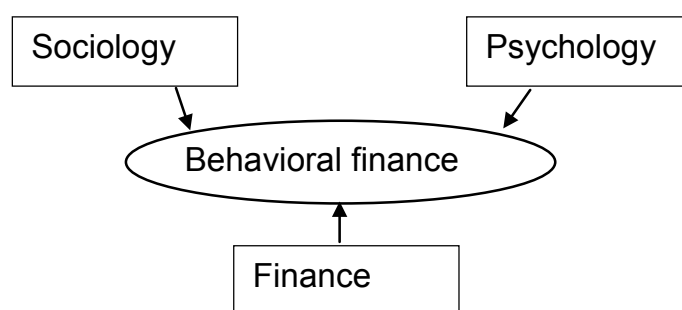
Aware of the importance of mobilizing all sources of capital from society to provide for the development of the economy, banks still face many difficulties in attracting capital and transaction activities from this group. Individual customers in general, and young customers in particular, are Gen Z, although this is a very potential customer group. In Vietnam, there are few studies on the psychology and consumption behavior of this group of customers. This study was conducted to (1) Identify the factors Gen Z customers care about when choosing a bank. (2) Assess the level of attention to each element in the customer's perception. (3) Provide information and comments to help the bank orient appropriate business strategies.

## 2. Theoretical basis

### 2.1. Theory of behavioral finance

There are many definitions of behavioral finance theory, according to Ricciardi & Simon, behavioral finance theory is built on three main foundations: psychology, sociology, and finance. According to this theory, factors influence the decision-making process of individual investors and groups of decision-makers.

**Figure 1: A basic theoretical model of behavioral finance**



### 2.2. Gen Z's buying behavior

The study of buying behavior to explain the process of buying or not buying a certain product. One of the ways to analyze customer behavior is to measure customer consumption trends. Consumption bias means a consumer's subjective inclination towards a certain product or brand, and it is a key factor in predicting consumer behavior. Customer behavior is an ongoing process that includes needing recognition, information gathering, consideration of options, purchase decisions, and post-purchase evaluation. The researchers realized that to go to a real purchase action depends on the importance of what customers are using and the willingness to make usage decisions.

### 2.3. Factors affecting Gen Z's decision to use banking services

According to W. Fred van Raaij (2014), consumer financial behavior depends on decision-making issues, people, social environment, and information sources. Vanessa G Perry and Marlene D Morris (2005) have identified two factors affecting the financial behavior of consumers including education level and income. Thus, consumer financial behavior is the decision-making action of individuals using financial services, including savings, credit, insurance, and investment services. Consumer financial behavior depends on Consumer factors including income, education level, and motivation to access services. Socio-environmental factors include social influence on consumer decisions regarding personal financial services. Elements of service providers include services, distribution channels, advertising, and marketing activities.

In Vietnam, the authors Nguyen Ngoc Huong and Le To Minh Tan from Hue University also conducted a similar survey on students at Hue University to discover the factors that are being accepted by the university's students. The Hue University of Economics in particular and students in general, apply in choosing a transaction bank and ranking the importance of those factors. Research results have identified 08 groups of factors affecting students' behavior in using transaction banking, in which, the factor "staff" is the highest-

rated, while the factor “advertising and marketing” is the most appreciated. “ is considered the least influential.

**Table 1. Summary of factors affecting the bank selection decision of previous studies**

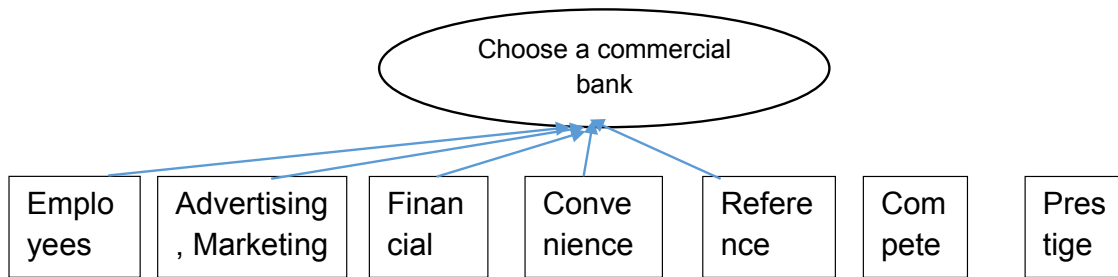
<b>Factor</b>	<b>Research</b>
Convenience	Awang (1997), Gerrard et al (2001), Almosawi et al (2001), Blankson et al (2007), Mokhlis et al (2009), Rao and Sharma (2010), Salih et al (2011) ).
Ability	Anderson et al (1976), Mokhlis et al (2009), Rao and Sharma (2010), Salih et al (2011)
3rd party offer	Anderson et al (1976), Gerrard et al (2001), Blankson et al (2007), Subhani et al (2012)
Service quality	Gerrard et al (2001), Rao and Sharma (2010), Subhani et al (2012)
The quality of products	Anderson et al (1976, Blankson et al. (2007), Rao and Sharma (2010)
Management team, staff	Anderson et al. (1976), Awang (1997), Almosawi et al. (2001), Lymperopoulos et al. (2006), Rao and Sharma (2010), Hedayatnia et al. (2011), Subhani et al (2012) )
Trademark	Anderson et al (1976), Almosawi et al (2001), Rao and Sharma (2010), Salih et al (2011), Subhani et al (2012)
Safe feeling	Gerrard et al (2001), Mokhlis et al., Rao and Sharma (2010), Salih et al (2011), Subhani et al (2012)
Technological factors	Gerrard and Cunningham (2001), Narteh and Frimpong (2011)
Attraction, attraction	Gerrard and Cunningham (2001), Mokhlis et al (2010)
Marketing and promotion policy	Gerrard and Cunningham (2001), Ukenna et al (2012)
Financial benefits	Awang (1997), Mokhlis et al., Rao and Sharma (2010), Subhani et al (2012)
Religious motives	Subhani et al (2012)

*Source: Nguyen Ngoc Huong and Le To Minh Tan, 2015*

### **Proposing a research model**

This research model is proposed based on the theoretical basis, and previous empirical studies related to the bank selection decision. Accordingly, this study proposes that there are 7 groups of factors that Gen Z is interested in when choosing banking services: (1) Employees - NV, (2) Advertising, Marketing - QCM, (3) Financial benefits main - LI, (4) Convenience - ST, (5) Reference - TK, (6) Competence - NL, (7) Prestige - UT

**Figure 2. Proposed research model**



**3. Analysis of research results**

The implementation of this survey was conducted with 197 people, under 25 years old, mainly students, office workers, and workers. Survey respondents have time to use products from the bank for 1 year or more.

The measurement model testing aims to evaluate the relationship between the scale and the factors in the research model. This is based on information about factor load factor reliability, internal consistency reliability, convergent value, and discriminant value.

The results of the test are shown in the following tables:

**Table 2. Testing the reliability of the Employee scale**

<b>Employee Scale: Cronbach's Alpha = .918</b>				
Observed variables	Average of scale if variable type	Scale variance if variable type	Coefficient of correlation of total variables	Cronbach's Alpha if variable type
NV1	12.50	8.649	.807	.894
NV2	12.45	8.350	.886	.868
NV3	12.80	8.262	.848	.880
NV4	12.52	8.853	.711	.928

*Source: Author synthesized from data processing results using SPSS 20.0, 2022*

For the Employee scale, the Cronbach's Alpha coefficient reached 0.918 (satisfactory > 0.6) and the variable correlation coefficient - the sum of the observed variables ranged from 0.711 to 0.886 (satisfactory > 0.3). Therefore, 4 observed variables belonging to the Employee scale group are valid and can be used for further analysis. Rating scale is very good.

**Table 3. Testing the reliability of advertising and marketing scales**

<b>Advertising and Promotion Scale: Cronbach's Alpha = .807</b>				
Observed variables	Average of scale if variable type	Scale variance if variable type	Coefficient of correlation of total variables	Cronbach's Alpha if variable type
QCM1	7.32	4.047	.752	.630
QCM2	7.28	3.927	.815	.561
QCM3	7.02	5.275	.435	.947

*Source: Author synthesized from data processing results using SPSS 20.0, 2022*

For the Advertising and Marketing scale, Cronbach's Alpha coefficient reached 0.807 (satisfactory > 0.6) and the variable correlation coefficient - the sum of the observed variables ranged from 0.435 to 0.815 (satisfactory > 0.3). Therefore, the three observed variables belonging to the Advertising and Marketing scale groups are valid and can be used for further analysis. Rating scale is very good.

**Table 4. Testing the reliability of the scale Financial benefits**

<b>Scale of Financial Interest: Cronbach's Alpha = .898</b>				
Observed variables	Average of scale if variable type	Scale variance if variable type	Coefficient of correlation of total variables	Cronbach's Alpha if variable type
LI1	7.90	5.353	.866	.799
LI2	7.85	5.028	.876	.784
LI3	8.73	5.680	.667	.967

*Source: Author synthesized from data processing results using SPSS 20.0,2022*

For the scale of financial benefits, Cronbach's Alpha coefficient reached 0.898 (satisfactory > 0.6) and the correlation coefficient - the sum of the observed variables ranged from 0.667 to 0.876 (satisfactory > 0.3). Therefore, 3 observed variables belonging to the group of scales of financial benefit are valid and can be used for the next analysis. Rating scale is very good.

**Table 5. Checking the reliability of the scale Convenience**

<b>Convenience Scale: Cronbach's Alpha = .918</b>				
Observed variables	Average of scale if variable type	Scale variance if variable type	Coefficient of correlation of total variables	Cronbach's Alpha if variable type
TT1	11.14	10.316	.776	.905
TT2	11.18	10.177	.829	.886
TT3	11.45	9.524	.859	.876
TT4	11.16	10.970	.785	.903

*Source: Author synthesized from data processing results using SPSS 20.0, 2022*

For the Convenience scale, Cronbach's Alpha coefficient reached 0.918 (satisfactory > 0.6) and the variable correlation coefficient - the sum of the observed variables ranged from 0.776 to 0.859 (satisfactory > 0.3). Therefore, 4 observed variables belonging to the Convenience scale group are valid and can be used for further analysis. Rating scale is very good.

**Table 6. Checking the reliability of the Reference scale**

<b>Reference Scale: Cronbach's Alpha = .833</b>				
Observed variables	Average of scale if variable type	Scale variance if variable type	Coefficient of correlation of total variables	Cronbach's Alpha if variable type
TK1	7.79	5.033	.586	.868
TK2	7.54	4.209	.758	.703
TK3	7.61	4.208	.745	.717

*Source: Author synthesized from data processing results using SPSS 20.0, 2022*

For the Reference scale, Cronbach's Alpha coefficient reached 0.833 (satisfactory > 0.6) and the variable correlation coefficient - the sum of the observed variables ranged from 0.586 to 0.758 (satisfactory > 0.3). Therefore, 3 observed variables belonging to the Reference scale group are valid and can be used for the next analysis. Rating scale is very good.

**Table 7. Testing the reliability of the Competency scale**

<b>Capacity Scale: Cronbach's Alpha = .865</b>				
Observed variables	Average of scale if variable type	Scale variance if variable type	Coefficient of correlation of total variables	Cronbach's Alpha if variable type
NL1	8.25	3.892	.778	.778
NL2	8.10	3.751	.860	.700
NL3	7.59	4.640	.608	.928

*Source: Author synthesized from data processing results using SPSS 20.0, 2022*

For the Competency scale, Cronbach's Alpha coefficient reached 0.865 (satisfactory > 0.6) and the correlation coefficient - the sum of the observed variables ranged from 0.608 to 0.860 (satisfactory > 0.3). Therefore, 3 observed variables belonging to the Competency scale group are valid and can be used for the next analysis. Rating scale is very good.

**Table 8. Testing the reliability of the Reputation scale**

<b>Reputation Scale: Cronbach's Alpha = .879</b>				
Observed variables	Average of scale if variable type	Scale variance if variable type	Coefficient of correlation of total variables	Cronbach's Alpha if variable type
UT1	8.01	4.199	.781	.821
UT2	8.67	3.610	.715	.894
UT3	8.07	4.021	.828	.779

*Source: Author synthesized from data processing results using SPSS 20.0, 2022*

For the Reputation scale, Cronbach's Alpha coefficient reached 0.879 (satisfactory > 0.6) and the correlation coefficient - the sum of the observed variables ranged from 0.715 to 0.828 (satisfactory > 0.3). Therefore, 3 observed variables belonging to the Prestige scale group are valid and can be used for further analysis. Rating scale is very good.

Thus, the results of testing the above scales show that the observed variables all meet the research requirements. So all variables are kept, none are discarded.

**Table 9. Scale information**

STT	The scale	Number of observed variables	Number of variables with a satisfactory total-variable correlation coefficient	Cronbach's Alpha coefficient
1	Staff (NV)	4	4	0.918
2	Advertising, Promotion (QCM)	3	3	0.807
3	Financial interest (LI)	3	3	0.898
4	Convenience (TT)	4	4	0.918
5	Reference (TK)	3	3	0.833
6	Capacity (NL)	3	3	0.865
7	Prestige (UT)	3	3	0.879

**Table 10. Ranking of factor groups**

Element group	Quantity	The average value	Standard deviation	Rating
NV	197	4.1891	.96036	first
UT	197	4.1235	.96420	2
LI	197	4.0795	1.12833	3
NL	197	3.9898	.97933	4
TK	197	3.8240	1.01717	5
ST	197	3.7437	1.05264	6
QCM	197	3.6041	1.00341	7

To consider the degree of difference in the top Gen Z factor groups, the rankings are compiled with the average value of the observed variables belonging to each factor group. The results are shown in Table 10. The group of factors that Gen Z prioritizes to consider first when choosing to use a commercial bank is the Employee factor group with an average value of 4,1891. Ranked second is the bank's Reputation factor group, with an average value of 4.1235. The third is the group of financial benefits that banks can bring with an average value of 4.0795 points. The top three groups of factors summarized in Table 10 are the group of factors that Gen Z is most interested in when choosing a commercial bank, the average value is above 4 on the 5-level Likert scale, equivalent to evaluation as an important group of factors. In addition, three groups of factors are ranked as less important, namely



the Bank's capacity, the impact of the Reference Group, and Advertising and Marketing campaigns with an average value of 3.9 respectively. ; 3.8 and 3.6 on a 5-point Likert scale.

#### 4. Conclusions and recommendations

##### 4.1. Conclusion

This study determines the level of interest of Gen Z in groups of factors that affect bank selection and measures the impact of these groups of factors, thereby analyzing and proposing some marketing solutions to customers. managers to attract individual customers who are Gen Z for the Bank. Summarizing the theory of behavioral finance, the consumption behavior of Gen Z subjects, and previous studies on factors affecting the choice of using banks, the author proposes a research model of influencing factors. to Gen Z's banking choice. The research model includes 7 groups of factors, including Employees, Advertising - Marketing, Financial benefits, Convenience, Reference, Competence, and Reputation.

Quantitative research is used to test the scale, research model, and research hypotheses. Due to the characteristics of the research object and to realize the research goal of the topic, in the condition of limited ability and resources, the author chooses the non-probability sampling method and convenience sampling method. The number of valid questionnaires used for analysis was 197 samples. Quantitative analysis process using reliability evaluation techniques by Cronbach's Alpha coefficient; Independent Samples T-Test. Research results show that there are 7 groups of factors that Gen Z subjects care about before choosing to use any commercial bank's services.

##### 4.2. Recommendations

Based on the research analysis above chapter 4 and the above conclusion, we can see that the author's research topic is carried out on the groups of factors that are sorted by importance level as follows: Employees, Reputation, Financial Benefits, Capability, Reference, Convenience, Advertising - Marketing (Table 10).

Some solutions related to the Trust factor group

**Table 11. Descriptive statistical results of the Reputation factor group**

Symbol	Observed variables	The average value
UT1	Many users know	4.37
UT2	Has a long history of operation	3.70
UT3	The bank has a large scale, wide coverage across the country, and a reputation	4.30

*Source: Author synthesized from data processing results using SPSS 20.0, 2022*

Regarding the Reputation factor group, customers are becoming more and more careful in choosing banks, especially Gen Z, the target customer of the study. They have assessed the importance of the bank's popularity in the market to give confidence, which represents the average value of the observed variables at a high level, especially UT1 and UT3 above 4.0. Banks can capitalize on this opportunity by demonstrating business practices that

differentiate their banking brand from the competition but are trustworthy. That action can be a form of safe financial transactions with customers, absolute security of customers' financial deposits, in addition to ensuring absolute transparency in all business relationships with customers. row. It is therefore expected that such a mandate will lead to a favorable reputation for banks in the community.

Some solutions related to the group of factors Financial benefits

**Table 12: Descriptive statistical results of the group of factors Financial benefits**

Symbol	Observed variables	The average value
LI1	ATM card service with no minimum balance required	4.34
LI2	Service fee is lower than other banks	4.39
LI3	Competitive deposit interest rates compared to other banks	3.51

*Source: Author synthesized from data processing results using SPSS 20.0, 2022*

Belonging to the group of the top 3 factors that Gen Z students pay the most attention to, the average value of the scale is above 4 (Table 10). This shows that Gen Zs care a lot about the financial benefits of one bank compared to other banks, especially service fees and account ownership conditions such as no balance required.

Banks should actively find a way through which the Gen Z target group will own a separate account type with exclusive benefits for Gen Z such as enjoying a more favorable interest rate, and no banking fees. for certain services and fees associated with opening a new account. However, when doing this, the bank can offer 2 different account packages for both Gen Z females and Gen Z males. This is to ensure incentives for 2 target groups with different regular needs

Some solutions related to the Competency factor group

**Table 13. Descriptive statistical results of the Competency factor group**

Symbol	Observed variables	The average value
NL1	The bank regularly offers new services	3.72
NL2	The bank is constantly improving in technology and services	3.87
NL3	The bank provides electronic banking services (Internet Banking, Mobile Banking, SMS...)	4.38

*Source: Author synthesized from data processing results using SPSS 20.0, 2022*

The bank's capacity is one of the top factors that Gen Z people care about. The factor is mainly assessed through the provision of modern technology elements in the service with the average value reaching 4th out of 7 groups of factors (Table 10).

Consumers' perception changes over time, especially among Gen Z customers, who have the most and easiest access to modern technologies and rapid developments in science and technology. Technology is the reason that makes banks' access to technological advances (such as service innovation, transaction process improvement associated with the use of science and technology, and application of e-banking services) becomes a measure of the quality of banking services.

Moreover, this study was conducted for Gen Z subjects, so technology is quite an important factor influencing consumer behavior. However, focusing on developing technological elements in new service delivery also requires promoting inherent strengths, and new technologies must be embraced by Gen Z. Therefore, checking the customer reviews about the experience at the bank, the customer's opinions need to be aggregated. Leverage the good points. Fix the things that make the customer unsatisfied. Thereby bringing the best user technology experience to customers.

Some solutions related to the Convenience factor group

**Table 14. Descriptive statistical results of the group of factors Convenience**

Symbol	Observed variables	The average value
ST1	The bank has many ATMs	3.83
ST2	The bank has many transaction locations near school, near home or near accommodation, workplace	3.80
ST3	The bank supports after-hours and weekend service	3.53
ST4	The bank has many transaction locations on the main road	3.82

*Source: Author synthesized from data processing results using SPSS 20.0, 2022*

Although belonging to the group of factors that Gen Z friends consider less important out of a total of 7 groups of factors. However, the Convenience factor is still a group of factors with an above-average level of interest, especially observed variables showing geographical location properties (ST1, ST2, ST4) with a score of approximately 3, 8 on a 5-point scale. This shows that being more convenient, closer to where to live and work, and the higher the frequency of occurrence of Gen Z customers, the higher the chances of a bank being selected.

To ensure that customers have access to the bank's products and services, factors such as geographical location must be prioritized. In particular, it is necessary to carefully study the main journey of the target customer groups to book transaction offices and branches to optimize the convenience for potential customer groups. Banks need to speed up the development of new branches with strategic locations, or ATMs right on campus.

Some solutions related to the group of elements of Advertising and Marketing

**Table 8: Descriptive statistical results of groups of advertising and marketing factors**

Symbol	Observed variables	The average value
QCM1	Get impressed with the bank’s advertising campaigns	3.49
QCM2	The bank’s marketing campaigns attract me	3.53
QCM3	Advertising campaigns always hit my needs	3.79

*Source: Author synthesized from data processing results using SPSS 20.0, 2022*

The average value of the observed variables ranges from 3.49 to 3.79, this range is small, just above the average on the Likert scale, showing that the variation in the survey is not large. That means most of the Gen Z people surveyed have almost the same evaluations about this Advertising and Marketing element.

The obtained values are all from 3.5 or more, showing that Gen Z’s awareness of Advertising and Marketing campaigns and programs is yes, but it is not clear, in other words, this group of factors is known to Gen Z. Z considers the least when choosing a bank. This shows that few campaigns are created with a focus on this audience, so it is both a challenge and an opportunity for the bank to create a leading trend in advertising campaigns. Foxes aimed at Gen Z.

Although the influence of the promotion factor is not high, banks still need to focus on this factor. Banks can create campaigns for the university to advise Gen Z in need. Linking with the school to integrate bank accounts into services such as tuition payment, extracurricular fees payment, etc. building houses of gratitude, awarding scholarships, etc.) contributes to the promotion of the bank’s reputation and brand. In addition to the existing promotions according to events, holidays, and birthdays, it is necessary to harmoniously combine product diversification according to each male and female audience.

### ***4.3. Limitations of the study and recommendations***

This study brought certain results to identify and evaluate the factors that young individual customers in general, students - Gen Z, in particular, are interested in when choosing a bank. That helps banks understand the attitudes and desires of consumers when choosing a bank. However, this study also has certain limitations:

The sample size of the study is quite limited

Time and urgent conditions make the research results many shortcomings in the condition of limited human resources.

More in-depth qualitative studies are needed to continue the current research results and scales.

Based on the diversity of groups of factors that authors Nguyen Ngoc Huong and Le To Minh Tan have synthesized (Table 1), it is necessary to diversify more observed variables in each factor group to be able to take full advantage of them. previous research results,

more practical and accurate for future research. Expand access to respondents to increase survey sample size and representability of future research results.

The research results show that the service attitude and professionalism of the staff at the bank are given the highest attention by Gen Z students. Therefore, banks need to create the first impression of the bank brand through employees to position the bank in the eyes of young customers. Unify the entire system of communication standards and attitudes towards customers in all situations. Continuously supervise and give regular training courses to improve the quality of staff who are good in both professionalism and ethics and style of the banking system.

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# FINANCIAL CUSTOMER PROTECTION - WHO CARES? THE STORY OF COMMERCIAL BANKS IN VIETNAM

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## **Abstract**

Customer satisfaction and customer protection is the central of serving customer in any industry. Yet the financial industry seems to lag behind other peer by not being recognised as transparent as the others. This calls for the awareness of both the users and the service providers. Good customer protection not only helps the banking industry to develop sustainably, but also constructs a basis for investors, regulators, depositors to build their trust in banks. This comparative research marks the first attempt in measuring and contrasting customer protection operation within Vietnamese commercial banks. On doing so, the research builds an customer protection index which is based on the Good Practice developed by the World Bank, which then is calculated based on data of 8 commercial banks of different sizes and ownership structures in Vietnam. Our findings indicate that there is a disparity between the level of Vietnamese commercial banks' customer protection. Results of this study call for improvement in customer protection in Vietnamese commercial banks, their peers and challengers.

**Keywords:** consumer empowerment, market conduct, customer protection, customer satisfaction

# LEGAL FRAMEWORKS ON ENSURING RIGHTS OF CUSTOMERS OF PAYMENT SERVICES: CURRENT SITUATION AND SOME POLICY IMPLICATIONS FOR VIETNAM

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## **Abstract**

In recent years, non-cash payment services in our country have made great progress, and the number of people using them has surged along with the growth of banking and financial services and their customers. With the strong development of technology and digital banking in such environment, protecting customers' rights continues to be a challenging issue. Although the legal system to protect consumers' rights has received attention from the State, becoming more and more specific to meet international standards and to respond to customers' level of experience, education and knowledge, many problems still persist and need to be resolved to protect consumers. My speech will cover some key solutions on guaranteeing customers' rights when they use bank payment services in Vietnam.

**Keywords:** Treat Customers Fairly, Cashless Service, Payment Consumer, Law on Protection of Consumers' Rights, Digital Banking

## **1. Protecting rights of consumers who use payment services - key concepts and points of view**

### ***1.1. Concept of consumer, customer***

#### *1.1.1. General concept of consumer*

Consumer is a broad term used to refer to individuals or households that use products or services produced in the economy. This is a concept used in many different contexts, so its usage is very diverse. However, according to the most common understanding, "Consumer is an individual who buys and uses goods and services, not for business purposes"<sup>1</sup>.

In the world, the concept of consumer is mentioned as follows:

According to Directive No. 1999/44/EC of the European Parliament and of the Council of Europe of 25 May 1999, "*consumer is any person who makes a purchase under the contract covered by this Directive, made for a purpose unrelated to commerce, business or profession*".

According to the Consumer Protection Law of Malaysia 1999, a consumer is defined as follows: "*a consumer is a person who receives goods or services for personal use,*

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<sup>1</sup> Monograph: State management of consumer rights protection, National Economic University Publishing House, 2017. ISBN: 978-604-964-293-1. Page 7.

*household use, use or consumption and do not use goods or services for commercial purposes, consume for the production process”.*

According to the Consumer Protection Act of Singapore or the Fair-Trade Act of Singapore 2003, a consumer is defined as follows: “*a consumer is an individual who receives or has the right to receive goods and services from a supplier or have the obligation to pay the supplier for the goods and services they have purchased as gifts for other individuals and such consumption activities are not for business purposes”.*

According to Article 3, point 1 of Law on Protection of Consumers’ Rights, a consumer is understood as follows: “*Consumer is a person who buys and uses goods and services for consumption and daily life purposes of individuals, families or organizations”.*

Thus, consumers are not only individuals but also include organizations that buy and use goods and services without the purpose of reselling or renting.

### *1.1.2. Concept of customer*

Customer can be another way of calling consumers and is quite commonly used, whereby customer is an organization or individual using products, services of the supplier.

In bank payment transactions, customers are the subject of using the most popular methods of payment such as money transfer via internet banking, mobile banking, ATM, QR code...to carry out transactions of buying, selling, transferring certificates of deposit, bonds, and stocks via a payment account connected to a securities account registered with the bank, securities company. These concepts have actually been established universally and recognized by state regulations as well as practices.

## ***1.2. Concept of protection of consumers’rights, fair treatment of customers***

### *1.2.1. Concept of protection of consumers’rights*

When participating in relationship of buying and selling goods or services in general and using payment services in particular with traders and enterprises, consumers often face more disadvantages, because they are often the less-favored parties in terms of information, negotiation ability, finance and others.

Because of the above reasons, consumers become an entity of concern and are protected by law. As a subject in society, consumers also have their own rights and obligations which are regulated and protected by law. The rights consumers are interested in and protected by law can be mentioned as: The rights to ensure the safety of life, health and security; the rights to be provided with accurate and complete information about organizations and individuals trading in goods; the rights to ensure confidentiality of customer information; the rights to be assured of the quality of products and services as committed and advertised by the supplier.

From the above, we can understand, protecting the rights of consumers is the guarantee of the interests of individuals and organizations who are the subject of purchasing and using goods and services for consumption, daily activities.

### *1.2.2. Concept of consumer protection*

Similar to the concept of consumer protection, fair treatment of customers, or treating customers fairly, is a commitment to protect the legitimate rights and interests of customers



when customers buy or use any product, service or solution of the supplier of the product or service. This is what institutions and organizations from the State to enterprises must pay attention to in their management and business activities.

### ***1.3. The necessity of protecting customers' rights in the digital age***

According to Mahatma Gandhi, the famous spiritual leader of Indian people, *“the customer is the most important guest in our factory. Customers do not depend on us, we have to depend on customers. Customers do not interrupt our production process, but customers are our goal.”*<sup>1</sup> Because, if considered in society in terms of creating value for life, there will be two opposing sides of interests but agreeing to coexist, that is, the producer and the consumer. Manufacturers create goods and services for consumers; customers can choose what they like at the right price. Thus, without consumers, society will not be able to develop production, there will be no new goods and products to be supplied to the market. However, although customers make up the majority, they are not organized (although most countries today have a Consumer Association, in Vietnam, it is the Vietnam Consumer Protection Association) or are fragmented so it is difficult to have the strength, a unified voice. Therefore, in the relationship between customers and manufacturers, professionals, in certain fields, consumers will be less knowledgeable and always are in a less-favored and disadvantaged position, which somehow leads to impeding socioeconomic development.

In banking and finance, the application of digital technology solutions in the field of payment services and other activities in recent years has helped create better and more convenient financial services with lower cost of use, bringing more interesting experiences to customers than traditional banking and financial services, and is becoming the mainstream in the coming decades.

For example, with the application of artificial intelligence (AI), TPBank has a virtual assistant application T’Aio on Facebook Messenger and VietA Bank with Chatbox works on Fanpage<sup>2</sup>. In addition, payment solutions have attracted attention from foreign investors such as partners in VNPAY, Momo (M\_Service), Moca (Grab Network), True Money Vietnam, ZION, OnePay, ZaloPay (mobile wallet), 123Pay, BaoKim (payment gateway), NAPAS...

In particular, developments in the financial services industry over the past two years have demonstrated that the COVID-19 pandemic has accelerated the digital transformation process and changed the customers' consumption behavior. According to PwC's 2020 “Global Consumers” survey, 63% of participants said they had transacted more online during the COVID-19 outbreaks, and 86% of respondents would continue to do so on the mobile channel when social distancing measures are removed<sup>3</sup>. When the payment on the digital technology platform becomes the trend and popular, the State management

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1 Monograph: State management of consumer rights protection, National Economic University Publishing House, 2017. ISBN: 978-604-964-293-1. Page 15

2 The article “Some Fintech challenges for Vietnam’s financial services industry” by Truong Thi Hoai Linh, published in Banking Magazine No. 1, January 2022, Page 21

3 The article “Some Fintech challenges for Vietnam’s financial services industry” by Truong Thi Hoai Linh, published in Banking Magazine No. 1, January 2022, Page 24

agencies need to take measures to protect the rights of consumers against risks such as virtual currency, virtual assets, and customer information security.

## **2. The current status of legal regulations on guaranteeing customers' rights when they use payment services in vietnam**

Protecting customers' rights is one of the top priorities in business activities and transaction processes of most organizations and individuals that trade goods and services.

With payment transactions of customers in the digital age, ensuring customers' rights is accessed mainly in two aspects: ensuring financial security and ensuring information security. In the context of the rise in technology crimes with increasingly sophisticated tricks nowadays, for the financial and banking sectors, protecting customers' rights not only ensures financial and information security for customers, but also contribute to the control and prevention of transnational crimes.

### ***2.1. Protect financial security for customers***

According to the provisions of the Civil Code 2015, when using products and services of the supplier, if detecting that the products and services are not of the right quality and quantity as committed in the contract, the customer may have the rights to claim the supplier for damages. In addition, depending on each specific case, the contract may have a product warranty clause as agreed by the parties.

According to Law on Protection of Consumers' Rights 2010, at Article 8, consumer has eight rights as below:

1) Being safely protected regarding their life, health, property, and other legitimate rights and interests when being involved in transactions, use of goods and/or services provided by organizations or individuals trading goods and/or services.

2) Being provided with accurate and complete information about organizations or individuals trading goods or services; contents of transaction of goods and/or services; the source and origin of goods; being provided with invoices and vouchers and documents relating to the transactions and other necessary information about goods and/or services that consumers purchase and/or use.

3) Being entitled to select goods or services, organizations or individuals trading goods and/or services according to their actual needs and conditions; decide to participate or not participate in the transaction and agreed contents when joining transactions with organizations or individuals trading goods and/or services.

4) Being entitled to offer suggestions to organizations or individuals trading goods and/or services on price, quality of product or service, service style, trading methods and other contents concerning transactions between consumers and organizations or individuals trading goods and/or services.

5) Being entitled to participate in formulating and implementing policies and legislation on protection of the interests of consumers.

6) Being entitled to require compensation if the provided goods or services do not match technical standards or norms, quality, quantity, features, usage, pricing or other contents

that organizations or individuals trading goods and/or services have already announced, posted, advertised or pledged.

7) Being entitled to complaint, denounce, and take a lawsuit or propose social organizations to take a lawsuit in order to protect their rights under the provisions of this law and other provisions of laws involved.

8) Getting advice, support, and guidance on knowledge for consumption of goods and/or services.

According to Competition Law 2018, the law has made provisions to protect directly and indirectly the interests of customers as follows:

1) Indirect protection: regulations aimed at creating a fair and free competition environment and most importantly, a healthy environment. Only then consumers' interests of consumers can be ensured as they are always in a "weak" position compared to businesses.

2) Direct protection: allows consumers the rights to complain, introduce regulations that prohibit advertising acts aimed at unfair competition, misleading instructions to customers.

Thus, the mechanisms of regulations on asset security protection for customers are quite complete when customers fully comply with regulations on safety in transactions. Acts of infringing upon the legitimate rights and interests of customers will be handled in accordance with the law.

## ***2.2. Protect information security for customers***

Recognizing the importance of protecting customer information, Vietnam has built a basic, general legal framework regulating this issue.

Preamble 2013 confirmed, everyone has the right to inviolability of his or her body and to the protection by law of his or her health, honor and dignity; no one shall be subjected to torture, violence, coercion, corporal punishment or any form of treatment harming his or her body and health or offending his or her honor and dignity (Article 21).

Regulations on protection of personal information continue to be concretized in the Civil Code 2015, whereby, the private life, personal secrets and family secrets of a person are inviolable and protected by law; the collection, preservation, use and publication of information about the private life of an individual must have the consent of that person; contracting parties of a contract may not disclose information about each other's private life, personal secrets or family secrets that they know during the establishment and performance of the contract, unless otherwise agreed (Article 38).

From a more focused and detailed perspective, the Law on Protection of Consumers' Rights 2010 clearly stipulates the principle that "*Consumers' information shall be kept safe and confidential when they participate in transactions, use of goods or services, except where competent state agencies require the information*" (Article 6)

The Law on Credit Institutions 2010 also clearly states: "*Credit institutions and foreign bank branches shall keep secret information relating to accounts, deposits, deposited assets and transactions of their clients*". (Article 14)

In many European countries, including Switzerland, it is forbidden for banks to disclose customer identities to third parties, including tax authorities or central governments<sup>1</sup>. Meanwhile, the Vietnamese law is more open to facilitate state management. For example, under the Law on Enforcement of Civil Judgments 2008, “... *organizations and civil servants engaged in justice-civil status, cadastral work-construction-urban centers and environment, other commune-level cadres and civil servants, and related individuals shall fulfill requests of enforcers and take responsibility for the information they provide...*” (Article 44 ). Article 176 of the Law on Enforcement of Civil Judgments 2008 also stipulates that the responsibility in civil judgment enforcement of banks and other credit institutions must “*provide correct, complete and timely information and data on accounts of judgment debtors at the request of enforcers or civil judgment enforcement agencies*”.

Under Article 37 of the Criminal Procedure Code 2015, investigators, as assigned to file charges and investigate criminal cases, have the following duties and authority: “*Enforce emergency custody orders, decisions or orders of arrest, temporary detention or detention, search, seizure, withholding, distraintment of property, freezing of accounts, handling of evidences...*”.

Under Article 46 of Law on Inspection 2010, in the course of inspection, inspection team heads have the following tasks and powers: “*To request agencies, organizations and individuals that have information and documents related to inspection contents to provide these information and documents...*” and “*To request credit institutions at which inspected subjects have accounts to blockade these accounts in service of their inspection when having grounds to believe that inspected subjects have committed acts of asset dispersal...*”.

Article 27 of the Law on Tax Administration stipulates that one of the duties of a commercial bank is to “*Provide information on account IDs based on the TINs of taxpayers when they open new accounts*”.

Article 30 of the Decree No 126/2020/ND-CP of Government on elaborating the Law on Tax Administration stipulates commercial banks shall provide information about taxpayers’ current accounts opened at the banks for tax authorities.

To ensure the rights of customers, the Law on Credit Institutions (amended and supplemented) stipulates the responsibilities of credit institutions and foreign bank branches in keeping information confidential (Article 14) and Decree No. 117/2018/ND-CP dated September 11, 2018 of the Government providing for the confidentiality and provision of customer information of credit institutions and foreign bank branches, especially the order and procedures for providing customer information (Article 8), the application file for customer information (Article 9), and the responsibility of information security of State agencies, other organizations and individuals (Article 15).

However, the above are only provisions of the law in case the bank is actively managing customer information. When customers are actively performing transactions, the problem of information leakage seems to be more difficult to control, when information security is

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<sup>1</sup> Government Electronic Newspaper (2021), Regulations on responsibility to protect bank account information were issued, published on 02/02/2021

compromised most of the time, financial security will be compromised. Common situations when customers make payment transactions through the bank include:

The customer receives a phone call claiming to be a bank officer, investigator... asking the customer to perform some actions and the customer believes and provides the password, account number, even read the number phone registered to receive OTP codes; consequently, fraudsters get OTP codes. According to a research team from the PT security company based in the US, OTP codes are not really secure; they can be easily stolen at any time. This will cause damage to the financial and banking system for online payment transactions<sup>1</sup>;

The customer receives a strange link with the request to make a transaction, when clicking on the link, they will lose money from their bank account;

Fraudsters impersonate a bank employee, and invite the customer to withdraw money from a credit card. They call and text to offer services from many strange phone numbers with the content of withdrawing cash from credit cards, easily repaying monthly or transferring in installments with lower fees and interest rates to entice customers. After the customer agrees with their proposal, they require him/her to provide his/her physical credit card information or information including card number and CVV code. They even build the trust by asking the customer to cover up their CVV code before providing information, then ID card images, the contract code will be sent to the phone number if needed (this is in fact OTP code of transaction deducting money from credit card) and amount to withdraw, hence appropriating the customer's money.

The customer transacts with friends via Facebook and Zalo accounts whose have been stolen by hackers. Customers who are unaware of the situation have made money transfers to hackers.

### **3. Some proposed solutions on guaranteeing customers' rights while they use bank payment services in Vietnam**

#### ***3.1. Enhancing associations' role to ensure the rights of customers using payment services via banks***

On March 15, 1962, the late US President John Kennedy said in a meeting of the US Senate on consumers: "... *By definition, consumers are all of us. They are the largest group of people, influencing and being influenced by most economic decisions, whether public or private. Yet they are the only important group of people whose views are often not heard...*". After this speech, the issue of protecting the interests of consumers as well as the role of consumer protection activities has gradually attracted attention by countries across the world and they have carried out studies as well as built an appropriate mechanism to protect the rights of consumers of this targeted group.

In many countries and territories in the world, consumer protection laws have been promulgated and enforced, including specific mechanisms to protect the interests of

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<sup>1</sup> The article "What is Fintech but is considered a revolution that threatens the global banking system" by author Thu Huong (2017) posted on Cafef.

consumers, such as: Singapore, Thailand, Japan, Korea, EU, USA, Canada, France, Russia, India, China, Malaysia, Taiwan... A number of countries and territories have established their state agencies on the matter such as New Zealand Department of Consumer Affairs; Malaysian Ministry of Trade, Cooperation and Consumer Protection; Korea Consumer Agency (under the Fair Trade Commission - Korea Fair Trade Commission - KFTC); Japan Consumer Affairs Agency (CAA) and Japan National Consumer Affairs Center)...<sup>1</sup>

Vietnam is a member of a number of international organizations on consumer protection such as Consumer International (CI); International Consumer Protection and Enforcement Network (ICPEN); and ASEAN Committee on Consumer Protection (ACCP).

In Vietnam, at the request of the VINASTAS Project and with the agreement of the Ministry of Industry and Trade and the Ministry of Science and Technology, on October 31, 2018, the Ministry of Home Affairs issued Decision 2453/QĐ-BNV for separation of VINASTAS into the Vietnam Consumer Protection Association (VICOPRO) and the Vietnam Science and Technology Association for Standards and Quality<sup>2</sup>.

The founding congress of the Vietnam Consumer Protection Association was held on November 29, 2018, in Hanoi. Thus, VICOPRO has its own legal status, seal and account; operates nationwide on the principle of voluntary, self-financed operating expenses, not for profit purposes. The Association operates in accordance with the law on consumer protection.

However, VICOPRO needs to actively integrate internationally in cooperation activities on consumer protection within the framework of ASEAN, APEC and international free trade agreements (FTAs) Vietnam has joined. Vietnam should focus on strengthening brand promotion, and continuing to negotiate FTAs to expand the market, and promote bilateral and multilateral cooperation with countries and international organizations to enhance information exchange and ensure effective and close protection of consumers' interests. It should also strengthen cooperation to resolve consumer disputes, recall products with defects across borders...

### ***3.2. Completing the legal framework and improving the capacity of managers, people's awareness about ensuring the interests of customers using payment services via banks***

Compared with other countries in the region, in addition to fundamental documents such as the Preamble and the Civil Code, Vietnam is one of the first countries to promulgate legal documents to regulate the issue of privacy protection. The Ordinance on Consumer Protection promulgated in 1999 (Ordinance No. 13/1999/PL-UBTVQH10 dated April 27, 1999), the Law on Protection of Consumers' Rights (Law No. 59/2010/QH12 dated November 17, 2010) promulgated in 2010 and the Competition Law 2018 have contributed to creating a fair competitive environment.

Over the years, the law enforcement to protect consumers' rights has been led and directed by the Communist Party of Vietnam and the State with considerable attention. As a result, consumer rights protection activities in Vietnam have achieved remarkable initial

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1 Monograph (2017), What you need to know about consumer protection legislation, Ministry of Industry and Trade, Page 26.

2 Wikipedia

results, gradually bringing the law on protecting consumers' interests into everyday life, contributing to ensuring the legitimate rights and interests of consumers as well as genuine businesses. Customers now know a place to “call for help” when they have their rights and interests violated in addition to other measures such as resolving contract disputes...

However, besides the achieved results, the practical implementation of consumer rights protection activities still has many difficulties; the interests of consumers have not been fully protected. Therefore, from the perspective of improving the provisions of the law as well as enhancing the capacity of state cadres and people's awareness, the State needs to:

*Firstly*, develop and issue documents to monitor and evaluate the implementation of consumer rights protection. For online payment activities via banks, the governing body, the State Bank of Vietnam (SBV), issued Circular 20/2018/TT-NHNN stipulating the supervision of payment systems in order to ensure the safety of payment systems. To protect the legitimate rights and interests of customers using payment services, it is necessary to strengthen customers' trust in banks' payment services;

*Second*, complete the legal framework, organizing a specialized body to clearly define roles, and focal points to regulate and monitor consumer rights protection activities;

*Third*, improve the law enforcement capacity for the government officials, civil servants and public employees involved in the protection of consumers' interests, ensuring the efficiency and effectiveness of state management with the protection of consumers' interests;

*Fourth*, promote propaganda, education and dissemination of policies and laws; information about the quality of goods and services and warning about the risk of unsafety for customers on the principle of publicity, transparency and diversification of communication methods;

*Fifth*, build a national database on consumer protection; open specialized pages and categories and increase the reporting time on consumer rights protection; develop and publish news articles and special reports on the protection of consumer rights; praise good people and good deeds in protecting the rights of consumers; publicly criticize irresponsible acts, serious violations in protecting the interests of consumers by organizations and individuals on the mass media for general prevention education; post news and articles about the quality of goods and services and warn of risks to consumers...;

*Sixth*, strengthen inspection, examination, supervision, handling of violations and support for consumers.

### ***3.3. Improving the responsibility of banks to ensure the interests of customers using payment services via banks***

If Circular No. 20/2018/TT-NHNN stipulates the responsibilities of State agencies in inter-bank payment activities such as the Payment Department, Information Technology Department, banking inspection and supervision agencies, credit institutions in general and commercial banks in particular need to actively take measures to ensure the interests of customers using payment services via banks.

In reality, the promotion of payment through banks has led to considerable reduce in cash in circulation. It thereby reduces the substantial costs for society related to the issuance and circulation of money, and supports the economy by shortening the time it takes for capital to move through payment systems. It also helps to reduce the time it takes capital to float, thus promoting capital mobility. For people, the use of this service helps save time and costs, especially the cost of safe, fast and convenient transportation and avoid the risks that may arise related to the use of cash. However, with the strong development of information technology, telecommunications and the rising number of high-tech crimes in the world, banks should to implement simultaneously a number of solutions as below:

*Firstly*, continue to update and apply advanced measures to ensure the security and safety of payment systems, payment products and services such as checking and reviewing ATM system and equipment, card-accepting device at the point of sale (POS) to promptly detect fraudulent trading tricks and profiteering from fraudsters;

*Second*, continue to regularly check, review, supplement and perfect business processes, internal regulations on security and confidentiality of information technology systems such as strengthening methods of information authentication customers via mobile phone number registered with the bank, one-time password (OTP), two-factor authentication, biometric code (fingerprint, face recognition, iris...), encryption customer identification number;

*Third*, improve the bank's information technology infrastructure to promptly adapt to the change of Fintech applications, because the more out-of-date the technology applications are, the more vulnerable they will be. Therefore, banks need to continuously research, use cloud technologies to effectively store, and manage customer data to prevent the intention and behavior of infringing customers' information systems from high-tech criminals;

*Fourth*, specify the responsibilities of service providers and payment intermediaries to build a closed payment ecosystem to serve payment needs in the direction of diversifying and increasing the utility of payment services ensuring safe, fast, confidential customer information in cooperation agreements to limit risks, remove malicious codes, malicious hardware, overcome weak points and security holes;

*Fifth*, regularly provide information and warnings about the behavior of criminals and fraudsters to customers to raise their own vigilance such as not disclosing usernames and passwords to anyone; not writing passwords or reading them aloud that others can hear; logging in only through trusted devices, limiting login through too many devices; not saving usernames and passwords on web browsers etc;

*Sixth*, strengthen coordination with state management agencies such as the State Bank of Vietnam, the Vietnam Banks Association, the police investigation agency... to receive support and guidance on timely handling serious cases that affect the interests of customers.

## **Conclusion**

Consumer protection is still a new concept for the majority of people in our country, especially with banking payment services possessing a high technology content. While technology development brings much sophistication to payment services, consumers are always in a less-favored position. This reality requires the State to make additional efforts in order to have more simultaneous measures to complete legal provisions for this area.



Besides, to ensure the consumers' rights, the companionship and cooperation from payment service providers as well as from customers in self-protection are always important and necessary factors.

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# FACTORS INFLUENCING THE INTENTION TO INVEST IN CRYPTOCURRENCY OF GENERATIONS X, Y AND Z IN VIETNAM: THE THEORY OF REASONED ACTION (TRA) APPLICATION

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## **Abstract**

This study investigates the effects of personal factors on Vietnamese people's intention to invest in cryptocurrency. Although it is not widely known and there are no specific regulations and laws on cryptocurrency-related transactions in Vietnam, many articles and studies show that the cryptocurrency market in Vietnam is constantly developing. Particularly, Vietnam was noted as the nation with the highest adoption of cryptocurrencies in 2021. Specifically, according to a new report about cryptocurrency published by Finder, Vietnam has 20% of people who claim to have invested in Bitcoin and other crypto-assets. In addition, data from Statista indicates that, of the 74 economies surveyed, Vietnam has the second-highest rate of cryptocurrency usage among the surveyed countries. Moreover, from the result of Tech in Asia, the investment trend in cryptocurrency is growing continuously in Vietnam, especially among the middle-aged generation and Gen Z young people. The study investigated 201 people living in Vietnam and contacted them through an online form to record their answers. This study uses the PLS-SEM method and applies TRA to achieve the goal of investigating the intention to invest in cryptocurrency in Vietnam. The results show that attitude and perceived usefulness have a positive effect on the intention to invest in cryptocurrency.

**Keywords:** Cryptocurrency, Bitcoin, TRA, Vietnam

## **1. Introduction**

For many scholars and students studying finance, cryptocurrency has become a high-priority subject. Various papers and articles that cover the same topic but employ different approaches exhibit behavior toward cryptocurrencies. For example, Using The Technology Acceptance Model, Albayati and colleagues published a study in 2020 titled "Acceptance of Financial Transactions Using Blockchain Technology and Cryptocurrency: A Customer Perspective Approach" (TAM) (Albayati, Kim, and Rho, 2020). The paper "Cryptocurrency Adoption and the Road to Government Regulation" by Schaupp and Festa, published in 2018, was clarified using the Theory of Planned Behavior (TPB) (Schaupp and Festa, 2018), TAM was also used as the fundamental theory to be extended and examined the "An empirical study on the adoption of blockchain-based games from users' perspectives" written by Shang and Ying in 2021. Recently in 2020, a paper released 2020 written by Boxer and Thompson also used TRA as a based theory to extend their framework as

TPB to research “Herd Behavior in Cryptocurrency Markets” (Thompson, 2020). This measurement method consists of four dependent variables for Perceived Risk, Perceived Usefulness, Perceived Enjoyment, Government Regulations, and Subjective Norms; one mediate variable is Attitude, and one independent variable is Intention to Invest in Cryptocurrency.

Vietnam was noted as the nation with the highest adoption of cryptocurrencies in 2021. In particular, 20% of people in Vietnam claim to have invested in Bitcoin and other crypto-assets, according to recent research on cryptocurrencies released by Finder. In addition, data from Statista indicates that, of the 74 economies surveyed, Vietnam has the second-highest rate of cryptocurrency usage among the surveyed countries. These numbers show that the investment trend in cryptocurrency is growing continuously in Vietnam, especially among the middle-aged generation and Gen Z young people (Technasia, 2022).

Clarifying the trends and intentions of young people in Vietnam regarding their intention to invest in cryptocurrencies, this study will clarify the following research questions: (a) The relationship between Perceived Risk, Perceived Usefulness, Perceived Enjoyment, and government regulation to the intention to invest. (b) The relationship between Perceived Risk, Perceive Usefulness, and Perceived Enjoyment to intention to invest in Cryptocurrency with the mediating role of Attitude. (c) The relationship between Subjective Norms to The Intention to Invest.

This study investigates the investor’s perception, along with the intermediary role of attitude and subjective norm as control variables related to the impact on intention to invest in cryptocurrency. This research’s findings will offer a better understanding and provide a new perspective on Vietnam’s investors’ decision-making process concerning this new emerging cryptocurrency investment. The establishment of investment intention elements for contribution to the investment decision-making process of Vietnam individual investors from a consumer behavior perspective is a key theory of this study. There are a lot of previous studies examining the factors impacting the intention to invest in cryptocurrency, but few have evaluated how an investor might approach this investment decision-making from an investor standpoint. This is the first study to use consumer perception theory to analyze investors in the context of intention to cryptocurrency investment, according to the authors. By understanding investors’ perceptions and attitudes, policymakers would be better able to determine the need for cryptocurrency policy. In addition, this article will provide readers with an overview and understanding of the intention to invest in cryptocurrency in Vietnam, especially the approach to the investment intention of the Z generation, who are considered young investors and the future of Vietnam.

## **2. Conceptual framework**

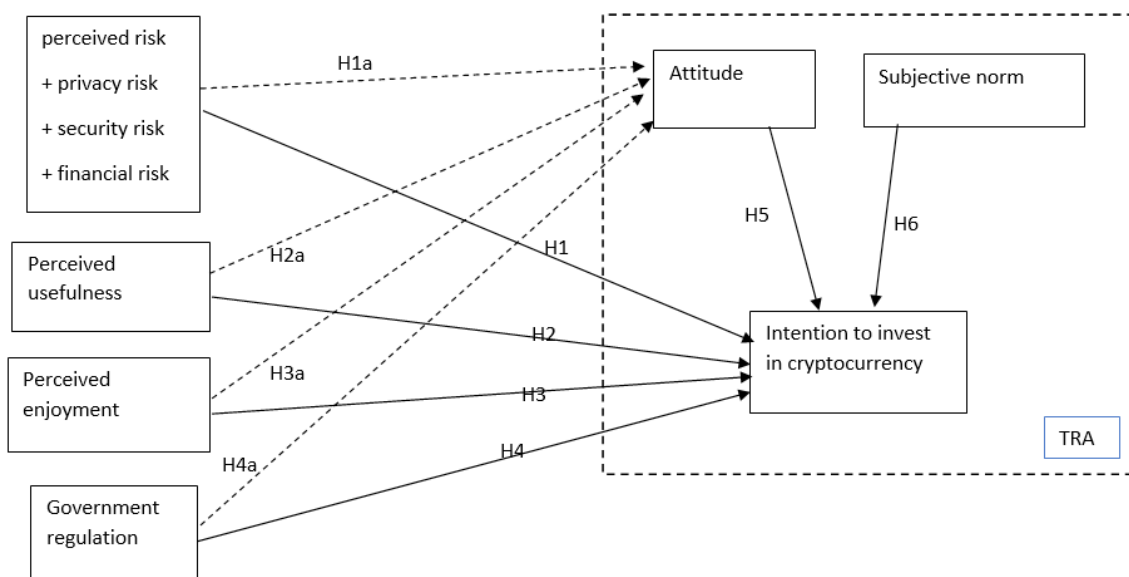
Cryptocurrency is a digital currency, using blockchain technology and Cryptocurrencies that are not regulated under any particular government. The former name of Cryptocurrency when it first occurred in public was “Cyber Currencies”. Cryptocurrencies became more famous with the occurrence of Bitcoin in 2009. In an article named “Bitcoin: A Peer-to-Peer Electronic Cash System” written by Satoshi Nakamoto self-affirmed as Bitcoin founder. Satoshi Nakamoto stated that “We have proposed a system for electronic transactions without counting on trust” (Nakamoto, 2008). Bitcoin is operated under blockchain

technology, specifically, in the previously mentioned article, Bitcoin works as a peer-to-peer network with the ability to record public transaction history and most nodes operate honestly under the management of powerful CPUs (Nakamoto, 2008).

In the field of Cryptocurrency, with the application of the TRA model, past research papers have made their mark in the financial industry and they have produced results that help future research groups and interested individuals have an overview of the factors that influence the decision to invest in cryptocurrency. Muhammad et al. (2020) indicate that the intention to invest in bitcoin of Chinese investors is influenced by social media through attitude, subjective norms, and perceived behavioral control (Muhammad et al., 2020). Besides, the TPB model is also applied to learn about cryptocurrencies and provide empirical data to support a theoretically improved understanding of the adoption of cryptocurrencies with real-world applications in the context of e-government (Schaupp & Festa, 2018). In Vietnam, a group of researchers also applied the PLS-SEM model with TPB and concluded that legal acceptance of the product, more specialized training opportunities and increased media attention might boost Vietnamese people’s intentions to invest in cryptocurrencies. Cryptocurrency is a burgeoning industry in the financial sector thanks to the acceptance of certain major multinational corporations (Telse, Starbucks) and the tendency of governments in creating laws governing virtual money (Nguyen, Nguyen, & Ha, 2021).

From the results of previous studies, the research model is referenced in the 2020 research paper which studies “Perceptions towards Cryptocurrency Adoption: A case of Saudi Arabian Citizens” (Alaklabi and Kang, 2021). The research model applies TRA theory to clarify the factors related to investors and investment intentions in the cryptocurrency market. This study will study the intention to invest in Cryptocurrency in Vietnam with the impact of 4 factors including perceived risk, perceived usefulness, perceived enjoyment, and government regulation and subjective norms with attitude as the mediate variable.

**Figure 1. Research model framework**



Source: Author (2022)

### **3. Hypotheses development**

#### ***3.1. Perceived Risk and The Intention to Invest***

Behavioral intention and attitude have been demonstrated to be affected by perceived risk (Kesharwan and Bisht, 2012). Discovering the major factors in perceived risk were security and privacy concerns (Chiristou, 2006, 2007, 2011; Tan et al., 2009). According to Bauer (1960), perceived risks associated with the acceptance of cryptocurrencies include: (1) perceived risks associated with products/services and (2) perceived risks associated with transactions. Nureyev et al. (2018) that the most vital factors in a claim by the perceived risk concern related viability, safety risk, third party service default risk and potential of illegal association, user error risk, private loss risk, and risk of the counterparty. An empirical study on predictors of behavioral intention by Faquih (2016) revealed that when a customer or investor is making a virtual currency investment transaction, there is a higher sense of risk when compared to the behavior using cash. Therefore, a hypothesis is proposed as followed:

*H1: Perceived risk has a significant effect on the intention to invest in cryptocurrencies.*

#### ***3.2. Perceived Usefulness and The Intention to Invest***

Researchers had contradicted opinions on the association between perceived usefulness and the intention to adopt cryptocurrencies of investors. Indeed, Alqaryouti et al., (2019) interpreted how the use of cryptocurrencies affects investors' benefits perception and proved that there was no significant relationship between the intention to use this blockchain platform market and the perceived benefits of users. In contrast, it is believed that people who got benefit from a particular activity or technology might consider using it again in the future. To specify, Gazali et al (2018), Nian and Chuen (2015), and Chowdhury and Mendelso (2013) had done several studies on the decision on investing in Bitcoin and concluded that since users perceive benefits they could gain from this virtual currency investment in terms of cost, time or convenient, the possibility that they could reinvest would be high. Moreover, one of the considerable drivers of the willingness to invest in this market is the significant return performance when utilizing it (Tekere and Deniz, 2021; McMorro and Esfahani, 2021). Therefore, a hypothesis is proposed as followed:

*H2: Perceived usefulness has a significant effect on the intention to invest in cryptocurrencies.*

#### ***3.3. Perceived Enjoyment and The Intention to Invest***

Abbasi et al (2021) proved the insignificant relationship between perceived enjoyment and the willingness toward cryptocurrency investment through the application of deep learning-based dual-stage PLS-SEM along with the ANN method. However, perceived enjoyment, which can be conceptualized as "hedonic motivation", is supported to have an impact on the intention to invest in the cryptocurrency market by many researchers. Thong et al (2006) and Alaklabi and Kang (2021) stated that enjoyment perception influences technology acceptance, which directly affects technology usage. Riffai et al (2011) proved that the application of cryptocurrency could be seen as essential to contemporary lifestyle. It could provide users who seek innovation and enjoyment and people who believe the possibility of gaining amusement from the investment activities are more likely to reinvest.

Moreover, being entertained could be the main driver for participating in cryptocurrency investments or transactions platform (Mahomed, 2017). Therefore, a hypothesis is proposed as followed:

*H3: Perceived enjoyment has a significant effect on the intention to invest in cryptocurrencies.*

### **3.4. Government Regulation and the Intention to Invest**

La Porta et al. (1998) have shown that differences in the legal system influence the intention of investors in the market. In particular, various States will provide a clear and broad overview of current regulation attempts in cryptocurrency policy. Studies by Leshchyshyn, (2017) reveal that US's cryptocurrency has a slightly neutral stance and takes a permissive. The expanding existing laws are a current challenge that the regulators are facing to allow for the unique factors and challenges of the virtual currency world. Virtual currency transmitters must comply with the government requirements fixed introduced for MSBs, consisting of reporting techniques, record bookkeeping, and compliance with the 1970 Bank Secrecy Act. This impacts a significant attitude of investors that requirement to an accountability level from virtual currency transmitters, and greater security against fraud (DiPetro, 2021). Each US states also play an important role in introducing regulations for the emerging currency. Licensing protocols for virtual currency activities are instituted in states, California has more virtual coin operations than other states, and investors have been proactive adoption in corporatizing cryptocurrencies into approaching financial frameworks (Kasprzyk, 2019).

*H4: Government regulation has a significant effect on the intention to invest in cryptocurrencies*

### **3.5. The mediating role of Attitude to the Intention to invest in Cryptocurrency**

By recurring to the analysis of individual brokerage Attitude data, Pelster et al, (2019) found that the overall cryptocurrency investors are driven by excitement-finding. Especially, when investing in cryptocurrency trading, simultaneously the investors rise risk-finding behavior since they rise their trading intensity and utilize leverage. Shaikh et al., (2018) show in their research that risky perceiving has an insignificant direct relation with behavioral intention to use mobile banking; nevertheless, it has importance in the re-adoption process significant. Greatorex and Mitchell (1993) concluded in their findings that when PR falls below consumer acceptance, it has little effect on intended behavior and is ignored.

The Perceived Usefulness, many researchers believed that Perceive Usefulness has a significant relationship with Attitude. Moreover, in the research of Alaklabi and Kang (2011), the authors investigated the usability of digital money among citizens in Saudi Arabia and the results supported the relationship between PU and cryptocurrency users' attitudes. Rodenrijs and Wokke (2018) also conducted a study under the context of the rise of bitcoin and blockchain technology and proved that the Perceived Usefulness of cryptocurrency determines investors' attitudes towards it. Lee et al. (2018) implemented research for exploring the motivation of using Bitcoin using qualitative data which is collected from a Bitcoin special interest group. Besides that, Albayati et al (2020) emphasized that the usefulness perception could increase customers' expectations and they can be motivated to

have a positive attitude towards blockchain technology-based applications, which indicated the significant relationship between perceived usefulness and attitude.

In terms of the relationship between the perceived entertainment of people and their attitudes toward cryptocurrency investment, many researchers had proposed that the hedonic aspects positively impact the attitudes. Nadeem et al. (2021) implemented a paper for examining the driver factors of the adoption of Bitcoin by Chinese people. And the research on the digital money adoption among Arabic citizens by Alaklabi et al, (2020) suggested that the hedonic aspects proved to have a significant relationship with investors' ATs towards cryptocurrency investment. Similarly, the results are also in line with the research from Bruner II and Kumar (2005) that the authors when people could conceive fun from using a system or technology, there will be a strong connection with their positive attitudes.

For the relationship between government regulations and attitudes, Greebel et al. (2015) examined New York as an emerging market, currently establishing its regulatory frameworks in the late stages. Residents of Australia account for about 7% of crypto users, and GRs for the virtual currency have yet to be officially established. However, a tax system for coinage was introduced. The Australian government has stated that Australian law or any other country's law does not widely recognize virtual currency as a legal form of payment and exchange. It has offered to facilitate the space for cryptocurrency adoption, thus increasing the willingness to invest in crypto-currency (Smerichevskiy and Suzdalieva, 2020).

Moreover, many papers had proved that the attitudes variable had a significant effect on the adoption of cryptocurrency of people. In particular, Ajzen (1991) studied the "theory and reasoned action" model and suggested that attitude is considered the most significant on the behavioral intention of people. Zamzami (2020) studied the attitude of people in DKI Jakarta towards cryptocurrency adoption with a sample size of 207 respondents, using the SmartPLS tool with covariance-based SEM methodology. He concluded that people's attitude significantly influences individuals' intention to use digital currency. Therefore, these hypotheses are proposed as followed:

*H1a: Attitude mediates the relationship between Perceived Risk and the Intention to Invest*

*H2a: Attitude mediates the relationship between Perceived Usefulness and the Intention to Invest*

*H3a: Attitude mediates the relationship between Perceived Enjoyment and The Intention to Invest*

*H4a: Attitude mediates the relationship between government regulation and the Intention to Invest*

### **3.6. Attitude and The Intention to Invest in Cryptocurrency**

An article by Schaupp and Festa from 2018 noted that attitude was a component of the combination of beliefs on the outcome of activity and the assessment of those results. (Schaupp and Festa, 2018). The findings of a report published in 2019 show that, in comparison to the other two categories, the attitude has the biggest impact on crypto

behavior. The team found that a unit increase in attitude leads to 74% growth in “behavioral intention to adopt cryptocurrency”.

Anser et al., (2020) research “Social media usage and individuals’ intentions toward adopting Bitcoin”. This paper recorded that attitude had responsibility for mediating the relationship between “the usage of social media” and “behavioral intention for adopting Bitcoin” (Anser et al., 2020). In recent times, a paper named “Testing Impact of Personal Innovativeness On the intention to invest in crypto products of Vietnamese People” found that attitude still had a positive impact on intention but with the lowest impact among other variables in the same research (Nguyen et al., 2021). Therefore, this study assumes that:

*H5: Attitude has a positive effect on The Intention to Invest*

### **3.7. Subjective norms and The Intention to Invest in Cryptocurrency**

A study article published in 2020 claimed that subjective norms had a favorable impact on “attitude towards cryptocurrency investment” and that people are more likely to have good attitudes when their friends, family, and coworkers share their outlook on cryptocurrencies (Thompson, 2020). Equally important, the intention to invest in cryptocurrencies is positively influenced by the so-called subjective norms - thus the influence of family and friends, trustworthy people, and the media - which leads to the herding behavior of investors (Coskun et al., 2020; da Gama Silva et al., 2019; Gurdgiev & O’Loughlin, 2020) and, as a consequence, to the high instability of the cryptocurrency market (Liu & Tsyvinski, 2018). A research paper in 2021 concludes that “subjective norm” has a direct influence on intention to invest in cryptocurrencies. The study also commented that the people important to investors influence and can motivate them to invest in cryptocurrencies. Networked investors who also invest in cryptocurrencies tend to follow the recommendations of those around them (Pham et al., 2021). Hence, this study proposes that

*H6: Subjective norm has a positive effect on The Intention to Invest*

## **4. Methodology**

To investigate the suggested hypotheses, the current study used a deductive methodology. In terms of study methodology, an online questionnaire will be used to collect information and data from participants. While online questions (created using Google Forms) are provided to participants, the researcher will get in touch with the representative and send the questionnaire to them via email and messages. This paper aim at studying factors having an impact on the intention to invest in cryptocurrencies or virtual currencies among 201 people of the Millennials and the iGen in both genders (male and female). Besides, this study was carried out from January 2022 to May 2022, data was collected for 2 months, from February to May 2022. The study collects and searches for investors and individuals in Vietnam’s provinces and cities through crypto investment groups and the participant was selected from some blockchain seminars which took place in Vietnam in 2022.

Additionally, this study used the snowball sampling technique, a non-probability group where the researcher will make first contact with participants and ask them to identify other instances in place of having a sample frame. Survey participants were volunteers to fill out the survey. The continued search for new participants only stops when individuals who previously joined have not been introduced to more suitable or similar participants.



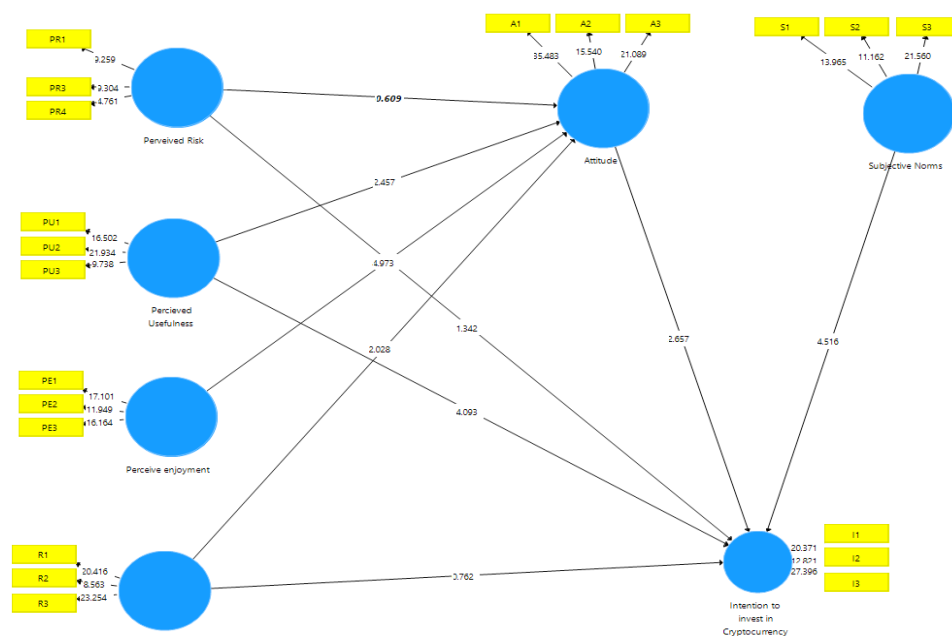
The use of the snowball sampling method is the most appropriate in the context of the COVID-19 epidemic, where people all work from home and it is difficult to access the entire population, despite limitations like the possibility of relative low representativeness, which had been carefully dealt with in the process of choosing initial participants.

The questionnaire is presented in English and translated into Vietnamese under the guidance of a professor with high academic qualifications. There are three main steps, First, the questionnaire is translated from English into Vietnamese to accurately reflect the meaning of the nuances of the language. Next, the questionnaire from Vietnamese was translated back into English with the help and supervision of the instructor to ensure the accuracy of the technical terms. Finally, the English version will be translated into Vietnamese again and the questionnaire (in Vietnamese) will be tested on a small sample of 20 people enabling them to discuss any uncertainty they may have and clarify what they believed the question items to signify. As a result, the accuracy of the translated version is guaranteed.

PLS-SEM as Partial Least Squares Structural Equation Modelling, emphasizes prediction in estimating statistical models whose structures are designed to provide causal explanations. In this study, the PLS-SEM method is used, there are important values that researchers need to focus on to give accurate and clear results. The values in PLS-SEM include Outer loading, Cronbach’s alpha, AVE, composite reliability, Discriminant validity, R2, Path coefficient, and collinearity. All values are mainly to measure the reliability and validity of the data. The research model is referenced from the 2020 research paper which studies “Perceptions towards Cryptocurrency Adoption: A case of Saudi Arabian Citizens” (Alaklabi and Kang, 2021). The research model applies TRA theory to clarify the factors related to investors and investment intentions in the cryptocurrency market.

## 5. Research results

Figure 2. SEM-PLS model of Intention to Invest in Cryptocurrency



Source: Author (2022)

## 5.1. Descriptive statistics

**Table 1. Demographic statistics**

Demographic variable	Options	Frequency	Percentage (%)
Gender	Male	98	49
	Female	96	48
	Preferred not to mention	7	3
Generation	Gen X	37	18
	Gen Y	60	30
	Gen Z	104	52
Education	High school	56	28
	Bachelor	104	52
	Master	35	17
	PhD	6	3
Starting time on cryptocurrency investment	Not invest yet	15	7
	Before 2015	4	2
	From 2016 to 2017	9	4
	From 2018 to 2019	51	25

*Source: Author (2022)*

The descriptive analytics was calculated and showed the frequency and percentage taken from 201 participants' answers (Table 1). 98 respondents were male and the number of females was 96 participants which was nearly equal to the male participants. This survey found that 8 participants had preferred not to mention. Among 201 respondents of the research, it can be seen that the majority of them were Gen Z, which is exactly 104 participants. Meanwhile, generation X and millennials take-up up 38 and 60 of the total users respectively. The major participant is people who have a bachelor's degree, ranked second are the participants with high school education, the number of participants holding a master's degree is 35 people and the number of people holding a doctorate is 7 people.

The two groups of years with the largest number of investors are from 2019 to 2020 and 2020 to the present in which 68 people are investing from about 2019 to 2020 and 54 people starting to invest from 2020 to now. 51 study participants said they started investing from 2018 to 2019. Only 4 people in the study said they invested in cryptocurrencies before 2015 while 9 people started investing between 2016 and 2017.

## 5.2. Measurement model

The reliability is measured using three indicators: Outer Loadings, Cronbach's Alpha, and Composite Reliability (Table 2, Table 3).

**Table 2. Outer Loadings**

	AT	IT	PE	PU	PR	GR	SN
AT1	0.834						
AT2	0.752						
AT3	0.787						
IT1		0.779					
IT2		0.700					
IT3		0.812					
PE1			0.770				
PE2			0.767				
PE3			0.779				
PR1					0.773		
PR3					0.811		
PR4					0.672		
PU1				0.756			
PU2				0.781			
PU3				0.684			
GR1						0.785	
GR2						0.683	
GR3						0.828	
SN1							0.723
SN2							0.736
SN3							0.779

Source: Author (2022)

First, Outer loading is a coefficient to examine the acceptance of the relationships of the latent construct to the indicator variable's outer loading. The outer loading coefficient must be greater than 0,7 which means meeting the reliability value (Hair, Ringle, and Sarstedt, 2017). In this study, the results below show that all statements of variables "AT", "intention to invest Cryptocurrency", perceived enjoyment", and "subjective norm" which are greater than 0.7 range from 0,7 to higher than 8,3, thus, guarantying the validity and reliability of these variables in the measurement model.

**Table 3. Construct Reliability and Validity**

Variables	Cronbach's Alpha	Composite Reliability	AVE
AT	0.702	0.834	0.627
IT	0.645	0.808	0.585
PE	0.665	0.816	0.596
PU	0.593	0.785	0.550
PR	0.627	0.797	0.569
GR	0.649	0.810	0.589
SN	0.607	0.790	0.557

Source: Author, 2022

In terms of measuring internal consistency reliability, the authors employed Cronbach's Alpha and composite reliability to assess internal consistency dependability. In the research approaching the PLS-SEM model, the composite coefficient value is accepted that is greater than 0,7 (Henseler et al., 2015). In this research, the overall reliability of all variables is greater than 0,7, ranging from 7,8 to 8,4. This indicates that the scale of concept is reliable. (Table 3)

To measure the convergent validity of a research model, the Average Variance Extracted (AVE in short) is evaluated (Wong, 2013). It is accepted that the AVE value of each variable is recorded to be 0.5 or above, in which the convergent validity is confirmed. In this research, the AVE value of all variables in the model were all exceeding the benchmark which is 0.5, ensuring the sufficient validity of the latent construct. (Table 3)

**Table 4. Discriminant validity**

	AT	IT	PE	PU	PR	GR	SN
AT							
IT	0.724						
PE	0.812	0.705					
PU	0.705	0.83	0.698				
PR	0.453	0.469	0.556	0.546			
GR	0.719	0.585	0.812	0.787	0.588		
SN	0.655	0.873	0.726	0.748	0.423	0.778	

*Source: Author, 2022*

To investigate the discriminant validity, the HTMT criterion is an estimate of the true correlation between two constructs if they are perfectly measured (i.e. if they are completely reliable). specifically, the HTMT value should be less than 0.85 to meet the discriminant validity. (Henseler et al., 2015)

### **5.3. Structural model**

Among the supported relationships, perceived enjoyment and Attitude, Subjective Norms, and Intention to invest in Cryptocurrency are the two relationships with the highest strength with Original Sample values of 0.361 and 0.333. The weakest relationship is each Regulation and Intention to invest in Cryptocurrency with the original Sample value of -0.084 (Table 5)

**Table 5. Path Coefficient**

	Original Sample	Sample Mean	Standard Deviation	T Statistics	P Values
AT -> IT	0.189	0.186	0.085	2.231	0.026
PE -> AT	0.361	0.353	0.074	4.865	0
PE -> IT	0.106	0.111	0.075	1.406	0.16
PU -> AT	0.196	0.194	0.086	2.28	0.023
PU -> IT	0.255	0.255	0.065	3.928	0

	Original Sample	Sample Mean	Standard Deviation	T Statistics	P Values
PR -> AT	0.044	0.055	0.069	0.635	0.526
PR -> IT	0.08	0.084	0.07	1.147	0.252
GR -> AT	0.187	0.195	0.092	2.024	0.044
GR -> IT	-0.084	-0.08	0.073	1.15	0.251
SN -> IT	0.333	0.334	0.076	4.354	0

Source: Author, 2022

The term “path coefficients” refers to the hypothesized correlations between variables (Aboul Ella Hassanien et al., 2019). The path coefficient evaluates the influence of independent factors on dependent variables. The path coefficient might range from -1 to +1. The closer the hypothesis is to +1, the more favorable the association will be. The majority of researchers use the p-value to determine the importance of correlations (Aboul Ella Hassanien et al., 2019). To demonstrate that the observation hypotheses are positively significant, a P-value lower than 0.05 is accepted. Furthermore, the Original Sample (O) reveals whether the correlations between variables are strong or weak.

After the measurement, there are six accepted relationships with P value less than 0.05 which are AT -> IT, PE -> AT, PU -> AT, PU -> IT, Regulation -> AT, SN -> IT. In which, there are 4 unacceptable relationships with a P-value greater than 0.05, the rejected relationships are “Perceived Risk -> Attitude”, “Perceived Risk -> Intention to invest in Cryptocurrency”, “Perceive enjoyment -> Intention to invest in Cryptocurrency” and “Regulation -> Intention to invest in Cryptocurrency”.

## 6. Discussion

This section focuses on analyzing the results of the abovementioned hypotheses (see Table 6).

**Table 6. Hypotheses Result**

Hypotheses	Relationships	Path coefficient	P Values	Result
H1	PR -> IT	0.08	0.252	Rejected
H2	PU-> IT	0.255	0	Supported
H3	PE -> IT	0.106	0.16	Rejected
H4	GR -> IT	-0.084	0.251	Rejected
H1a	PR -> AT -> IT	0.008	0.57	Rejected
H2a	PU -> AT -> IT	0.037	0.163	Rejected
H3a	PE -> AT -> IT	0.068	0.032	Supported
H4a	GR -> AT -> IT	0.035	0.145	Rejected
H5	AT -> IT	0.189	0.026	Supported
H6	SN -> IT	0.333	0	Supported

Source: Author, 2022

**Hypothesis 1 (H1):** *Perceived Risk has a positive effect on the intention to invest -> Rejected*

The hypothesis assumed that PR has a significant impact on the intention to invest in cryptocurrency. Based on the result, the p-value is 0.156 and the path coefficient is 0.276. It finds that the PRs had not a significant relationship with the intention to invest in cryptocurrency, so this hypothesis was rejected.

The results are in line with some papers that reveal data that the perceived risk has insignificant impacts on IT. Specifically, in Mendoza-Tello et al. (2018) study paper, the study has highlighted that in the context of cryptocurrency, PR reflects uncertainty regarding investors' future investment behavioral intentions. Based on the demographic results of this study, most respondents account for a high proportion (Gen generation (1995-2012)). In contrast, only a small number of respondents with 14.4% belong to the substituent group. Fietkiewicz et al, (2016) justify that different generations have varying levels of PR acceptance. it can be just that this could be since most of the young generation regards the danger and risk related to cryptocurrency. Besides, it could be claimed that as a consequence of the extensive belief that retail investors lack financial knowledge and investment literacy, some people may be utterly oblivious of the danger they may be facing.

**Hypothesis 2 (H2):** *Perceived Usefulness (PU) has a positive effect on the intention to invest (IT) -> Supported*

The hypothesis indicates the relationship between PU and IT. The relationship between PU and IT is significant, with the P-value at 0 (lower than 0.05). Moreover, the  $\beta$  value was recorded at 0.255, meaning that for every unit of PU, there will be a 0.255-increase in the IT. In other words, the more usefulness perception among people, the higher possibility that they intend to adopt this digital currency.

This relationship has been proved and supported to be significant by many previous researchers. Indeed, Nadeem et al (2021) found that the PU positively impacts the intention to adopt Bitcoin, and it is believed that benefits perception could be a significant predictor to apply new technologies. The author also suggested that as Bitcoin system is considered to be a cost-effective payment system, but it seems to be still unpopular in developing countries. Therefore, the government should pay attention to Bitcoin and allow it to appear in other market assets, hence, raising awareness among people as well as their usefulness perception towards this digital money. Moreover, Jariyapan et al. (2022) revealed that investors and business-educated people, who understand and related the use of cryptocurrency to their benefits, productivity, and effectiveness, tend to continue their investment in virtual currency.

**Hypothesis 3 (H3):** *Perceived enjoyment has a positive effect on the intention to invest -> Rejected*

The result illustrates that the P-value for the relationship between perceived enjoyment and IT was recorded to be 0.016 with the  $\beta$  value at 0.106. This means there is no significant impact from the perceived enjoyment of investors on their intention to adopt the virtual currency. This relationship is expected to have a positive association; however, the path coefficient had proved that hypothesis H3 is rejected.

Mansour and Yaser (2020) stated that the previous crash of the digital currency market had led to a cognitive bias about it, hence, generating the scenarios about bankruptcy or losses inside their subconscious. Moreover, FOMO (the Fear of Missing Out) is also a popular effect among players in the digital currency market, which occur when they are concerned that buying opportunity might be missed. This effect is associated with negative mental problems such as emotional stress, down mood, reduction in life satisfaction, anxiety, or even depression (Sutanto et al., 2020). Additionally, Vidal-Tomas (2022) pointed out that the form play-to-earn (P2E) shows some harm to players as it requires a large amount of money to purchase items for complete missions, which the purchase could be thousands or even millions. This result is in line with previous studies, in which Dangmei and Singh (2016) said that generation Z has the features of independence, self-direct, flexibility, and personal freedom. Furthermore, Schwieger et al., (2018) also believed that Gen Z-ers are ambitious, planning for their future, and willing to self-learning. Therefore, all the evidence resulted in an insignificant relationship between perceived enjoyment and the intention to adopt cryptocurrency.

***Hypothesis 4 (H4): Government Regulation has a positive effect on the intention to invest -> Rejected***

Hypothesis 4 assumed that there is a significant relationship between government regulation and intention to invest in cryptocurrency. The result shows that the p-value is 0.251. Therefore, H4 is rejected and the result found that government regulation has insignificant effects on the intention to invest in cryptocurrency.

In this research paper, there are many disagreements that government regulation of cryptocurrency would encourage to intention to invest in them. According to the process of crypto exchanges work, if government regulation comes to all cryptocurrency investment activities, this would affect the investment implementation process. The investigation into cryptocurrency adoption as a tool in financials by Lim, (2015) found that government regulation would force participants to use or invest to take more execution steps in an investment execution to secure cryptocurrency stakeholders. Transaction time reduces money efficiency (Wu et al., 2018). This can cause them to miss investment opportunities or cause a rate of return loss. Cryptocurrency investors could be a significant hard impact if the area is rising regulated. Investors face meeting any policy goal in the cryptocurrency sector when applied with quantifiable expectations. Furthermore, the research paper's analysis has shown that regulation and government oversight do not significantly reduce the risks associated with cryptocurrency investments. Cryptocurrency's value can be affected by government regulations (Grablee, 2000). Another finding is that most of the respondents (51.4 %) in this study had bachelor's degrees while only a few are master's degrees in education (17.3%). Nurbarani and Soepriyanto (2022) argued that different levels of education lead to different cognitive and cognitive abilities. This demonstrates the differing views of different educational levels regarding the interest in government regulation. People with a high level of education will be more concerned while people with a lower level of education are not necessarily concerned about issues related to government

regulation. Sum of, the government regulation does not impact insignificantly on the intention to invest in cryptocurrency.

***Hypothesis 5 (H5): Attitude has a positive effect on the intention to invest in cryptocurrencies -> Supported***

Hypothesis 5 assumed that Attitude positively affects the intention to invest in cryptocurrency with a P-value is 0.026 and a beta coefficient is 0.189. Therefore, the hypothesis is accepted and there is a positive and significant relationship between Attitude and intention to invest in cryptocurrency.

In this research paper, a large number of participants agree with the idea that they want to conduct their financial transactions through cryptocurrency, at the same time, they also want to invest in cryptocurrency as another type of investment. According to the way crypto exchanges work, if you want to withdraw money to a bank card or exchange it for cash, an investor must sell the Crypto and then use another exchange to convert it to cryptocurrency. traditional to bank transfer (cryptoviet, 2021). Therefore, it is understandable that many people are using cryptocurrency for external trading or withdrawing to invest in other investment sources. This leads them to continue and maintain investing in cryptocurrency as another type of investment because it is easier to trade back and forth between their portfolios. Moreover, because in Vietnam there is no clear law on crypto trading activities, so transactions through crypto are often considered by many to be more convenient because it will be difficult to be traced and checked by the government. In addition, many others agree with the idea that investing in cryptocurrencies helps them achieve their goals in life. This leads to a positive in using and investing in crypto as many people choose to agree with the idea that they will recommend to those around them to invest in cryptocurrency. Therefore, when people have a positive attitude towards cryptocurrency, they will also be willing to continue to invest and recommend to those around them to invest in cryptocurrency as a new investment method.

***Hypothesis 6 (H6): Subjective norm has a positive effect on the intention to invest in cryptocurrencies -> Supported***

H6 predicted that there would be a significant relationship between subjective norms and intention to invest in cryptocurrency. The result reports that there is a positive significant relationship between these two variables. The hypothesis was supported since the P-value is 0 which is over 0.05 and the path coefficient is 0.33.

In this study, the influence of subjective norms on investment intention is quite significant. Specifically, many people agree with the idea that the people around them feel fine when they invest in cryptocurrencies. Some people also think that people important to them support them when investing in cryptocurrencies. This result is in line with Nguyen, Nguyen, and Ha, (2021), a research paper also investigating cryptocurrency in Vietnam. Specifically, this study argues that the views of those around them are very important to their investment decisions. The research team concludes that the more people favor cryptocurrency and believe in its future, the more potential investors have an intention to



invest in it (Nguyen, Nguyen, and Ha, 2021). Another study in Vietnam also concluded that the subjective norm has a positive influence on the investment intention of virtual currency investors. this leads to herding behavior in the cryptocurrency market. (Coskun et al., 2020; da Gama Silva et al., 2019; Gurdgiev & O'Loughlin, 2020)

***Hypothesis 1a (H1a): Attitudemediates the relationship between PR and The Intention to Invest ->Rejected***

H1a predicted that there would be a significant AT mediating the relationship between PR and intention to invest in cryptocurrency. The result reports that there is no significant mediating role of AT in the relationship between these two variables. The hypothesis was rejected because of P-value is 0.52 which is over 0.05 and the path coefficient is 0.57.

This result is the same as studies in the past, the research stated that investor engagement may not modifies the connection between PR and emotional weakness, and psychological owning as they believed with the relevant decisions about If financial is specifically the IT, then the high risk is implicit. Consequently, they intend to ignore the risk of cryptocurrency investment. Similar to this result, Airias-Oliva et al, (2019) that consumers having low PR are more likely to have a good AT towards the behavior. The investors having the IT is frequently driven by the potential of earning a high rate of revenue even though the cryptocurrency investment is associated with risk. Individuals having invested in cryptocurrency had a lot lower perceived risk and high risk than those who did not (Zhao and Zhang, 2021). As 92% of participants of this research reported that they had invested in cryptocurrency. This behavior is consistent with Zhao and Zhang's findings, (2021).

***Hypothesis 2a (H2a): Attitude mediates the relationship between Perceived Usefulness and The Intention to Invest ->Rejected***

The role of a mediator of AT in the relationship between PU and IT is represented in hypothesis H2a. The path coefficient shows the P-value at the result higher than 0.05 (which is 0.163) along with the  $\beta$  value at 0.037. This means that there is no mediation role of AT in this relationship. In other words, hypothesis H2a is rejected.

This result was in line with the research by Hasan et al. (2022). The authors found that perceived value from cryptocurrency has a positive effect on the AT towards its usage along with the significant association between AT and the behavioral intention to invest in this digital currency. Nevertheless, the results show no mediation role of AT between perceived value and the intention to adopt cryptocurrency as the index of moderated mediation is negative.

***Hypothesis 3a (H3a): Attitude mediates the relationship between perceived enjoyment and The Intention to Invest -> Supported***

This research proved the significant direct relationship between PU and IT while the results show that AT does not mediate this relationship. The P-value from the table indicates that AT plays a role as a mediator in the association between perceived enjoyment and IT. The result is recorded to be 0.32, which is lower than 0.05, along with the  $\beta$  value equal to 0.068. In other words, hypothesis H3a is supported.

This result is also supported by several studies in the past. Guych et al. (2018) studied the adoption of cryptocurrency in hotel payment in Taiwan as well as components having an impact on the people's intention to adopt this e-payment. Applying the TAM model, he concluded that hedonic motivation greatly influences consumers' ATs toward cryptocurrency adoption, which also affects their decision to invest in the digital currency market. Also, it is believed that AT mediates the association between "fun" or perceived enjoyment and behavioral intention of any internet-related activities (Bruner II and Kumar, 2003). Moreover, he stated that joy deriving from a system usage is considered a significant factor towards the intention to adopt a technology. Sheppard et al. (1998) also concluded that a higher level of joy along customers would lead to a more positive attitude towards the system usage and they might be more likely to repurchase it.

***Hypothesis 4a (H4a): Attitude mediates the relationship between Government Regulation and The Intention to Invest->Rejected***

In result of this study shows that no mediation role between Government Regulation and IT through AT (P-value = 0.044) Therefore, hypothesis H4a is rejected.

In this study, based on the results, there is no effect of Government Regulation on the intention to invest in cryptocurrency. This result is similar to the findings of Shanneav, et al, (2019). Many people believe that although under third party support is the intergovernmental GR however more evidence suggests that more regulation would impact the cryptocurrency industry. Due to the minor amount of explicit cryptocurrency activities, government regulation is still insufficient, particularly in Vietnam's policy environment. Investors are more interested in the growth of cryptocurrency than in the concentration of government regulation like bailouts or government insurance. This suggests that government regulation will not lead to any difference in attitude and significantly affect cryptocurrency investment intentions because cryptocurrency is considered to be the same as both traditional commodities and currency in that. The public's belief in the currency's issuer determines the value of fiat money (EduGorilla Prep Experts, 2021).

## **7. Conclusion and implication**

The intention to invest in cryptocurrency has obtained several scholarly attention and journal papers and media coverage. This research paper significantly adds to the knowledge about cryptocurrency investment intention by using TRA theory and using the PLS-SEM technique, this research aims to investigate individual cryptocurrency investment intention through data from Vietnamese citizens by viewing perceived risk, useful perceived, enjoyment perceived, and government regulation.

Based on the research results, the core coefficient and values in PLS-SEM were pointed out and displayed the acceptable or rejected values. There are three hypotheses rejected, specific H1, H3, and H4 and there is no mediator role of Attitude on the relationship of perceived risk and perceived enjoyments to the intention to invest in cryptocurrency. There

are four hypotheses were accepted, including H2, H5, H6, and H3a. The findings have shed light on the intention to invest in the cryptocurrency market in Vietnam by policymakers and regulators by providing a deeper understanding of the individual perceptions of Vietnamese citizens. The research paper's findings have raised concerns among Vietnamese citizens because most of the participants who reported having invested in cryptocurrencies were IGen/Z Gen (1995-2012) who might be lacking literacy in the crypto investment and are potential to be risk imposed

After modeling the framework of this study and analyzing the results, it can be seen that PR has a negligible positive effect on cryptocurrency investment intention. Therefore, it is recommended that Cryptocurrency businesses and administrators provide investors with the ability to control all of their transactions and that these be transparent and secure, even with complete traceability. According to the indirect association between these two variables that our study found, this set of steps will reduce the investor's PR and therefore enhance his or her attitude. Besides, security concerns and money losses necessitate risk management strategies and individual cryptocurrency investor insurance. Some providers in the blockchain market, like Coinbase and BitGo, provide insurance to their consumers against certain security threats. Individual investors of cryptocurrency and other cryptocurrencies, on the other hand, have no such insurance arrangements or policies. Cryptocurrency insurance is a new phenomenon, and regulators are uncertain how to handle it due to the difficulties in verifying claims against cryptocurrency (Wallace, 2019). As the result, this research recommends that plans and strategies should be developed with inputs from insurance firms, regulators, and individual investors to defend their interests and rights. Based on this study's findings, might help investors be able to make the decision better when joining in Cryptocurrency investment. Moreover, the cryptocurrency investment should consider the result gained in this study. Investors' intention should be considered in investment in the cryptocurrency market, which should be supported by Government regulations and user experience. Governments should encourage and regulate the use of any cryptocurrency application, and draft legislation to control and prevent fraud.

Due to the limitation of research funding, survey participants are not entitled to receive benefits for participating in the survey. In addition, some participants said that they were still afraid to fill out surveys related to Cryptocurrency because currently in Vietnam, activities related to Cryptocurrency and Crypto assets have not been supported by the state. As a result, some responses were left blank or uncompleted, and incomplete responses were omitted and this reduced the objectivity of the study results. Secondly, the study has not considered demographic factors. Therefore, the profound conclusions about the behavior of each generation have not been analyzed in depth. Thirdly, the sampling method also needs to be changed, instead of using convenient sampling, the research team can use systematic sampling and un-convenient sampling to have more suitable participants.

## Appendix

Using the following scale, please select only one answer that best reflects your opinion about the statement.

1 = Strongly Disagree (SD), 2 = Disagree (D), 3 = Neutral (N), 4 = Agree (A), 5 = Strongly Agree (SA).

Constructs		Items
Perceived Usefulness (PU)	PU1	I find that investing in cryptocurrencies in a blockchain platform is time-saving
	PU2	Using blockchain platform support for beginners in choosing appropriate investments option
	PU3	I can use cryptocurrencies as an alternative source of money
Perceived risks (PR)	PR1	Cryptocurrencies are risky due to high volatility, compared with other currencies or investments
	PR2	Investing in cryptocurrencies puts my anonymity at risk
	PR3	Investing in cryptocurrencies puts my financial activities at risk
	PR4	If I invest in cryptocurrencies, my historical transaction might be hacked
Perceived Enjoyment (PE)	PE1	I feel happy when having the opportunity to invest in cryptocurrencies
	PE2	I find play to earn/ run to earn for making tokens is entertained
	PE3	I feel interested when using returns after cryptocurrencies investments for other purposes
Work Engagement (WE)	WE1	I am interested in my job
	WE2	I try my hardest to perform well on my job
	WE3	At work, my mind is focused on my job
	WE4	I get carried away when I'm working
	WE5	I enjoy working long term in my company
Government regulation (GR)	GR1	Government regulation would encourage cryptocurrencies investment
	GR2	Government should enact policies and insurance for protecting cryptocurrencies investors
	GR3	Government regulation and supervision will reduce risks associated with cryptocurrencies investment
Attitudes (AT)	AT1	Investing in cryptocurrencies will help me to achieve my goals
	AT2	I want to conduct my transactions through cryptocurrency
	AT3	Investing in cryptocurrencies will increase my living standards
Subjective Norms (SN)	SN1	People who are important to me believe that it is okay to invest in cryptocurrencies
	SN2	People having valuable opinions about me suggest I invest in cryptocurrencies

Constructs		Items
	SN3	People who are important to me would support cryptocurrencies investment
	SN4	People around me are investing in cryptocurrencies
Intention to invest in cryptocurrencies (IT)	I1	I intend to invest in cryptocurrencies as a type of official investment (from many forms that I currently invest in)
	I2	I would recommend others to invest in cryptocurrencies as a new type of investment
	I3	My willingness to invest in cryptocurrencies is high

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# QUALIFYING THE EFFECT OF FINANCIAL CONSUMER PROTECTION ON FINANCIAL INCLUSION

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## **Abstract**

Financial consumer protection strives to encourage equitable interactions between financial service providers and customers, thereby facilitating the attainment of financial objectives. Four fundamental principles govern the conduct of service providers: (1) fair treatment, (2) information transparency, (3) complaint handling, and (4) supervision power are examined. While legislation on fair consumer treatment and complaint resolution have an effect on both access and use of financial services, research indicates that transparency and regulatory powers only impact access to finance.

**Keywords:** Financial consumer protection, financial inclusion, financial access, use of financial services

## **1. Introduction**

In recent years, governments have prioritized the protection of financial consumers. According to World Bank (2012) and the European Parliament (2014), lax financial consumer protection aggravated the global financial crisis, while enhancements in Consumer protection are crucial for enhancing efficiency, competitiveness, and individual consumer access. In a similar sense, Duke (2009) discusses the systemic significance of consumer financial protection, suggesting that restoring confidence through financial consumer protection regulations does not have a negligible effect on the economy. Not only is it beneficial for individuals, but it can also play a significant role in restoring investor confidence, thereby assuring a sustainable credit supply that fosters economic growth and stability. Bernanke (2009) echoed the preceding comment, stating, “Protecting financial consumers serves to build household savings, fosters trust in financial institutions and markets, and simultaneously restores the soundness of the financial system.” After the 2008 financial crisis, countries enacted the Financial Consumer Protection Act, such as the United States with the Financial Consumer Protection Act and Wall Street Reform, to promote financial stability by enhancing accountability and transparency in the financial system and protecting consumers from unfair financial services. In addition, the G20 nations, the World Bank, and the European Union have supported a number of initiatives to tighten global financial consumer protection regulations.

The purpose of this study was to determine whether financial consumer protection policies have an effect on worldwide financial inclusion levels. Although the World Bank and the European Parliament have acknowledged a beneficial association between



financial consumer protection and financial inclusion, the empirical studies that confirm this connection are quite limited.

Although a number of studies have examined the relationship between financial inclusion and prudential policies such as capital requirements, regulatory powers, restrictions on banking operations, and transparency, etc. (Besong et al., 2022; CGAP, 2012; Jungo et al., 2022), their findings cannot be directly applied to financial consumer protection policies. This is owing to potential variations between the two studies and, more crucially, to the use of distinct metrics to evaluate the two types of policy. For instance, in the context of prudential laws, information transparency refers to accounting obligations such as the disclosure of off-balance sheet information and risk management strategies in financial statements and annual reports. In the context of consumer protection, transparency refers to the information offered to the customer, such as mandatory information when creating an account, for example the customer's interest earnings, or information on dispute resolution. Besong et al. (2022) and WorldBank (2019) note that previous research frequently fails to differentiate between financial consumer protection rules and prudential regulations, and that they are frequently limited in scope (Musau, 2022). The few worldwide studies conducted (Garz et al., 2021) lack credible quantitative evidence. Consequently, the effect of financial consumer protection legislation on financial inclusion remains an unanswered subject that must be investigated. To bridge the research gap, we use data from 87 countries and the new World Bank database on financial consumer protection policies (2017) in this study. Section 2 offers an overview and conceptual framework of the investigation. Section 3 describes the research methods, section 4 examines the findings, and section 5 provides a conclusion.

## **2. Literature review**

The objective of Financial Consumer Protection is to promote fair transactions between financial service providers and consumers, including individuals and small and medium-sized organizations. Consumer protection methods consist of safeguarding the financial system's integrity and protecting consumers from unethical practices such as fraud, unfair pricing, and delayed complaints settlement (Finaccess, 2019). Goulard, Azis, and Gragtman (2020) are of the same opinion that consumer protection is an important component in the provision of financial services and that consumer protection initiatives include encouraging openness. Moreover, according to the authors, protecting financial consumers also entails constructing processes and expanding access to complaints for customers who utilize digital financial services. Several further papers (World bank, 2014) also emphasize the significance of regulatory authority in protecting financial customers. According to the researchers, the behavior of service providers will be guided by four fundamental principles: (1) fair treatment of consumers, (2) information transparency, (3) complaint resolution, and (4) supervisory authority (Brix & McKee, 2010). This study will examine the influence of each of the four facets of financial consumer protection on financial inclusion.

### *(1) Fair treatment and impact on financial inclusion*

The protection of consumers from unfair and misleading sales practices is a priority for legislators. In this context, regulators may decide to impose limits on deceptive advertising,

abusive collection techniques, fraudulent lending practices, and bogus substance. After the global financial crisis of 2007, Duke (2009) stated that “customer confidence in the financial system can only be restored if sufficient consumer protections are in place to give borrowers reason to believe they will be treated fairly” and proposed to “restore consumer confidence by increasing transparency and, if necessary, prohibiting unfair and deceptive complexities.” Similarly, the Consumer Protection Bureau report (2013) asserts that consumers are concerned about their ability to differentiate between legitimate and illegitimate financial service providers, as well as the use of services with greater risk, higher costs, and lower-than-expected quality levels, which can result in the avoidance of financial services. Simultaneously, banks seeking long-term success will find it difficult to compete in terms of quality, variety, price, and other attributes, as vendors may charge lower fees for products that appear to be of equivalent quality but are not. Based on the aforementioned factors, the industry can expand further if consumers have more faith in suppliers and products (Financial Consumer Protection Bureau, 2013). In addition, financial consumer protection measures can refocus competition on quality and cost (World Bank, 2014), thereby compelling banks to become more efficient.

### *(2) Disclosure and impact on financial inclusion*

Policymakers have paid attention to the demand for transparent information to assist informed product selection. Duke (2009) notes that financial products tend to grow increasingly complex, opaque, and perplexing for users. Incorrect financial decisions, a rise in defaults, and a rise in foreclosures during economic downturns are the results of the deliberate concealment of product features from consumers. In the meanwhile, the necessity for information transparency can promote competition between banks and decrease client prices. Transparency regulations, for instance, demand uniform and comparable formats and languages, making it easier for consumers to locate and compare items and pricing. This prevents banks from taking advantage of uneducated consumers and compels them to increase their efficiency. In addition, transparency rules signal quality standards for financial service products, which boosts consumer confidence (European Bank, 2012). Consequently, the desire for information openness may result in an increase in demand for financial goods.

### *(3) Complaint handling and impact on financial inclusion*

The Financial Consumer Protection Bureau (2013) asserts that customers may not be able to detect and comprehend clear, honest, and accurate information from a supplier in order to protect themselves. This could be due to a lack of awareness and knowledge of sophisticated financial instruments. As a result, customers are unable or unprepared to comprehend and manage the risks connected with financial services and products, resulting in poor market participation or selection. In addition, the competitive climate among credit institutions might make it difficult for banks to lower consumer risk or erode protections. To address these difficulties, consumer protection legislation demands financial services standards, such as mandating providers to respond to consumer information requests, establish a complaint resolution process, and save records for future review. Effective grievance redress mechanisms can help maintain financial services and boost client satisfaction (Hart, Heskett and Sasser, 1990).

#### *(4) Regulatory power and impact on financial inclusion*

Policymakers and other international organizations underline the necessity for a supervisory agency with adequate jurisdiction, resources, and regulatory authority to safeguard financial consumers (Worldbank, 2014). The above consumer protection policies will be implemented, monitored, and promoted by these agencies. According to Brix and Mckee (2010), regulatory methods might range from compelling providers to reimburse extra costs or pulling deceptive marketing to harsher punishments such as fines or the revocation of operating licenses for banks that violate the law. These circumstances strengthen the assurance and confidence of customers, hence expanding their access to financial services.

### **3. Methodology**

#### **3.1. Data**

##### *3.1.1. Consumer financial protection*

Financial consumer protection is a composite indicator of several financial consumer protection policies adopted by authorities. First, four component indices are created. Each signal is associated with a concept outlined in section 2, including fair treatment, disclosure, complaint handling, and supervisory power.

The first section contains provisions on fair treatment (fair). Specifically, this section demonstrates that countries have unique legislation regarding (i) prohibiting/restricting unfair business activities; (ii) prohibiting/restricting regulatory actions with customer controls; and (iii) establishing debt collection standards. There are a total of ten sub-stipulations within the fair treatment component.

The second component measures regulations related to information disclosure (disc), which represents regulations on information that credit institutions are required to disclose to customers (such as interest rates, interest rates, etc.) at various stages (before and after contract signing) and with varying requirements (such as plain language, easy to understand, standard format...). This indicator considers responses to 26 questions in total.

The third component measures the complaint handling mechanism (comp), indicating the presence of regulations on complaint handling standards at credit institutions, the unit responsible for handling violations, the timeless, the ease of access when complaints are filed, information storage, and complaint reporting to the authorities. The raw complaint handling score for each country goes from 0 to 8 with a total of 8 questions.

The fourth component describes the powers of financial consumer protection supervisors (sppower), such as whether they can conduct investigations, monitor, request collection information, or impose sanctions on credit institutions that breach consumer protection legislation. To construct the component indicator of supervisory authority, 16 questions were used.

For each country in the sample, these indicators are computed by comparing the existence (with a value of 1) and absence (with a value of 0) of some consumer protection regulation. According to Gaganis et al. (2020), these indices were then standardized on a scale ranging from 0 to 100 based on equation 1 in order to account for various number of

subindex in each component. The composite fcp index is then computed using the principle component technique pca of the components according to equation 2, with a greater value reflecting a greater level of rigor in financial consumer protection policies.

$$Standardize_i = \left( \frac{I_i - I_{min}}{I_{max} - I_{min}} \right) * 100 \quad \text{Equation (1)}$$

In which, Standardize is the post-normalized index, i indicates countries,  $I_i$  is the raw measurement index,  $I_{max}$  is the maximum score for each indicator,  $I_{min}$  is the minimum score for each index.

$$PCA_i = \omega_1 Y_i^1 + \omega_2 Y_i^2 + \omega_3 Y_i^3 \quad \text{Equation (2)}$$

In which, PCA is the indicator calculated by the principal component method pca, i indicates the countries,  $Y_i^1, Y_i^2, Y_i^3$  is the component indicators.  $\omega_1, \omega_2, \omega_3$  is the weight of each component.

Financial consumer protection data is collected from Worldbank's Global Financial and Consumer Protection Survey (FICP). The FICP survey data represents a global measure of the prevalence of legislative, legal, regulatory, and supervisory actions to safeguard financial consumers. The 2017FICP poll received responses from financial sector regulators at 124 institutions representing 141 economies.

### 3.1.2. Financial inclusion

Financial inclusion is a multifaceted notion that is difficult to quantify. In previous research on financial inclusion, financial inclusion index were frequently self-structured based on a synthesis of multiple selection criteria. In this study, we concur with (Lan et al., 2019) that expanding access to and utilization of financial services is a crucial aspect of financial inclusion.

Therefore, to quantify the access component, we employ three indicators: account (%age 15+ with an account), debit card (%age 15+with a debit card), and credit card (credit card holder, %age 15+)The prevalence of accounts indicates the proportion of the population with access to financial services.

Nonetheless, account ownership does not correlate with account usage. Usage enables holders to maximize the benefit of financial inclusion through deposits or withdrawals (at a financial institution, age 15+), using a card (using a debit or credit card in the last year, % age 15+), paying bills (paying via accounts, % of payers, age 15+), borrowing (borrowing from a financial institution or using a credit card), and paying bills (paying via accounts, percent of payers, age 15+).

We employ the two-stage principle component method pca to structure the financial inclusion and component metrics. In the initial phase, the access component and use component will be computed using the formula pca (2). In the subsequent phase, financial inclusion is composed of two elements. The World Development Indicator from the World Bank displays comprehensive financial statistics.

### 3.2. Analytical models

The linear regression model was applied to cross-sectional data from 87 countries, encompassing both high-income and low-income nations. With two variables reflecting two facets of financial inclusion, financial access (access) and usage of financial services (use), the following two models are evaluated:

$$\text{Access} = f(\text{fcp, control variables}) \quad \text{Model(1)}$$

$$\text{Use} = f(\text{fcp, control variables}) \quad \text{Model(2)}$$

In which:

- Access reflects the ratio of financial access, as determined by the principal component method pca of the component indicators.

- Use reflects financial service utilization, as determined by the principal component method pca of component indicators.

- FCP represents the overall financial consumer protection criterion, which is measured by the principal component analysis (pca) of the component indicators.

To explore the effect of each component of financial consumer protection on financial inclusion, we replace the overall financial consumer protection variable in model (1) and model (2), respectively with *sppower*, *disc*, *fair*, and *comp* one by one. Therein:

- *sppower* represents supervisory power
- *disc* displaying disclosure obligations
- *fair* represents fair treatment regulations
- *comp* demonstrates complaint handling regulations

Previous empirical investigations have demonstrated that disparities in financial inclusion between nations might be due to different economic and financial development conditions. We add to model (1) and (2) the control variables: GDP per capita (*gdp*) and inflation (*inflation*) to account for the economic development, and the concentration of financial institutions (*concentration*) and domestic credit to private sector (% GDP-credit) to account for financial market condition. These variables are obtained from the World Bank's World Development Indicator

## 4. Results

### 4.1. Variables description

Table 1 presents the descriptive statistics of the model's variables, whereas Table 2 presents the correlation matrix between the variables. Access, use, and fcp are the variables determined using the principal components analysis (pca) approach. Standardized indicators include supervisory powers (*sppower*), disclosure regulations (*disc*), fair treatment (*fair*), and complaints processing (*comp*) for the financial protection component. Evidently, financial consumer protection legislation vary substantially between nations. Specifically, high-income countries have more comprehensive and uniform financial consumer protection legislation than low- and middle-income nations. In terms of financial consumer

protection, the United Kingdom has the tightest restrictions, whereas Egypt has the laxest. Similar trends are observed in the indicator of financial inclusion, as developed nations have three times greater access to and utilization of financial services than less developed nations.

**Table 1. Data description**

Variables	mean	sd	min	max
Access	.1074086	.9409977	-1.775723	1.367856
Use	-.010699	.9911448	-1.200202	1.686137
fcp	.0054665	.9875135	-2.135654	.8628525
sppower	62.26563	22.88186	0	100
disc	69.65	28.4961	0	100
fair	70.875	25.81304	0	100
comp	71.40625	32.93368	0	100
inflation	3.676194	4.215374	-.8381946	29.50661
concentration	68.43257	19.46602	24.09322	100
private	70.86182	43.62299	12.85203	223.3909
gdp	16397.36	18718.93	850.1622	107142.1

Source: Author's Statistics

**Table 2. Correlation matrix**

	Access	Use	fcp	sppower	disc	fair	comp	inflation	concentration	private	gdp
Access	1										
Use	0.910***	1									
fcp	0.364***	0.328**	1								
sppower	0.291**	0.202	0.467***	1							
disc	0.170	0.115	0.442***	0.339**	1						
fair	0.374***	0.385***	0.406***	0.292**	0.348**	1					
comp	0.364***	0.328**	1.000***	0.467***	0.442***	0.406***	1				
inflation	-0.366***	-0.345**	-0.299**	-0.234*	-0.179	-0.551***	-0.299**	1			
concentration	0.164	0.232*	-0.0719	0.0105	-0.130	0.00586	-0.0719	0.0213	1		
private	0.572***	0.568***	0.180	0.246*	0.0574	0.186	0.180	-0.351**	-0.0821	1	
gdp	0.717***	0.836***	0.270*	0.138	0.0920	0.322**	0.270*	-0.306**	0.169	0.573***	1

Source: Author's Statistics

Ghi chú: \*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$

#### 4.2. Effects of consumer financial protection on financial inclusion

Table 3 presents the study's findings. Columns (1) through (5) illustrate the influence of consumer protection on the element of gaining access to financial services, while columns (6) through (10) illustrate the impact of consumer protection on the aspect of utilizing financial services. The model uses the overall financial consumer protection index

in columns (1) and (6). The findings indicate that overall financial consumer protection legislation will boost the safety and dependability of services, hence promoting financial inclusion through the increasing number of citizens obtaining and utilizing financial services. However, the effects of each internal facet of financial consumer protection can vary. Therefore, in columns (2) to (5) and (7) to (10) we substitute the overall indicator for financial consumer protection with the component indicators. Each component indicator is added in succession, while the control variables remain unaltered.

First, the fair treatment requirement has a positive indication and is statistically significant for both access to financial services and utilization of financial services. Therefore, financial inclusion is greater in nations with stricter regulations on deceptive advertising, unfair service delivery, abusive tactics, upfront fees, and unauthorized data use. The reason for this is because fair treatment standards assist protect the interests of clients, thereby fostering confidence, particularly among people who have never utilized financial services and encouraging them to do so.

Second, the complaint handling has a favorable effect on financial inclusion. Compliance with the requirements for certain internal policies, processes, and standards for customer complaint handling positively affects the credit institution's reputation. In a highly competitive climate where banks frequently offer very complicated financial products with unclear costs and revenues, these restrictions assist protect customer safety. According to the Financial Consumer Protection Bureau (2013), clients with a low degree of financial literacy find it challenging to comprehend current financial products, even if they are publicly available. In this instance, complaint settlement requests will safeguard customer safety.

Thirdly, information transparency (disc) shows a positive coefficient and is statistically significant with respect to financial access but not with respect to the utilization of financial services. As anticipated, the results indicate that the greater the information disclosure requirements for clients, the greater the incentive for customers to open accounts or credit cards with financial institutions. However, the disclosure obligation has nothing to do with the usage of financial services. Customers who have access to financial services and a need to use them (such as paying bills, borrowing capital, saving money, etc.) will be interested in charges and interest rates, as opposed to whether or not the information is clearly specified in the contract. Customers with limited financial expertise or limited exposure to financial services frequently find it difficult to compare different financial solutions, therefore they are unaware of the required information grant. Therefore, they are more concerned with the legal provisions governing the provider's behaviour in the event of a disagreement, such as fair treatment and complaint resolution, than they are with information transparency.

Finally, the research findings reveal a positive and statistically significant correlation between the rate of access to financial services and the tools that allow authorities to monitor and enforce compliance with consumer financial protection regulation (sppower). This may be a requirement for banks to publish information on the number of claims, rates and fees for financial services, and audits and inspections on a quarterly or regular basis. These restrictions promote client assurance, hence contributing to an increase in population access to financial services. Surprisingly, the study showed no correlation between supervisory power and the utilization of financial services. It is evident that financial customers are

less concerned with the regulatory authorities' ability to enforce laws and are instead more concerned with their direct interaction with credit institutions.

The results of the control variables also reveal the distinction between the financial access rate and the financial service utilization rate. Although the degree of financial concentration has a positive effect on encouraging the use of financial services, the effect on the rate of financial access is not statistically significant. Simultaneously, the development of financial markets (expressed as a percentage of GDP) and economic development (expressed as GDP per capita) influence the promotion of financial inclusion worldwide. Alternatively, the inflation rate has no statistically significant impact on the preceding two factors.

**Table 3. Impact of financial protection components on financial inclusion**

	Access					Use				
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
fcp	0.179**					0.111*				
	(0.003)					(0.064)				
sppower		0.007**					0.002			
		(0.003)					(0.003)			
disc			0.005*					0.002		
			(0.003)					(0.002)		
fair				0.008***					0.005*	
				(0.003)					(0.003)	
comp					0.005**					0.003*
					(0.002)					(0.002)
inflation	-0.012	-0.015	-0.016	0.002	-0.012	-0.013	-0.017	-0.017	-0.003	-0.013
	(0.018)	(0.018)	(0.018)	(0.020)	(0.018)	(0.015)	(0.015)	(0.015)	(0.017)	(0.015)
concentration	0.005	0.004	0.005	0.004	0.005	0.007**	0.006*	0.007**	0.007**	0.007**
	(0.004)	(0.004)	(0.004)	(0.004)	(0.004)	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)
private	0.006***	0.005**	0.006***	0.006***	0.006***	0.003*	0.003*	0.003*	0.004**	0.003*
	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)
gdp	0.000***	0.000***	0.000***	0.000***	0.000***	0.000***	0.000***	0.000***	0.000***	0.000***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Constant	-1.086***	-1.401***	-1.416***	-1.642***	-1.468***	-1.281***	-1.355***	-1.372***	-1.655***	-1.518***
	(0.313)	(0.361)	(0.381)	(0.387)	(0.362)	(0.265)	(0.307)	(0.330)	(0.358)	(0.312)
R-squared điều chỉnh	0.580	0.573	0.567	0.585	0.580	0.724	0.716	0.715	0.725	0.724
Số quan sát	87	87	87	87	87	80	80	80	80	80

Soure: Author's Statistics

Note: \*\*\*  $p < 0.05$ , \*\*  $p < 0.01$ , \*  $p < 0.1$



### 4.3. Diagnostic test

To ensure that the estimated results are unbiased and consistent, a number of model defect tests are conducted. First, because the correlation coefficient between the variables shown in the correlation matrix is quite high, a test of multicollinearity was conducted to determine the likelihood of this phenomenon occurring. The results of the test indicate that the VIF coefficients of all model variables are less than 2, so the model does not appear to be multicollinear. The author then conducts a deficiency test on variable variance for all models from (1) to (5). (10). The value of Prob > chi2 is greater than 0.05, there is insufficient evidence to reject H<sub>0</sub>; thus, the model has constant error term. In conclusion, the F test coefficient of models with a P value less than 0.05 indicates that the tested models are appropriate.

## 5. Discussion

This study evaluates the effect of financial consumer protection across the globe. Consequently, four components of consumer protection regulations, namely fair treatment, complaint handling, information disclosure, and supervisory powers, were analyzed to determine the effect of each component on consumers. Access to and utilization of financial services are two aspects of financial inclusion. The results indicate that countries with stricter consumer protection regulations have higher rates of population access to and utilization of financial services. Access to and use of financial services are affected by regulations on fair consumer treatment and complaint resolution, while requirements for information disclosure and regulatory powers are pertinent only affect access to financial resources. The findings of this study demonstrate the significance of enhancing financial consumer protection regulations to financial inclusion.

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# SUSTAINABLE DEVELOPMENT AND SOCIAL INSURANCE: FACTOR AFFECTING INTENTION TO PARTICIPATE IN VOLUNTARY SOCIAL PENSION IN HANOI - VIETNAM

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## **Abstract**

With the Sustainable Development Goals (SDG), social pension is playing an important role of social protection beyond financial sector. The research was carried out with the purpose to identify factors that affecting intention to participate in voluntary social pension in Hanoi, Vietnam. By using an original survey collected from 260 representative samples in Hanoi, the results indicated that Understanding has the greatest impact on the intention to participate in voluntary social pension, followed by Attitude and Moral Responsibility. Therefore, the research will propose some recommendation for the Government to revise regulation in order to boost the retirement insurance industry while also raising awareness and understanding of people among the general public about social security.

**Keywords:** Factors, intention, Hanoi, sustainable development, voluntary social pension

## **1. Introduction**

According to the UN Sustainable Development Goals (SDGs), new socioeconomic scenarios prioritize social sustainability and people's well-being (United Nations, 2022). Retirement pension systems are at the heart of the current societal discussion, and new tools and approaches are needed to solve them. To experience dignity in old age is a fundamental human right. If the elderly are able to participate in society, keep their independence, and alleviate the financial burden on their relatives, they may opt to have their money invested in an Pension Plan. Social Security systems that are well-designed have a broad variety of effects on the general economy. Under the direction of the People's Committee in this plan, the authorities at all levels of the city will focus on thoroughly grasping and strictly implementing Directive No. 09-CT/TU on voluntary social insurance and voluntary social pension.

Many scholars' focus has recently shifted to social insurances (Cuong et al., 2014; Dung & Sinh, 2019; Han, 2016; Kolsrud, 2018; Lin; & Zhu, 2006; Nam, 2019; Parsons et

al., 2003; Phuong & Song, 2014; Qin et al., 2015; Thao, 2017). Moreover, there are various of research focus on analyzing factors affecting intention to join insurance products and pension (Adinoto et al., 2021; Dragos et al., 2020; Lin; & Zhu, 2006; Nomi & Sabbir, 2020; Panigrahi et al., 2020; Rudolph, 2016). In many research all over the world, there were different documents focus on analysing the current pension system in their countries in order to increase the quality and coverage of pension system to laborers. However, in Vietnam, the pension system are improving for higher qualification, especially during the period of pressure during Covid-19 and the criteria of changing in retirement laws in Vietnam that changed the age of labors to get retirements. Therefore, there are many discussion related to pension and insurance in Vietnam (Âu Thị Diệu Linh, 2018; Bùi Huy Nam, 2019; Điều Bá Đước, 2020; Hoàng Bích Hồng; Mai Thị Hương; Tô Thị Hồng, 2017; Hoàng Thu Thủy; Bùi Hoàng Minh Thư, 2018; Mai Thị Hương, 2019; Ngô Minh Thắng, 2020; Nguyễn Thị Nguyệt Dung; Nguyễn Thị Sinh, 2019; Trương Thanh Thùy, 2016). These researchs are focused on intention to join in insurance products as well as improving the quality of pension system in Vietnam. Furthermore, the research of Trương Thanh Thùy (2016) are the first paper that was exploring about factors affecting the intention to buy pension of individual customers in Binh Long town, Binh Phuoc province. From there, the author offered solutions to improve the propaganda level of the insurance company, improve the company's commitment to customers, as well as ensure the company's investments to minimize client's risk aversion.

This study intends to apply some theories of rational action and Sustainable development goals to serve as a basis for measuring the intention to participate in Voluntary Social Pension of individuals in Hanoi.

## **2. Theoretical Framework and Methods**

Theory of Reasoned Action (TRA) was coined by Fishbein and Ajzen in 1975 (Ajzen, I., & Fishbein, 1980), and it states that the most significant aspect in human action is the individual's desire to engage in that conduct. One's attitude toward the conduct and subjective criteria relating to the behavior influence one's purpose for the behavior. The outcome of these two considerations is the desire to carry out the action. This hypothesis, in fact, proved to be highly accurate when it came to forecasting human behavior that was under the control of the individual.

Extending the TRA, Theory of Planned Behavior (TPB) aims to explain out-of-control behaviors. Since 1991, Ajzen has added to this idea by incorporating a new aspect of cognitive behavior control, such as how readily an individual's beliefs are linked to a difficult or easy capacity to conduct the activity (Ajzen, 1991)1985, 1987. A person's ability to manage their conduct is enhanced by the more resources and opportunities they have. Control can originate from within the individual (decision, capacity to accomplish...) or from outside to the individual (advice, resources) (time, opportunity, economic condition ... ).

By applying the theory above, the research model is built with the following hypotheses:

H1: Moral responsibility has a positive influence on the decision to participate in voluntary social pension to express the desire to protect oneself..

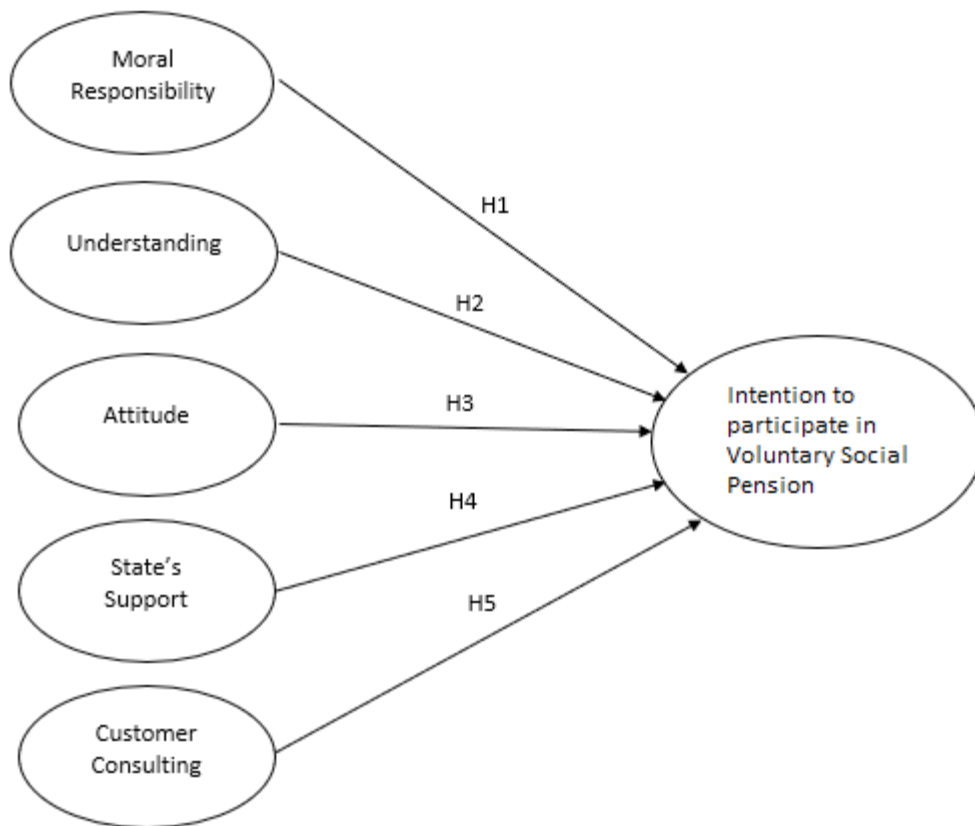
H2: Knowledge of voluntary social pension has a positive impact on participating in voluntary social pension.

H3: Attitude towards voluntary social pension has a positive influence on intentions to participate in voluntary social pension.

H4: State Contribution Support has a positive impact with the participation of voluntary social pension.

H5: Customer Consultant that have a positive influence on interest in participating in voluntary social pension.

**Figure 1. Research model on intention to purchase voluntary social pension**



*Sources: by authors*

The objective respondents in this research are those who are currently working in Hanoi, basic biographical information and factors affecting the likelihood of voluntary social pension participation are both part of the survey. More than 284 people were mailed questionnaires, and 260 of those were completed and counted as valid for data analysis. By using SPSS software, descriptive statistics and Cronbach's Alpha coefficient were utilized in this study to provide an overall assessment of all aspects, CFA and SEM are applied in the hypothesis.

### **3. Results and Discussion**

#### **3.1. General results**

The results showed that 147 male workers and 113 female workers participated in answering the survey questionnaire. The percentage of female is smaller than male but not significantly (43.5% and 56.5%). With the different age groups, age from 30 to 34 years old accounts for the most with 29%, followed by 22-29 years old with 18%, and other age groups with lower percentages. According to the survey, the number of respondents with education are quite high, undergraduate and postgraduate accounts for 81% while studying college and others takes only 19%. Due to the result of Occupation, almost people are working in public sector which counted 54%, private sector 35% and other sector 11%.

As can be seen from the income of survey respondents, the results are totally different. The incomes range from less than 2 million to over 50 million VND, mainly between 4 - 7 million VND.

From the obtained data, it can be seen that the amount of people who have not participated in voluntary social pension counts for 62%, while people still participating is 38%. The number of people participating in voluntary social pension is increasing, but this number is still low compared to workers participating in compulsory social pension. Regarding reasons for not participating in voluntary social pension, 22% of people have not participated due to low income, 16% do not understand the policy, 18% do not know about voluntary social pension, and 44% have no demand to participate in voluntary social pension.

### 3.2. EFA

After testing the reliability of the variables in the model, it can be seen that when removing the questions TNDL2, HB3, HB6, HTD2, TVKH6, TVKH8, the variables including these questions tended to increase their reliability. The remaining observed variables continue to participate in the Exploratory Factor Analysis (EFA) test to ensure that they are structurally independent.

**Table 1. KMO and Bartlett's Test**

<b>KMO and Bartlett's Test</b>		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.759
Bartlett's Test of Sphericity	Approx. Chi-Square	5157.109
	df	300
	Sig.	.006

*Source: SPSS Data*

As can be seen on the table 1 of KMO and Bartlett test results, the Kaiser-Meyer-Olkin index measuring the appropriateness of sampling is 0.759 (satisfying  $0.5 \leq 0.759 \leq 1$ ) and the value of the importance of Bartlett's Test of Sphericity test is .006 (satisfies  $\leq 0.01$  or satisfies confidence level  $> 99\%$ ).

**Table 2. Pattern Matrix**

Pattern Matrix <sup>a</sup>						
	Factor					
	1	2	3	4	5	6
TVKH1	.977					
TVKH4	.784					
TVKH3	.783					
TVKH5	.738					
TVKH2	.726					
TVKH7	.721					
TNDL1		.960				
TNDL5		.860				
TNDL3		.821				
TNDL4		.815				
HB1			.986			
HB5			.872			
HB4			.797			
HB2			.786			
HTD1				.965		
HTD3				.797		
HTD5				.793		
HTD4				.751		
TD1					.965	
TD4					.742	
TD2					.740	
TD3					.702	
YD1						.991
YD2						.812
YD3						.717
Extraction Method: Principal Axis Factoring.						
Rotation Method: Promax with Kaiser Normalization.						

*Source: SPSS Data*

Table 2 represents the results of the pattern matrix of EFA. Factor loadings  $> 0.7$ , as identified by J. Hair et al. (2010), indicate different factor structure .

### 3.2. CFA

$\chi^2(120) = 638.544$ ;  $\chi^2/df = 2.456$ ;  $p = .001$  ( $\leq 0.005$ );  $GFI = 0.854$ ;  $CFI = 0.921$ ;  $TLI = 0.909$ ;  $RMSEA = .075$ .

According to the conditions set by Hair et al. (2014),  $\chi^2 / df \leq 3$ ;  $p \leq 0.05$ ;  $CFI \geq 0.9$  and  $RMSEA \leq 0.08$ . Due to the limitation of sample size, the GFI value is difficult to reach 0.9 because this index depends heavily on the number of scales, the number of observed variables and the sample size. Therefore, if the GFI value is below 0.9 but from 0.8 or

more, it is still accepted. As a result, the model-fit analysis of the study's six scale variables fulfills all of the aforementioned criteria.

**Table 3. Convergent and Discriminant Validity**

Variables	CR	AVE	MSV	MaxR(H)	TNDL	HB	TD	HTD	TVKH	YD
TNDL	0.908	0.626	0.065	1.003	0.791					
HB	0.929	0.768	0.192	0.975	0.154*	<b>0.876</b>				
TD	0.920	0.745	0.103	0.981	0.123†	0.128*	<b>0.863</b>			
HTD	0.792	0.550	0.065	0.944	0.255***	0.141*	-0.005	<b>0.742</b>		
TVKH	0.870	0.631	0.146	0.971	0.184**	0.382***	0.213**	0.199**	<b>0.794</b>	
YD	0.896	0.743	0.192	0.983	0.241***	0.438***	0.321***	0.198**	0.323***	<b>0.862</b>

Source: SPSS Data

Following the CFA procedure, the reliability of the instrument was determined by using Composite Reliability scores (CRs) and Average Variance Extracted scores (AVEs). In general, CRs are required to be more than 0.7, and AVEs should be more than 0.5 (Hair et al., 2010). As Table 3 have shown that all numbers of CRs and AVEs satisfied the requirements. In this research, Maximum Shared Variance scores (MSV) were also calculated to evaluate the discriminant validity of factor loadings. Almost all the factors satisfied the criteria for discriminant validity ( $MSV < AVE$ ) (Hair et al., 2010).

### 3.4. SEM

The model meets the criteria established by Hair et al. (2014), in which ideal model-fit indices must satisfy the following criteria:  $\chi^2 / df \leq 3$ ;  $p \leq 0.05$ ;  $GFI \geq 0.9$ ;  $CFI \geq 0.9$ ,  $TLI \geq 0.9$  and  $RMSEA \leq 0.08$ .

**Table 4. Table of Significance Level**

Hypothesis	Structural Path			Standardized Beta	p. value	Results
H1	YD	<---	TNDL	.139	.038	Accepted
H2	YD	<---	HB	.305	***	Accepted
H3	YD	<---	TD	.249	***	Accepted
H4	YD	<---	HTD	.130	.074	Not accepted
H5	YD	<---	TVKH	.134	.093	Not accepted
*** The level of importance is $\geq 99.99\%$						
** The level of importance is $\geq 99\%$						
* The level of importance is $\geq 90\%$						

Source: SPSS Data

According to the analysis results of the SEM linear structure model, the delegate variables “Moral responsibility”, “Understanding” and “Attitude” satisfy the p.value.  $\leq 0.05$  (value below 90% at the acceptable level given by Hair et al. (2014)).



According to the standardized Beta value:

- Each time Moral Responsibility increased by one unit, participants intend to join voluntary social pension would increase by 0.139 units.

- Every time Understanding increased by one unit, participants intend to join voluntary social pension would increase by 0.305 units.

- Each time Attitude increases by one unit, participants intend to join voluntary social pension increase by 0.249 units.

Moreover, it can be seen that Understanding has the greatest impact on the intention to participate in voluntary social pension, followed by Attitude and Moral Responsibility.

Hanoi is known as the capital of Vietnam, with the purpose by 2045 to become a globally connected city with a high standard of living, educational and quality of life, with a GRDP per capita of over USD 36,000; economic, cultural and social development is comprehensive and unique; typical for the whole country; has a development level on par with capitals of developed countries in the region and the world (Quang Phong, 2022). Moreover, Directive No. 09-CT/TU on 2021 in Hanoi was approved by People's Committee on voluntary social insurance and voluntary social pension that raise the awareness of people on this major and increase the Understanding of people and Attitude more responsive than annual. Besides, on behalf of Vietnamese behaviors, moral responsibility is the tradition of Vietnamese people to look after and take care for elders and younger in families when they are alive. In general, these factors express all the behaviors to meet the requirement of Vietnamese people, especially traditional behaviors in Hanoi.

#### **4. Conclusions**

According to survey results from the questionnaire as well as data collected from the voluntary social pension in Ha Noi City, the number of employees participating in voluntary social insurance is still increasing year by year, but the rate remains very low in comparison to those participating in compulsory social pension. The results of using the data analysis with SEM revealed that factors influencing the employee's intention to participate in voluntary social pension include Moral Responsibility, Understanding and Attitude. Since then, various suggestions have been made to enhance the variables influencing workers' involvement in voluntary social pension.

It is critical for people to have a better understanding and attitude in voluntary social pension. The Government should raise more awareness of people in order to encourage them to participate in pension system. Furthermore, the children need to be taught about financial literacy so that they can understand the main roles of pension in saving their retirement life in the future when the age of retirement are getting higher and higher. Planned changes to voluntary social pension policies, including a multi-tiered social pension model and submissions to Congress for amendments and supplements to legal documents such as the Labor Law (social insurance law, employment law, etc.), will be issued by the Government and implemented. Increasing the quality of life and moving forward to reach SGDs, Vietnam is targeting to end poverty, protect the earth's environment and climate, and ensure that people everywhere can enjoy peace and prosperity soon. Efforts have been made since 2008 to develop a voluntary social pension program to help freelance workers,

those with unpredictable income, and the elderly get a monthly stipend and medical care, respectively. In Vietnam's social security system, voluntary social pension is a key component. In order to promote their role in helping to stabilize social security for the general public and expand the country's economy, it is vital that voluntary social pension programs be made more effective and covered by more employers and employees alike.

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# DEVELOPING GREEN BANKING TO PROMOTE CIRCULAR ECONOMY IN VIETNAM: CHALLENGES

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## **Abstract**

Circular economy (CE) is considered to be the economic model that addresses the challenges among economic development, environmental pollution and climate change towards the goal of sustainable development. In Vietnam, the development of the CE model has been identified as one of the development directions for the period 2021-2030 in the draft document submitted to the 18<sup>th</sup> National Congress of the Communist Party. Besides the advantages, the promotion of circular economy also faces many challenges, especially the serious shortage of financial resources to support enterprises in the transition and application of advanced technologies. Green banking was born with green credit packages for businesses pioneering technological transformation or investing in the green sector that have contributed to solving this challenge. But for this impulse to come into being, there is still a need for synchronized solutions from the stakeholders. The framework of the article addresses a number of issues: (i) The inevitable trend of developing circular economy; (ii) The challenge posed in green banking development to promote circular economy; (iii) Green banking development solutions to promote circular economy in Vietnam.

**Keywords:** Circular economy, green banking, green credit, green growth, challenges, impulse

## **1. The inevitable trend of circular economy development**

Circular economy (CE) development is becoming one of the inevitable trends to address the challenges between economic growth and the ecological environment in all countries in the world, including Vietnam. Promoting the development of CE results from the benefits of this economic model, including: (i) CE contributes to the use of used raw materials, minimizing processing costs. In particular, for enterprises, the CE contributes to reducing the risk of product overcapacity and scarcity; creating incentives to invest, innovate technology, reduce production costs, increase supply chain; (ii) the CE creates sustainable development when the demand for raw materials is increasing, while this source of raw materials is increasingly depleted, especially for mineral resources and non-renewable resources; (iii) the CE helps countries reduce the dependence on raw material supply, leading to political constraints, causes of global political tensions; (iv) Reducing the impact on the ecological environment, climate change due to the exploitation of resources, carbon emissions and industrial waste from production and business processes.

Recently, initiatives to promote the development of CE have increasingly received the attention of policy makers around the world. Typically in 2018, the World Economic Forum, the World Resources Institute, the Ellen MacArthur Foundation, the United Nations Environment Programme and more than 40 partners initiated a programme to promote CE with the following specific solutions: (i) strengthening the mixed financial models to promote CE projects in developing countries and countries in transition; (ii) creating policy frameworks to remove barriers to promoting CE and (iii) promoting public-private partnerships for circular economy.

In Vietnam, the economy grew mainly based on the export of raw materials. That has caused the economy to face serious challenges from climate change; environmental pollution; increased carbon emissions... According to the World Bank Report (2020), Vietnam's national carbon-to-GDP density increased 48% in 2000-2010, the second highest in East Asia. From 2010 to 2020, CO<sub>2</sub> emissions nearly quadrupled, largely from coal-fired heat, industrial emissions activities and transport[6]. In particular, Vietnam is also among the most vulnerable countries to climate change. It is projected that climate change and natural disasters could cause damage up to 11% of Vietnam's GDP by 2030[7]. The environment is seriously threatened, global climate change has been causing negative impacts on human life and creating pressure for sustainable economic development. In that context, sustainable growth and socio-economic development models have become the inevitable development trends that Vietnam needs to pursue to address the challenges posed between economic growth and socio-environmental problems. That has been concretized in the content of building the CE mentioned at the XIII Congress of the Party, considering the CE as one of the directions of sustainable development of the country in the period 2021-2030. Accordingly, the CE is not merely the reuse of waste but more deeply it is the connection of economic activities forming a long-used material flow, continuously regenerating at different stages in the supply chain. The CE's ultimate goal is to reduce minimal emissions into the environment.

The implementation of CE in Vietnam in the past time has faced many difficulties, specifically as follows:

*Firstly*, there is a lack of policy mechanisms to promote CE, especially policies and tools to encourage and support pioneering enterprises to transform production technology, recycle and use "waste" from other sectors or in their own production processes.

*Secondly*, resources for the transition to the development of CE are weak. Especially financial resources to support enterprises transforming production technology or willing to invest in the green field. Because CE is associated with technological innovation, while most of the production technology of Vietnamese enterprises is now backward, the scale of production is small.

*Thirdly*, the right awareness of the nature, role and benefits of CE for enterprises, people and all levels of management and leadership to create a common consensus is a great challenge.

## **2. Green bank to promote circular economy development - challenges posed**

One of the challenges posed to promote the development of biotechnology is the financial resources to support the recycling of materials for the closed cycle of the reproduction process in order to minimize emissions into the environment. The essence of the CE is the “waste” of this production-consumption process, which is considered as the raw material of other production-consumption processes, regardless of whether it is the primary, secondary or resource recovered. Being able to use the raw materials of the previous production process, it requires enterprises in the economic cycle to apply advanced and modern production technology. This technology not only promotes the recycling of raw materials but also contributes to reducing the emission of polluting environment. CE can be applied in all fields and industries but currently in Vietnam there are 5 potential industry groups that can apply the CE model, including: (1) For the group of agriculture and forestry aiming to build clean green agriculture, use waste rotation for recycling and waste conversion to obtain high overall benefits; (2) For the group of urban waste aiming to apply modern waste treatment technology instead of landfilling as currently and recycling waste for other industries; (3) For the group of energy prioritizing the development of renewable energy sources, clean energy such as solar energy, wind power... (4) For the eco-industry to apply improvement of production stages, saving resources, energy and recovery of recycled waste for other sectors to bring economic efficiency, reduce environmental pollution emissions; (5) For the tourism group, services to encourage the development of green tourism and waste recycling of this sector as raw materials for other industries. In general, the application of the CE model in potential areas is encouraged in two directions: application of advanced technology and investment in green areas to ultimately reduce environmental polluting emissions.

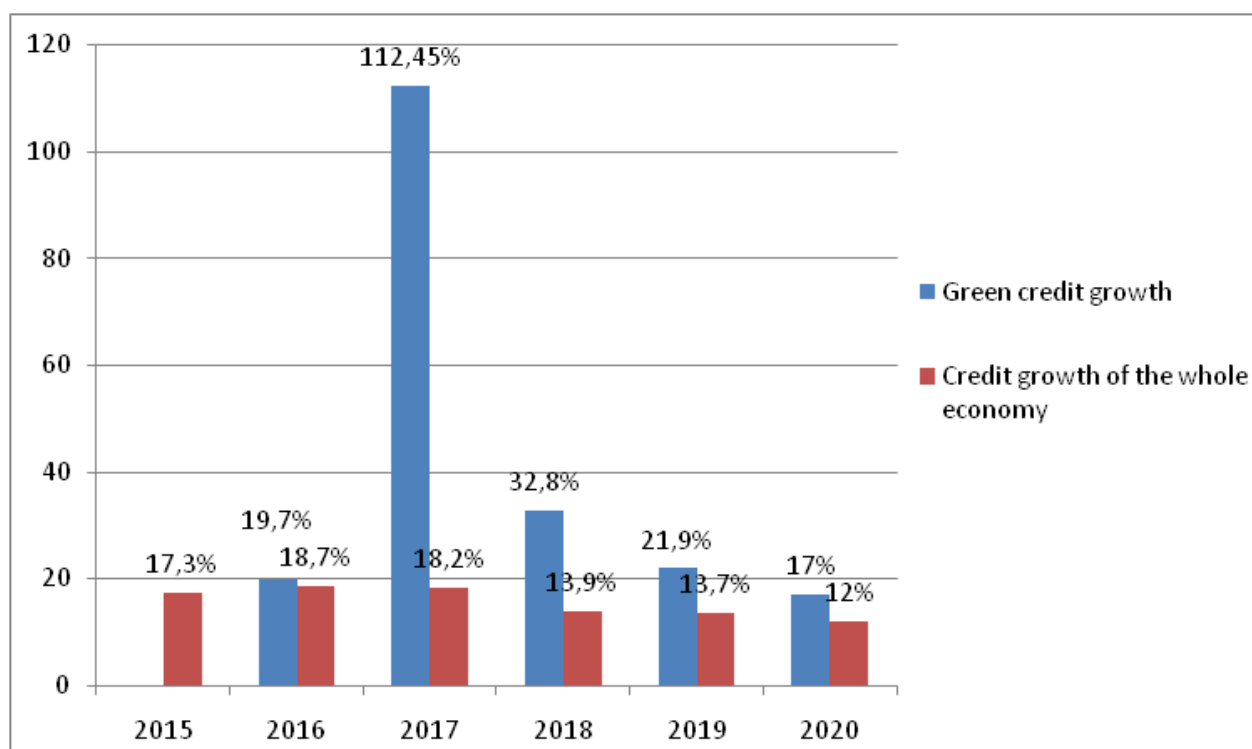
The investment in the application of these technologies needs big financial resources, especially the capital of enterprises must be “large”. Financial support for enterprises in the CE cycle can come from public and private sector sources. Specifically, public sector capital is made up of: (i) State financial resources, regulated in the State Budget, which are expenditures on environmental protection under the mandate of the central budget and local budget; (ii) financial resources supported by the State through preferential tax and land policies; (iii) foreign investment capital and international credits to finance environmental protection activities, support environmentally friendly production projects. Private sector capital is made up of: (i) capital from enterprises serving environmentally friendly production and business projects; (ii) capital from trade finance institutions.

In the past time, with its efforts, the Government has tried to direct the flow of investment capital from both the public and private sectors into green areas or encourage enterprises to apply clean green technology to support CE through funds such as the Vietnam Environmental Protection Fund, the Green Credit Trust fund... or foreign investment flows, but the availability of capital is seriously short compared to investment needs. Accordingly, in the Government’s assessments, the investment opportunities identified in the period 2020-2030 need to be financed at least \$18 billion from foreign capital in addition to domestic resources, which will increase to 6 to 12 times the State’s ability to finance capital if adding \$30 to 40 billion to achieve the green growth goal, promoting the Government’s CE [8].

According to the experience of many countries in the world, the flow of capital from green banks is very important and even decisive to the implementation of investment projects to support CE as well as lead private sector capital flows into this sector. In Vietnam, the overall flow of investment support capital in the economy depends largely on commercial banks. Especially in the field of green investment, technology transformation - one of the areas that requires relatively large capital, long investment time and high risk, the green credit capital of professional capital providers such as green banks can be met. Therefore, green bank development with a focus on green credit development needs to be informed.

In the past time, in Vietnam, green banks have provided relatively diverse and rich capital sources to support the development of CE in areas such as clean green agriculture; renewable energy; clean energy... Green credit outstanding increased continuously over the years in the period 2015-2020 with growth rate up to 378.9% (average increase 63.1% per year) (Chart 1). Specifically, the outstanding green credit balance has increased from more than 71 trillion VND by the end of 2015, to 340 trillion VND by the end of 2020 [4].

**Chart 1: Growth rate of green credit outstanding in 2015-2020**

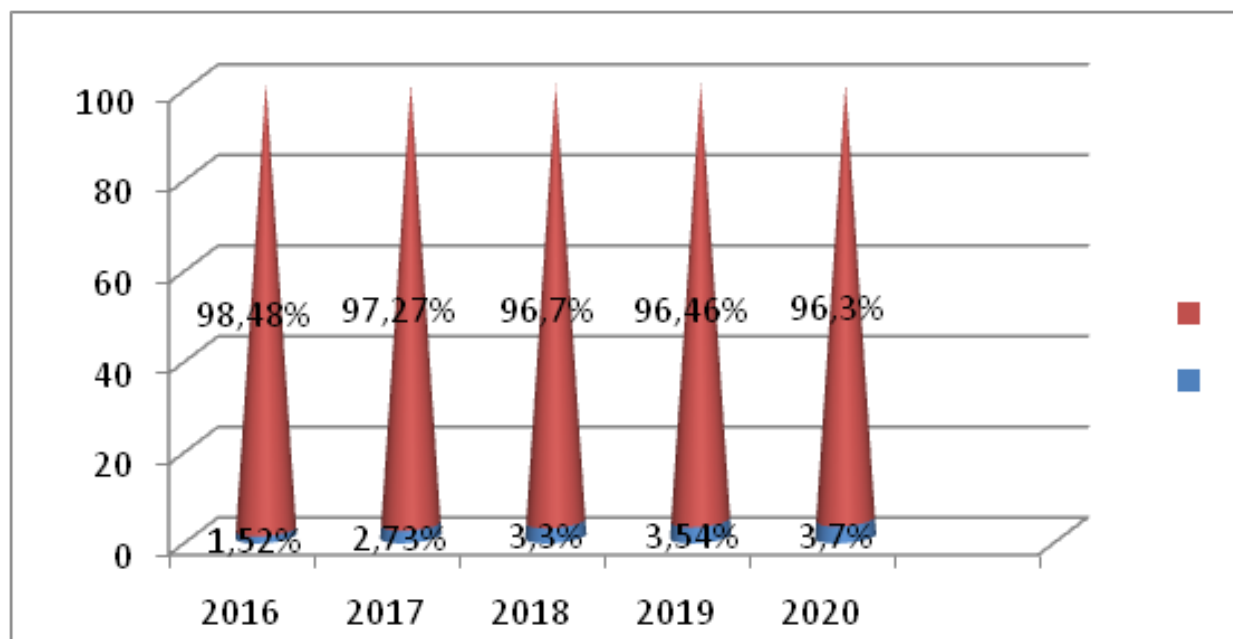


*Source: Department of Credit of Economic Sectors - State Bank*

Although green credit has grown strongly over the years, the green credit balance of the commercial bank system in the period 2016-2020 is quite modest, accounting for only about 3% of the overall credit balance of the whole economy (Chart 2). The banks' green credit balance focuses mainly on areas such as green agriculture accounting for nearly 39%, renewable energy, clean energy accounting for more than 37% [4].



**Chart 2. Outstanding green credit in Vietnam**



*Source: Department of Credit of Economic Sectors - State Bank*

Some support packages for credit packages to support enterprises to transform clean and environmentally friendly green production technology come from large commercial banks such as BIDV, Sacombank, Vietcombank, Agribank...Typically BIDV Bank has been implementing capital financing for green energy and renewable energy credit projects with social environmental efficiency, contributing to sustainable country development. The total amount of foreign trust funding for green energy credit that BIDV has mobilized is 147.76 million USD, and the outstanding balance at the end of Q1 2021 is 106.3 million USD (Tram Anh, 2021). In 2020, Sacombank also dedicates VND 15,000 billion in preferential interest rate loans from 5%/year for enterprises with production and business needs in the field of “green” or have operating processes that do not affect or have the ability to protect resources and the environment.

Although banks in Vietnam have made commitments to support green investment in their investment strategies to achieve the goal of green growth, promoting the CE but this contribution is still modest compared to the need to finance technology transformation enterprises to promote the CE. Explaining this may include some challenges such as the following:

*Firstly*, For Vietnam, in the past time, the economy has grown mainly based on the exploitation and the export of raw resources. Expenditures for investment in upgrading and improving environmentally friendly technologies and projects are still low. Besides, the fields related to green growth such as renewable energy, hi-tech agriculture, ... are relatively new areas of Vietnam so the experience of commercial banks as well as investors is very limited.

*Secondly*, from green investment projects themselves, technological transformation is always low risk, so investors as well as capital donors, especially commercial banks are not very interested. In a study by Vivid Economics (2019), it was shown that in emerging

markets such as Vietnam, green investment projects always face industry-specific barriers (Table 1).

**Table 1. Investment barriers for each green sector**

<b>Investment</b>	<b>Degree of agreement on feasibility (%)</b>	<b>Description</b>
Forestry	15	Unfeasible return on investment; difficulty lending to counterparties; high land rights and coordination risks
Sustainable use of agricultural land	15	
Urban Wastewater	20	Potential return on investment; high actual risk; difficult to assess counterparty risk
Urban waste management	15	
Bio-energy	15	
Fuel-efficient vehicles	20	
Low emission fuel conversion traffic	20	
Electric and hybrid vehicles	20	Commercially viable under established technology or business model conditions; high risk
Public Transport	20	
Commercial waste management	40	
Energy-saving buildings	30	
Energy saving industry	30	Commercially feasible when technology is available and reasonably priced; new field, heterogeneous regulation
Solar	40	
Electric energy	20	

*Source: Report “Supporting green investment in Vietnam: The role of green financial institutions” (2019)*

Thus most financial institutions believe that the feasibility of the project is not high except for some areas such as commercial waste management or solar power (40% of those surveyed agree on the feasibility of the project). This comes from the fact that these projects need large capital, long investment time and face different challenges of the industry. For example, for the solar and wind energy sectors, this field is new in the application of technology, while the technology currently applied in Vietnam does not meet the requirements. Therefore, Vietnam’s experience in implementing this sector is relatively difficult. The feasibility and possible implementation of the project has inevitably created barriers for investors as well as capital donors.

*Thirdly*, the ability to access long-term funding

- For project investors, they lack information on priority green investment areas as well as those who are supported with green credit loans. This creates an ambiguous perception for the business in its understanding of green credit, bank borrowing procedures and loan support incentives. In addition, for enterprises themselves, the cost of investment, building systems to reduce environmental pollution or investing in green technologies and clean production is often quite large while the potential of enterprises is quite modest, so they will not meet the conditions for borrowing project financing.

- For the financial institution itself providing capital (especially banks). Normally green investment projects need to be financed from long-term capital while the current regulations on the management of term differences on banks' balance sheets or the regulations introduced to limit the risk in the portfolio have made it impossible for banks to provide long-term loans to finance green projects.

- For the financial market, although Vietnam's financial market has developed significantly in the past time, meeting the demand for green investment capital is still a challenge. In fact, the Government of Vietnam has piloted the issuance of green bonds since the end of 2015 on the basis of the cooperation of the The German Agency for International Cooperation (GIZ) and the Hanoi Stock Exchange (HNX). Accordingly, green bonds were piloted in Ho Chi Minh City with an issue value of VND 523.5 billion, term of 15 years and Ba Ria - Vung Tau (VND 80 billion, term of 5 years). This funding is used for sustainable water management, climate change adaptation, sustainable infrastructure and green projects. However, Vietnam's green bond market still stops on a pilot scale and none of green bond market really exists. This means that the potential to develop this long-term capital instruments to raise capital flows for green investment is still open.

*Fourthly*, the awareness and interest of banks in appraising the impact of projects on the social environment is very limited. The perception of commercial bank managers about the benefits of green bank development is that this is a trend in line with the Government's green growth and sustainable development strategy (Tran Thi Thanh Tu, 2017). Few commercial bank managers recognize the core value of green banking development as bringing profit, reputation value for banks and sustainable development of the economy. On the other hand, the concern of commercial banks is to increase profits and solve internal challenges posed in business activities such as bad debt handling, liquidity safety, growth, which has caused the level of participation and development of green banking products, especially green credit has not been paid attention.

*Fifthly*, the ability of bank staff, especially credit officers, does not meet the requirements of green credit appraisal. The credit officers themselves not only have in-depth expertise in the field of banking and credit in general but also in the field of green investment with specific characteristics that require credit officers to be qualified to appraise and evaluate the impact of the project on the social environment. In fact, some staffs sometimes rely only on the appraisal experience of previously done projects to appraise other projects, which will make an unfounded credit decision and expose the credit to many risks, with serious consequences for the ecological environment if implemented.

*Sixthly*, in terms of mechanisms and policies for green finance development, green banking still lacks clear regulations. The legal framework and process of green credit appraisal of the State Bank are not yet available. As a result, banks find it very difficult to grant credit for green projects. At the same time, there is no coordination among ministries and branches to develop a system of classification and evaluation of industries causing environmental pollution and develop criteria for selecting industries and fields of production and business to meet green economy standards. Accordingly, banks have a basis for evaluation when granting credit for these projects.

*Seventhly*, regarding financial resources for green credit development, it is still too dependent on state and international financial sources, not yet mobilizing financial resources of enterprises and private through the issuance of green bonds. In fact, the capital source to finance the green credit activities of banks is mainly based on international credits for environmental protection projects and environmentally friendly production projects.

*Eighthly*, for businesses. They are not really interested in the bank's green credit support packages because the cost of enterprises to invest, build systems to reduce environmental pollution or invest in green technology and clean production is often quite large while the potential of enterprises is modest. In addition, most enterprises are small and micro enterprises (accounting for more than 95%) with thin capital, making it relatively difficult to invest in technological innovation. Therefore, the majority of enterprises still choose to buy energy-intensive backward technological machinery, which has a major impact on the ecological environment.

### **3. Solutions to develop green banks to promote circular economy development in vietnam**

Promoting CE from the development of green banking needs many synchronous solutions from state management agencies, banks themselves as well as enterprises in the economy such as the following:

#### ***3.1. Recommendations for state management agencies***

*Firstly*, fully form the legal provisions related to green banking. In addition to perfecting policies and laws such as environmental protection law, water resources law, land law... to support green banking activities, it is necessary to complete specialized laws directly related to green banking activities such as the Law on State Bank, Law on Credit Institutions because in reality these laws do not mention green banking activities.

*Secondly*, to promulgate mechanisms and policies for green credit activities of the bank. The State Bank should coordinate with relevant ministries and sectors such as the Ministry of Finance, the Ministry of Industry and Trade, the Ministry of Natural Resources and Environment to develop mechanisms to promote green finance such as tax incentives, interest rates, stabilization of output prices for green projects for enterprises, thereby supporting commercial banks to appraise the efficiency and repayment capacity of customers. At the same time, the State Bank needs to issue guidelines and tools to assess environmental and social risks for banks to apply when appraising credit. A list of industries should be developed to limit investment and credit.

*Thirdly*, enact policies to support access to green credit for businesses.

- There should be certain preferential policies, support for interest rates, loan procedures, collateral of the State as well as banks to encourage enterprises to invest in environmentally friendly projects, technology transformation.

- Strengthen the propagation of information about green growth, green credit, bad debts for enterprises to improve their awareness as well as the connection between banks and enterprises to find green investment needs. In addition, in order to encourage green

investment enterprises, the State needs to take measures, both administrative measures and economic instruments, to raise consumer awareness and use green goods of consumers.

- Improve mechanisms, reform administrative procedures and create a transparent investment environment to promote investment of domestic enterprises as well as call for foreign investment capital sources in the green sector.

### ***3.2. For Commercial Banks***

*One is*, Develop a strategic framework and roadmap for green banking development. With business orientation, market segmentation and the determination of their capacity advantages, commercial banks should set out the strategy and roadmap for green banking development according to the criteria: green focus; capital attraction; technical capacity; organizational structure.

*Secondly*, raising the awareness of the management of the bank and employees on issues related to green banking and green credit and improving the capacity of credit officers to appraise and evaluate green credit projects. In the immediate future, commercial banks should aim to establish a specialized department for the implementation of social protection risk management in green credit projects and monitoring the implementation of green banks. This department will bring together qualified and experienced credit officers in evaluating projects related to the previous environment.

*Thirdly*, commercial banks need to build a list of priority industries to support and encourage green credit on the basis of the lists issued by state management agencies. At the same time, commercial banks need to build a system of social protection risk management processes including appraisal, decision making, monitoring, credit processing... It also should increase mobilization of funds from both the private and public sectors to support green credit.

*Fourthly*, Enhancing the risk management capacity of commercial banks. Investing in green projects always faces a high level of risk due to the specialization and complexity of these projects. Therefore, the strengthening of risk management capacity, especially credit risk, must be given due to the attention.

### ***3.3. For enterprises***

*Firstly*, Enterprises need to build a green investment strategy in their long-term development plan because in the process of increasingly fierce competition between domestic and foreign enterprises has made environmentally friendly products more and more popular. From there, it helps enterprises improve their competitive position and increase profits in the long-term range.

*Secondly*, raising the awareness of enterprises about the factors of social protection in business investment activities, the value of pursuing sustainable development, especially the immediate benefits from the green credit capital of commercial banks. Thereby removing barriers in access to green credit between banks and businesses, increasing the role of green banks in transformation and promoting the development of biotechnology.

## Conclusion

Promoting CE is a general trend of the world and Vietnam is not out of that trend. This is the best way to address the relationship between economic growth and the negative effects on resource depletion, pollution and environmental degradation. In order to achieve this orientation, it requires the efforts of all sectors of society, especially the role of providing capital from green banks.

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# FACTORS AFFECTING THE ENVIRONMENTAL ACCOUNTING INFORMATION DISCLOSURE OF LISTED FOOD MANUFACTURING ENTERPRISES ON THE VIETNAMESE STOCK MARKET

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## **Abstract**

The purpose of this study is to evaluate the factors affecting the disclosure of environmental accounting information of the food manufacturing companies listed on the Vietnamese stock market. The factors are evaluated on the basis of data collected from 100 listed food manufacturing companies in Vietnam during the period from 2019 to 2021. Based on the secondary data collected from financial statements, annual reports and sustainability reports of the chosen firms, quantitative research methods are used to measure the influence of factors on the disclosure of environmental accounting information of food manufacturing companies on the Vietnamese stock market. The regression results show that there are 3 factors including the size of firms, time of listing and the reputation of audit companies that have a positive influence on the disclosure of environmental accounting information of listed food manufacturing companies, in which the reputation of the audit firms has the strongest impacts. Based on the research results, several recommendations have been proposed for listed food manufacturing companies and for State management agencies to improve the level of environmental accounting information disclosure of listed companies on the Vietnamese stock market.

**Keywords:** Impacting factors, disclosure, environment accounting, food manufacturing industry, listed companies

# COMPLETING INCOME TAX POLICY TO INCREASE TAX COMPLIANCE BEHAVIORS OF TAX PAYERS IN THE CONTEXT OF INTERNATIONAL ECONOMY INTEGRATION

*Ngoc Minh Nguyen*

*VisioEdu*

## **Abstract**

International economic integration has impacted Vietnam's income tax (PIT) policy in many ways, including: (i) adjustment of corporate income tax (CIT) and personal income tax (PIT); (ii) impact on tax cooperation between Vietnam and other countries in the world; (iii) impact on competition on income tax; (iv) impact on corporate income tax administration. These impacts have created a significant challenge for the income tax policy to be perfected to adapt and especially the management of tax compliance behavior of taxpayers (NTT). The framework of the article studies the factors affecting taxpayers' income tax compliance behavior, thereby completing the income tax policy in the context of international economic integration to adapt on the one hand to the commitments in the process. integration, on the one hand stimulates foreign investment attraction and increases taxpayers' compliance with tax obligations.

**Keywords:** Policy; income tax, integration, behavior, compliance

## **1. Introduction**

Vietnam's income tax policy, after the reforms, has made important strides, relatively suitable to the country's economic development conditions and level, and is gradually becoming more consistent with international practices. economic. However, in order to resolve conflicts in the process of international economic integration, the current income tax policy still has many limitations, such as: (1) not covering all business subjects and fields in this Article. new case; regulations on determining deductible revenue and expenses are unclear and difficult to determine; tax incentives are scattered and ineffective; (2) legal gaps in association and transfer pricing activities have not been clearly regulated; (3) Vietnam's PIT regulation is still quite high and the gap between tax calculation tiers is too wide. The limitations in Vietnam's current PIT policy have caused difficulties in managing taxpayers' tax compliance behavior, creating favorable loopholes for frauds and non-compliance with tax obligations. increase. Thus, studying taxpayers' tax compliance behavior to proactively improve the income tax policy towards harmoniously resolving inevitable conflicts in the context of globalization and international economic integration is highly meaningful in reality.



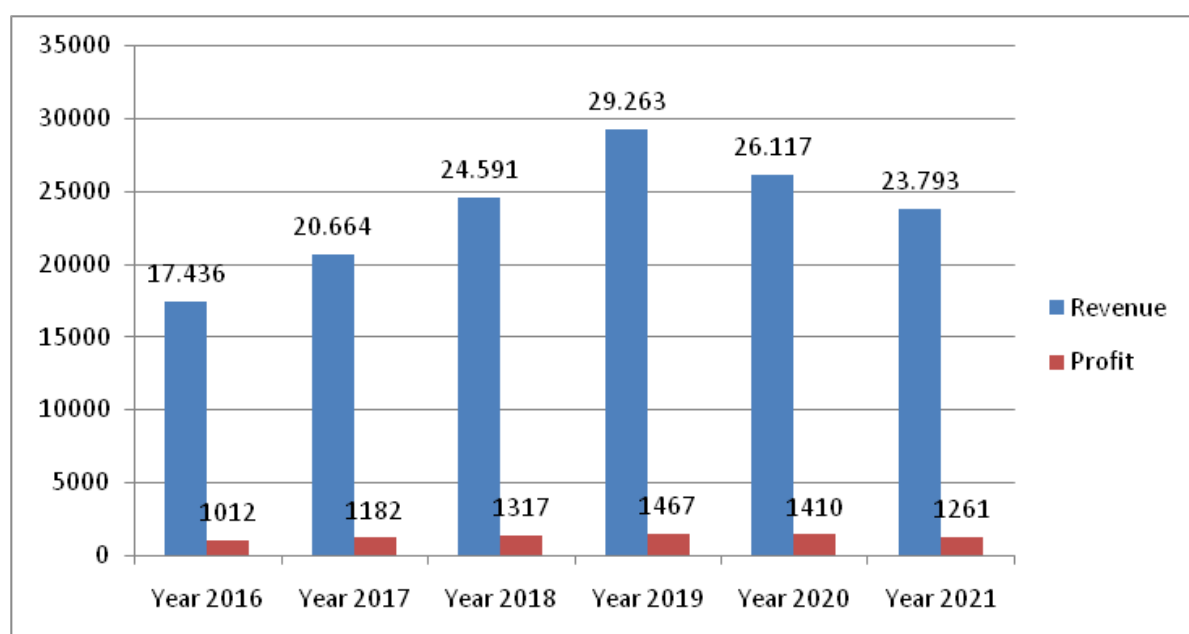
## 2. Actual situation of income tax collection in Vietnam

The income tax policy has gone through many different stages of development of the economy, and after each of these stages, there are adjustments, amendments and supplements to such contents as taxpayers; income taxes; tax rate (tax schedule) and tax exemption and reduction to better suit the requirements of the integration process. In the past time, the contribution to the state budget of CIT and PIT has been relatively low. As follows:

### 2.1. Collecting corporate income tax

According to statistics of the General Statistics Office, the total revenue of enterprises in the country in 2021 will increase by nearly 1.4 times the total revenue of 2016, the total profit before tax of enterprises in 2021 will increase by more than 1 times. 2 times higher than the profits of enterprises in 2016. Specifically: In 2016, the total revenue of enterprises reached 17,436 trillion VND, by 2020 it will reach 26,117 trillion VND, and in 2021 it is estimated to reach 23,793 trillion VND, equal to 49.8% of revenue in 2016. Total profit before CIT in 2016 was just over 1,012 trillion VND, by 2020 it will reach 1,410 trillion VND, in 2021, total profit before CIT is estimated at 1,261 thousand billion VND, equal to 24.6% compared to 2016 (Figure 1). In 2020 and 2021, due to the impact of the Covid-19 Pandemic, the business performance of enterprises decreased, profits and revenue both decreased compared to 2019. However, the growth rate of total profit before tax is many times higher than the growth rate of revenue, which proves that the business efficiency of enterprises in Vietnam is increasing.

Figure 1. Business results of enterprises



Unit: trillion

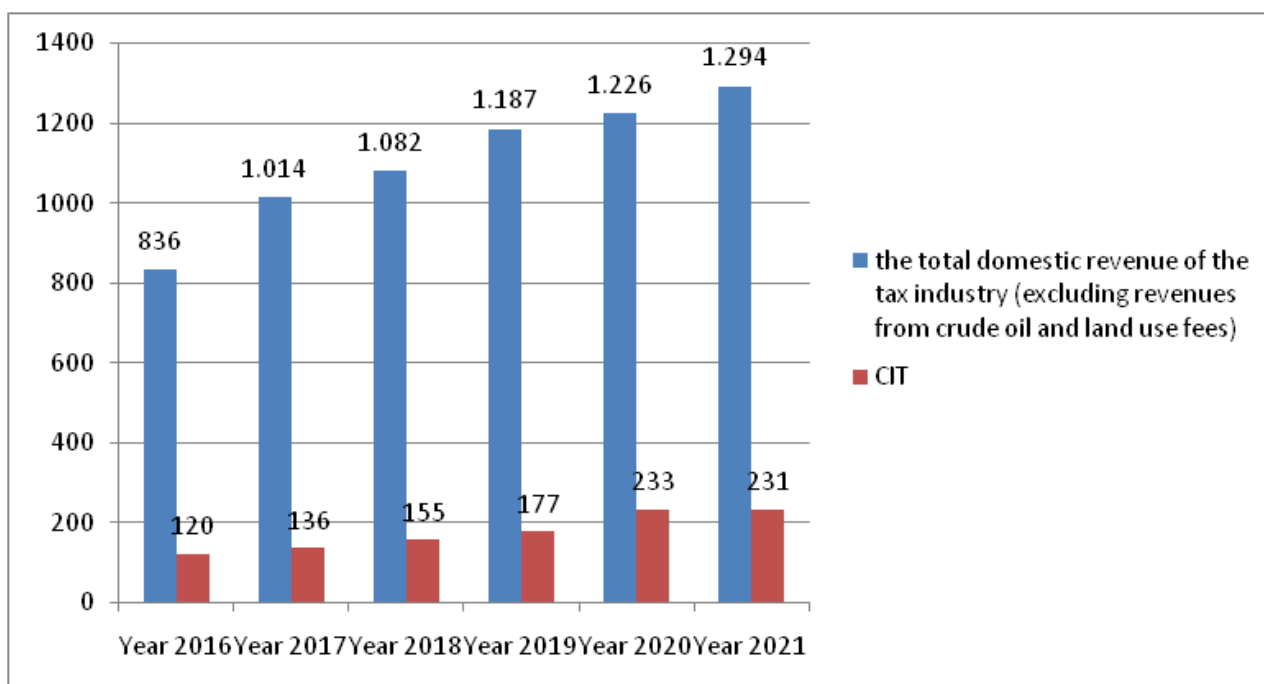
Source: Statistical Yearbook; General Department of Taxation and the author's calculations

The increase in profits of enterprises is a condition to increase revenue for the state budget. Of the total budget revenue, CIT is always stable from 15% to 19% of the total

domestic revenue of the tax industry (excluding revenues from crude oil and land use fees). In 2016, the total domestic revenue of the tax industry excluding revenues from crude oil and land use fees reached VND 836 trillion, by 2021 the total domestic revenue of the tax industry reached over VND 1,294 trillion, equaling 54 billion VND. 8% compared to 2016 (Figure 2).

Income from corporate income tax also grew at the same rate as the increase in total budget revenue. In 2016, CIT revenue reached VND 120 trillion, accounting for 14.4% of the total budget revenue. By 2021, CIT revenue will reach VND 231 trillion, accounting for over 17.9% of the total budget revenue. CIT revenue always accounts for the most stable proportion of all taxes and is always associated with the growth and development of businesses, therefore, CIT always plays the most important role in the total budget revenue of the tax authorities.

**Figure 2. CIT in total state budget revenue**



*Unit: trillion*

*Source: General Department of Taxation (2021)*

## **2.2. Personal income tax (PIT)**

Over the past decade, personal income tax has accounted for a large proportion of the state budget revenue structure and has continuously experienced impressive growth year on year. Statistics show that, in 2006, the state budget collected nearly 5,180 billion VND from personal income tax, after 12 years in 2018 the revenue from personal income tax has increased more than 18 times to over 94,366 billion and by 2021 at 116,096 billion VND. In terms of structure, PIT's share of total budget revenue has also increased by nearly 3.6 times over the past decade. From 1.85% in 2006 to 6.62% in 2021 (calculated by estimates). In the PIT payment structure, the proportion from wages and salaries still

accounts for a very large amount, more than 70% - this is one of the signs indicating the possibility of loss of income tax revenue.

Thus, tax evasion and tax avoidance are the two most important causes of revenue loss. Taxpayers are considered tax evaders when they use illegal means to reduce their tax liability. In the case of tax avoidance, taxpayers abuse loopholes in the current regime to reduce tax liability. These behavioral manifestations of taxpayers are influenced by many interrelated factors, including both subjective and objective reasons stemming from tax policies, tax authorities and themselves. taxpayers.

### **3. Income tax compliance behavior of Vietnamese taxpayers**

#### ***3.1. Factors affecting tax compliance behavior***

The income tax policy needs to ensure the goal of increasing the reasonable level of encouragement of individuals and businesses into the state budget, and at the same time promoting internal resources to promote production, increase competitiveness, and accumulate enterprises. individuals to ensure sustainable economic growth and improve people's living standards. To achieve that, the management of tax compliance behavior plays a very important role.

Managing tax compliance behavior is based on taxpayers' sense of compliance (observance) of the law. Basically, the principle of tax compliance management is shown in two aspects: (i) If taxpayers are willing to comply, the tax authority will create maximum favorable conditions for taxpayers to comply through support mechanisms. and various incentives; (ii) If taxpayers do not want to comply, tax authorities will apply different mechanisms and sanctions to force taxpayers to comply. The application of mechanisms and sanctions depends on different levels of compliance of taxpayers. Understanding the factors that affect taxpayers' compliance to pay income tax will help governments issue effective and effective tax policies. Tax compliance behavior is affected by many factors, including:

(i) *Intention to comply with PIT* (Compliance Intentions - CI). Income tax compliance is the correct and complete implementation of the provisions of the tax law (Alm & Yunas, 2009), namely the observance of the criteria of time, accuracy, honesty and completeness. activities of tax registration, tax declaration, tax payment and other income tax obligations of taxpayers.

(ii) *Perception of Corruption*(Grand Corruption - GC). Corruption is the abuse of entrusted power for private gain and it leads to serious political, economic and social costs. Corruption is always associated with power and personal gain. To measure the level of corruption in each country, Transparency International (TI) uses the Corruption Perceptions Index (CPI).

(iii) *Perception of petty corruption* (PC). Based on the scale and extent of damage caused by corruption, Transparency International divides corruption into two categories: major corruption and petty corruption. Massive corruption occurs mainly in relation to

large projects and is common in public and private construction projects, hospitals; in arms sales contracts... Petty corruption, also known as administrative corruption or bureaucratic corruption, is a type of corruption that occurs on a daily basis, when civil servants are in direct contact with the public. Petty corruption occurs when taxpayers seek to evade their obligations and taxes and when tax officials abuse regulations for their own gain.

(iv) *Personal Norms* (PN) are the moral standards of individuals and their behavioral expectations (Cialdini & Trost, 1998; Wenzel, 2004). Personal norms can develop through the accumulation of social norms (of a group of people or of society at large) that individuals can perceive (Wenzel, 2004). Some important social norms become the moral standards of the individual. Personal standards reflect their own personal beliefs, which will affect their tax compliance behavior.

(v) *Descriptive Norms* (DN) is a form of social norm. Descriptive norms are understood as perceptions of how members of a group or of society actually behave (Arosen et al., 2010). These norms influence the behavior of individuals in groups or in society. Descriptive norms are based on the actual behavior of group members (or society) and sometimes contradict behavior that is widely accepted by the group (or society) (Arosen et al., 2010; Cialdini & Trost, 1998). Descriptive norms can encourage tax compliance or tax evasion by motivating individuals to justify their behaviour. Descriptive norms can inform people about how tax compliance and evasion is (Cialdini & Trost, 1998).

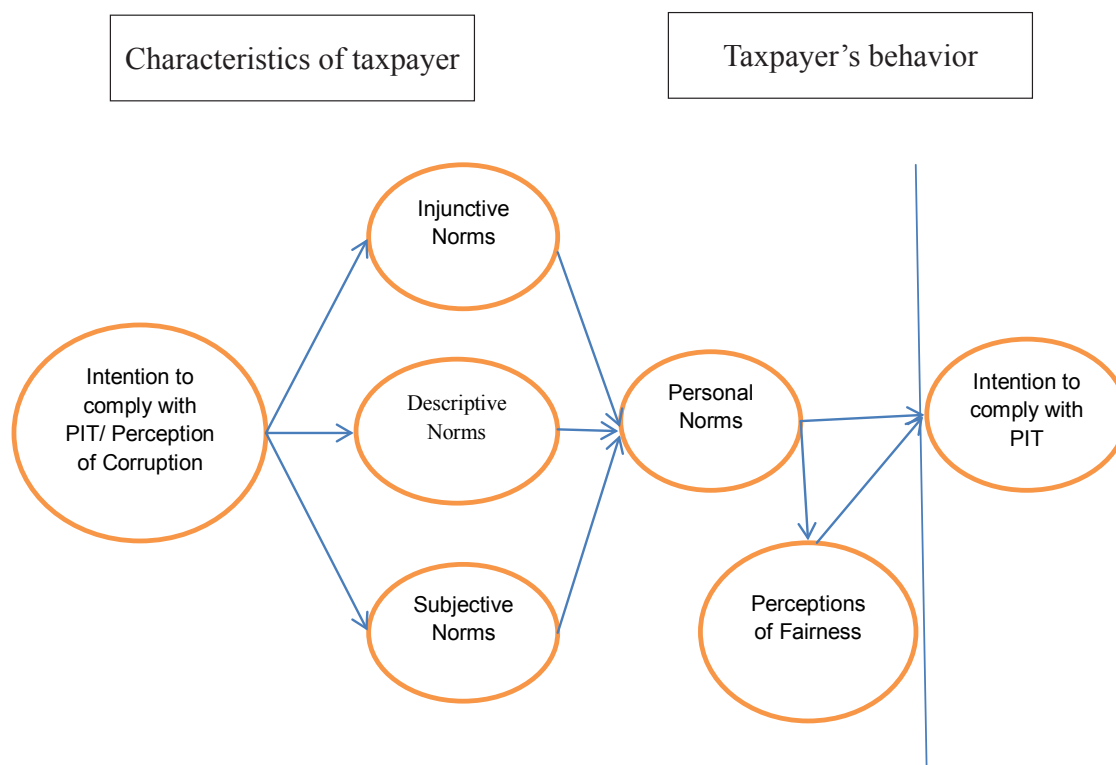
(vi) *Injunctive Norms* (IN). Mandatory norms are also a type of social norm. The required norm is the perceived behavior that most people in the group approve and disapprove of (Arosen et al., 2010; Cialdini & Trost, 1998). While descriptive norms are concerned with the behavior that members actually do, imperative norms dictate how all members should act (Kallgren et al., 2000). Mandatory norms can influence behavior in a wide variety of situations, including tax compliance situations. Bobek et al. (2007) separately examined the impact of the required norm on tax compliance behavior and found that it helps predict compliance behavior.

(vii) *Subjective Norms* (SN) is the perception of how most people important to the individual might act (Fishbein & Ajzen, 1975). While imperative norms explain society as a generally accepted whole, subjective norms explain things that are closer to individual acceptance. Subjective norms often stem from pressure from relatives and friends. Subjective norms that can cause individuals to comply or evade taxes are due to the approval of a group of members close to the influential individual (Arosen et al., 2010).

(viii) *Perceptions of Fairness* (PF) is particularly important to compliance decisions. Tax compliance theory indicates that perceived fairness is one of three important factors affecting compliance (Torgler, 2007).

Based on the model of Jimenez and Iyer (2016) and applying the theoretical framework, the author proposes the following research model:

**Figure 3. The author's proposed research model**



17 research hypotheses are given by the author in Table 1

**Table 1. Research hypotheses**

Symbol	Research hypothesis
H1a	Perception of corruption has a negative relationship to the required norm.
H1b	Perception of corruption has a negative relationship to descriptive criteria.
H1c	Perception of corruption has a negative relationship with subjective norm.
H1d	Perception of corruption has a negative relationship with personal standards.
H2a	Perception of petty corruption has a negative relationship to mandatory norm
H2b	Perception of petty corruption has a negative relationship to descriptive criteria.
H2c	Perception of petty corruption has a negative relationship with subjective norm
H2d	Perception of petty corruption has a negative relationship with personal standards.
H3	Personal standards of tax compliance have a positive relationship with tax compliance intentions.
H4a	Descriptive standards for tax compliance have a positive relationship with tax compliance intentions.
H4b	The required standard of tax compliance has a positive relationship with the intention to comply with tax.
H5a	Compulsory tax compliance standards have a positive relationship with individual standards of tax compliance.
H5b	Subjective norm of tax compliance has a positive relationship on intention to comply with tax
H6a	Subjective standards of tax compliance have a positive relationship with individual standards of tax compliance.

Symbol	Research hypothesis
H6b	Personal standards of tax compliance have a positive relationship with perceived fairness in the tax system.
H7a	Perceived fairness into the tax system has a positive relationship with tax compliance intentions.
H7b	Personal standards of tax compliance have a positive relationship with tax compliance intentions.

*Source: given by the author*

### ***3.2. Experimental study on tax compliance behavior***

*The study was carried out in 2 phases:*

(1) Preliminary research. The study used qualitative analysis methods, in-depth interviews with 10 businesses and 5 individuals with taxable income in Hanoi. The study took place in January 2022. The purpose of this study was to ask respondents how well they understood the questions, and to ask for their opinions on the content of the questionnaire and other comments to correct, edit and complete the questionnaire to improve survey efficiency. After pilot testing, the author made necessary adjustments and modifications to ensure the meaning of the question.

(2) Formal research. The study conducted a survey on random income taxpayers in Hanoi city. The survey was conducted in March and April 2022, the number of votes collected was 300 votes. However, after counting the votes, only 274 that met the allowed sampling conditions were included in the analysis, reaching the rate of 91.3%.

The purpose of this study is to collect and analyze survey data, to confirm the components as well as the validity and reliability of the scales and to test the theoretical model. The scale is evaluated through Cronbach's Alpha reliability method and EFA exploratory factor analysis. At the same time, the SEM linear structure model was analyzed to test the research model.

Eight scales are used in this study, all of which are in the form of latent variables, which are: (1) perceived corruption; (2) perceived petty corruption; (3) mandatory standards of tax compliance; (4) descriptive standards for tax compliance; (5) subjective standards of tax compliance; (6) personal standards for tax compliance; (7) a fair perception of the tax system; and (8) intend to comply with income tax. The scales used to measure these are all available in the world and have been verified many times (Table 2), however, the application of the scales in Vietnam, specifically Hanoi City, is in the current context. , there are also many differences. The scales are measured in a 7-point Likert format, where from 1 - Totally disagree to 7 - Totally agree.

**Table 2. Summary of the scale**

The scale	Origin of the scale
Perception of corruption	Rosid andassociates (2016)
Perception of petty corruption	Rosid andassociates (2016)
Injunctive Norms	Bobek andassociates (2007);Jimenez & Iyer (2016)
Descriptive Norms	Bobek andassociates (2007); Jimenez & Iyer (2016)
Subjective Norms	Blanthorne và Kaplan (2008)
Personal Norms	Bobek andassociates sų (2007), Jimenez & Iyer (2016)
Perceptions of Fairness	Jimenez & Iyer (2016)
Intention to comply with PIT	Jimenez & Iyer (2016)

Source: Author's compilation

## 4. Research results

### 4.1. Check the reliability of the scale

The results of Cronbach's alpha analysis of the scales of concepts are as follows (Table 3): Perceived corruption:  $\alpha=0.663$  (when GC3 is not excluded,  $\alpha=0.597$ ); perception of petty corruption:  $\alpha=0.637$  (when PC3 is not eliminated,  $\alpha=0,609$ ); personal standards:  $\alpha=0.829$  (when PN5 and PN6 are not excluded,  $\alpha=0,675$ ); Mandatory criteria:  $\alpha=0,684$  (when IN4 and IN5 are not included,  $\alpha=0.093$ ); descriptive criteria:  $\alpha=0,472$  (when DN3 is not excluded,  $\alpha=0,464$ ); subjective criteria:  $\alpha=0,851$  (when SN3 is not excluded,  $\alpha=0.78$ ); fair perception:  $\alpha=0.895$ ; and intend to comply with tax:  $\alpha=0,782$  (when CI1 and CI2 are not excluded,  $\alpha=0,641$ ). The results show that there are 10 observed variables of the scales with low variable-total correlation coefficient ( $<0.30$ ). Furthermore, if these variables are excluded, the content validity of the measurement concepts is not violated. So these 10 variables are excluded. The final results show that all scales meet the requirements of reliability coefficient, Cronbach's alpha: The lowest is 0.472 (descriptive standard) and the highest is 0.895 (perception of fairness).

**Table 3. Results of Cronbach's alpha test**

Observed variables	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
<i>Perception of corruption</i> (GC): $\alpha=0,663$ (without removing GC3, $\alpha=0,597$ )				
GC1	15,85	16,66	0,54	0,54
GC2	15,75	15,94	0,55	0,52
GC4	16,26	15,45	0,43	0,60
GC5	15,75	16,96	0,30	0,70
<i>Perception of petty corruption</i> (PC): $\alpha=0,637$ (without removing PC3, $\alpha=0,609$ )				
PC1	15,82	16,98	0,49	0,50
PC2	15,51	18,21	0,52	0,49

Observed variables	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
PC4	15,66	20,34	0,33	0,62
PC5	15,55	19,43	0,33	0,62
<i>Personal Norms (PN): <math>\alpha=0,829</math> (without removing PN5 và PN6, <math>\alpha=0,675</math>)</i>				
PN1	12,05	29,89	0,78	0,72
PN2	11,96	31,07	0,74	0,74
PN3	12,35	32,09	0,69	0,76
PN4	11,29	38,87	0,42	0,87
<i>Injunctive Norms (IN): <math>\alpha=0,684</math> (without removing IN4 và IN5, <math>\alpha=0,093</math>)</i>				
IN1	11,85	24,94	0,42	0,64
IN2	12,71	22,02	0,55	0,55
IN3	11,60	24,12	0,47	0,61
IN6	12,87	26,55	0,41	0,65
<i>Descriptive Norms (DN): <math>\alpha=0,472</math> (without removing DN3, <math>\alpha=0,464</math>)</i>				
DN1	13,84	17,61	0,27	0,39
DN2	14,43	17,78	0,17	0,50
DN4	14,82	15,90	0,32	0,35
DN5	13,90	17,11	0,33	0,34
<i>Subjective Norms (SN): <math>\alpha=0,851</math> (without removing SN3, <math>\alpha=0,78</math>)</i>				
SN1	12,23	25,84	0,76	0,77
SN2	12,26	25,37	0,80	0,75
SN4	12,11	29,20	0,72	0,79
SN5	11,55	32,51	0,49	0,88
<i>Perceptions of Fairness (PF): <math>\alpha=0,895</math></i>				
PF1	13,13	23,98	0,78	0,85
PF2	13,15	24,59	0,83	0,84
PF3	13,33	25,68	0,80	0,85
PF4	13,26	26,37	0,65	0,90
<i>Intention to comply with PIT (CI): <math>\alpha=0,782</math> (without removing CI1 và CI2, <math>\alpha=0,641</math>)</i>				
CI3	8,95	12,70	0,62	0,70
CI4	9,46	12,45	0,58	0,74
CI5	9,24	12,18	0,65	0,66

Source: SPSS analysis results

#### 4.2. EFA exploratory factor analysis

The results of exploratory factor analysis showed that all factors met the requirements of extracted factors, extracted variance achieved 72.81% and the smallest factor weight was 0.486 (Table 4). That proves that the appropriate factors ensure reliability, accuracy and science to put into the regression model



**Table 4. Factor analysis explores independent variables affecting intention to comply with income tax**

Observed variables	Factor weights						
	PF	IN	PN	CI	GC	IN	DN
PF2	0,897						
PF3	0,888						
PF1	0,881						
PF4	0,784						
SN2		0,898					
SN1		0,873					
SN4		0,820					
SN5		0,626					
PN1			0,950				
PN2			0,924				
PN3			0,754				
CI4				0,824			
CI5				0,756			
CI3				0,704			
GC1					0,884		
GC2					0,858		
PC1					0,486		
IN3						0,792	
IN2						0,785	
IN1						0,579	
DN4							0,788
DN5							0,648

Source: SPSS analysis results

### 4.3. CFA Confirmatory factor analysis

To test the research hypotheses, the SEM method was used. SEM analysis is a general method in general linear model (GLM) data analysis that allows researchers to test hypotheses. Consider the degree of influence of the factors at the same time on the sub-variable. From the hypothetical model, through a loop chain of transformation indexes to finally provide the researcher with a stable, capable model, being able to maximize the fit between the model and the actual collected data set.

The suitability of the entire model is in fact assessed through the following criteria of relevance:

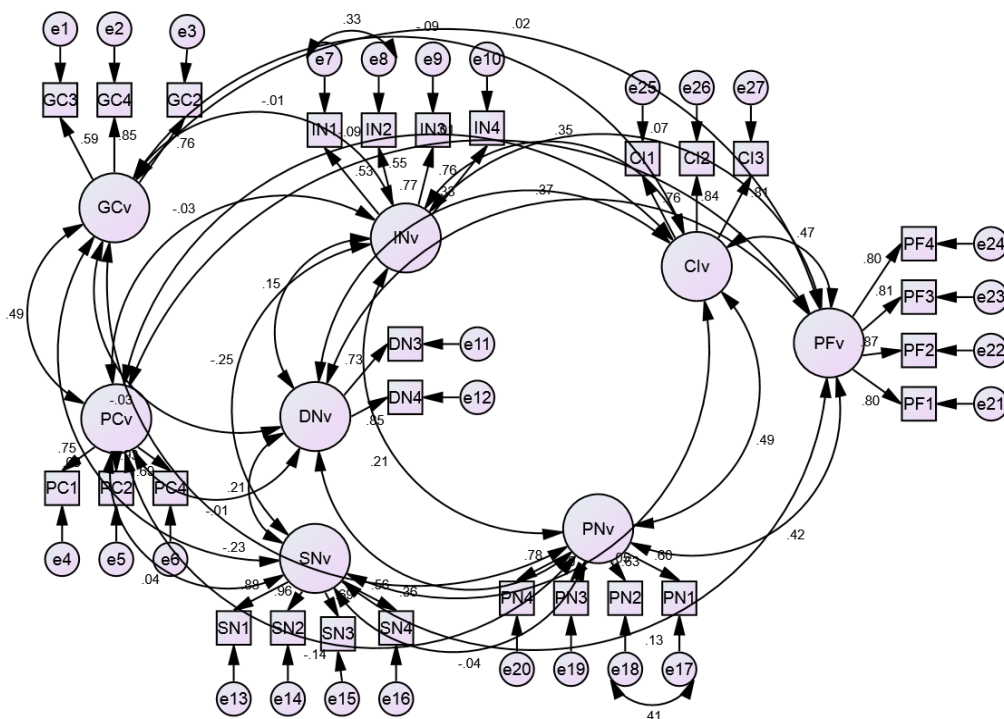
A value of  $p \leq 0.05$  or  $p < 0.1$  is considered a good fit (Arbuckle and Wothke, 1999; Rupp and Segal, 1989). This means that hypothesis H0 (which is a good model hypothesis) cannot be rejected, that is, no better model can be found than the current one.

For each relationship, we have a corresponding hypothesis (as described at the beginning of this chapter on hypotheses and research models). In studies in the social sciences, all

suggested causal relationships have a confidence level of 95% ( $p=0.05$ ), and 90% ( $P=0.1$ ). To consider the explanatory power of the model, the adjusted  $R^2$  coefficient is used.

After testing, if the results show that the hypotheses are not violated, it can be concluded that the estimation of regression coefficients is unbiased, consistent and efficient. The conclusions drawn from the regression analysis are reliable. From the results of factor analysis EFA, the author put factors with Likert scale and factors with quantitative scale into the confirmatory factor analysis model CFA to analyze and confirm the relationship between variables. independent and dependent variables, and remove variables from the model if the independent variable has no effect on the dependent variable. The CFA model results are as follows (Figure 4)

**Figure 4. CFA (normalized) critical model results**



Chi-square=564,015

df=294; P=0,000

Chi-square/df=1,918

GFI=0,873

TLI=0,906

CFI=0,921

RMSEA=0,058

*Source: Author synthesizes research from AMOS software*

The CFA results show that the model achieves compatibility with market data:  $\chi^2[294]=564,015$  ( $p=0,000$ );  $GFI=0.873$ ;  $TLI=0.906$ ;  $CFI=0,921$ ; and  $RMSEA=0.058$ . The results also show that the CFA weights of all observed variables are greater than 0.50, which confirms the unidirectionality and convergence value of the scales used in the research model. Next, the correlation coefficients of the concepts in the model are all less than the unit (Table 5), confirming the discriminant value of the concepts (Steenkamp & Van Trijp, 1991).

**Table 5. Correlation coefficients**

<b>Relationship</b>	<b>Correlation(r)</b>	<b>Standard deviation</b>	<b>Critical Value</b>	<b>Significance level of r (P(r))</b>
GC PC	0,527	0,102	5,144	0,000***
GC IN	-0,006	0,089	-0,071	0,943
GC DN	-0,039	0,104	-0,376	0,707
GC SN	0,003	0,076	0,038	0,97
GC PN	-0,299	0,104	-2,883	0,004***
GC PF	0,025	0,11	0,23	0,818
GC CI	-0,124	0,107	-1,165	0,244
PC IN	-0,038	0,095	-0,397	0,692
PC DN	-0,018	0,111	-0,161	0,872
PC SN	0,049	0,081	0,6	0,548
PC PN	-0,196	0,104	-1,876	0,061*
PC PF	0,01	0,117	0,088	0,93
PC CI	-0,154	0,114	-1,346	0,178
IN DN	0,25	0,137	1,831	0,067*
IN SN	-0,33	0,108	-3,052	0,002***
IN PN	0,321	0,129	2,494	0,013**
IN PF	0,135	0,139	0,972	0,331
IN CI	0,613	0,157	3,915	0,000***
DN SN	0,339	0,122	2,775	0,006***
DN PN	0,669	0,17	3,939	0,000***
DN PF	0,823	0,191	4,318	0,000***
DN CI	0,702	0,179	3,917	0,000***
SN PN	-0,065	0,102	-0,637	0,524
SN PF	0,23	0,12	1,916	0,055*
SN CI	0,089	0,113	0,78	0,435
PN PF	0,859	0,177	4,863	0,000***
PN CI	0,948	0,18	5,26	0,000***
PF CI	1,111	0,192	5,779	0,000***

*Source: Author synthesizes research from AMOS software*

### Test of combined reliability and extracted variance

The combined reliability  $\rho_c$  and extracted variance  $\rho_{vc}$  are calculated on the basis of the estimated factor weights in the CFA models of the scales. The results show that the scales all meet the requirements of overall reliability ( $\rho_c \geq 0.60$ ; Table 6). Regarding extracted variance, the scales are satisfactory ( $\rho_{vc} > 0.50$ ), especially the required standard concept scale has the extracted variance lower than 0.50 but not too small (0.434) (Fornell & Larcker, 1981; Nguyen & associates, 2018).

**Table 6. Combined reliability and extracted variance**

Concepts	$\rho_c$	$\rho_{vc}$
Perception of corruption	0,783	0,552
Perception of petty corruption	0,835	0,631
Injunctive Norms	0,797	0,500
Descriptive Norms	0,749	0,434
Subjective Norms	0,768	0,625
Personal Norms	0,864	0,622
Perceptions of Fairness	0,892	0,673
Intention to comply with PIT	0,846	0,647

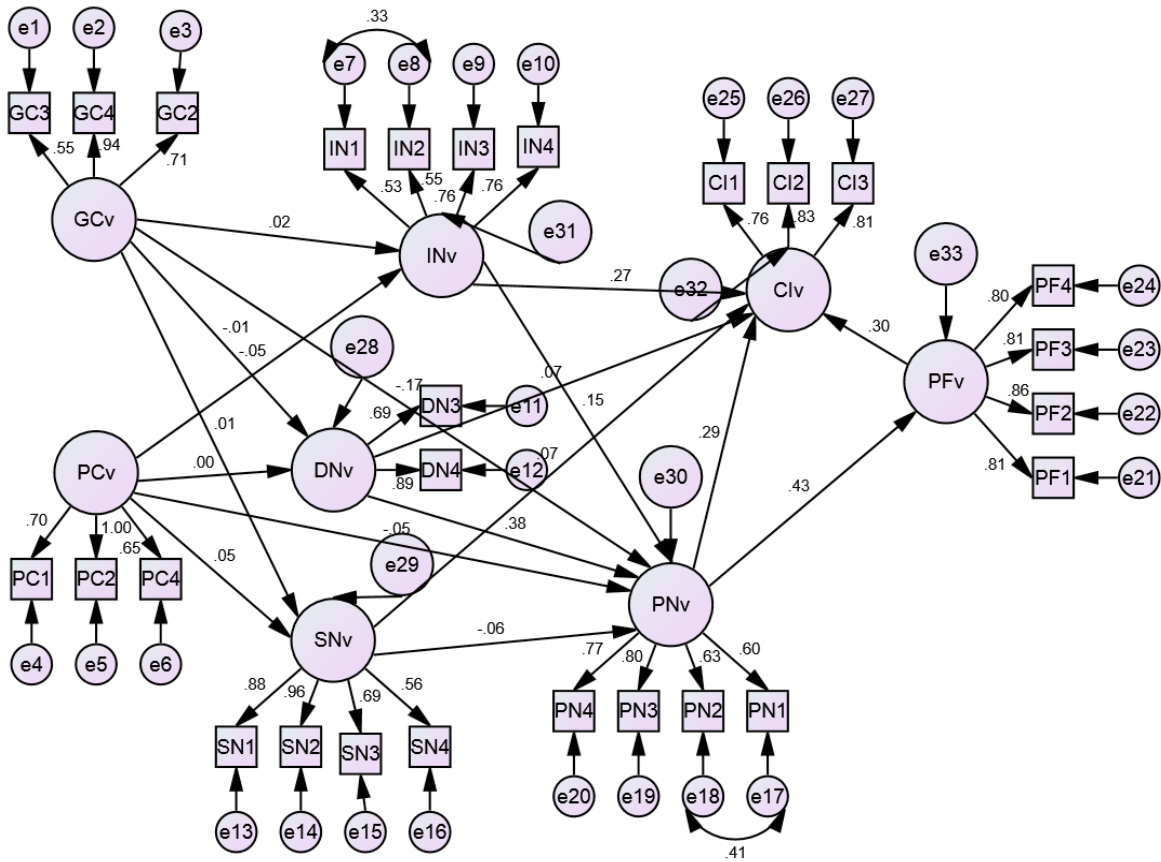
*Source: Author's survey results*

All the scales in this study met the requirements of reliability and validity: composite reliability, extracted variance, unidirectionality, convergent value and discriminant value. Therefore, these scales continue to be used to test the research model

#### **4.4. SEM linear structural model analysis**

The results of the fit assessment of the SEM model are presented in Figure 5. The number of correlations between the CFA and SEM models is the same and the properties of the relationships are nearly the same. Therefore, the values of the fit between the CFA model and the SEM model are similar, but the regression weights between the relationships must still be different.

Figure 5. SEM analysis result



Chi-square=654,995

df=305; P=0,000

Chi-square/df=2,148

GFI=0,854

TLI=0,883

CFI=0,898

RMSEA=0,065

Source: Author synthesizes research from AMOS software

The analysis results show that all factors have a statistically significant influence on tax compliance intentions. The results of the linear structural analysis show that the critical model is very suitable with the survey data, the values reaching the required level  $\chi^2[305]=654,995$  ( $p=0,000$ ); GFI=0.854; TLI=0.883; CFI=0.898; and RMSEA=0.065. The coefficients in the model show a good agreement with the actual data. The results shown in the SEM analysis model show that all factors have a statistically significant influence.

#### 4.5. Test the research hypothesis

The estimated (unnormalized) results of the main parameters in the theoretical model are presented in Table 7 and the normalized results are shown in Figure 6.

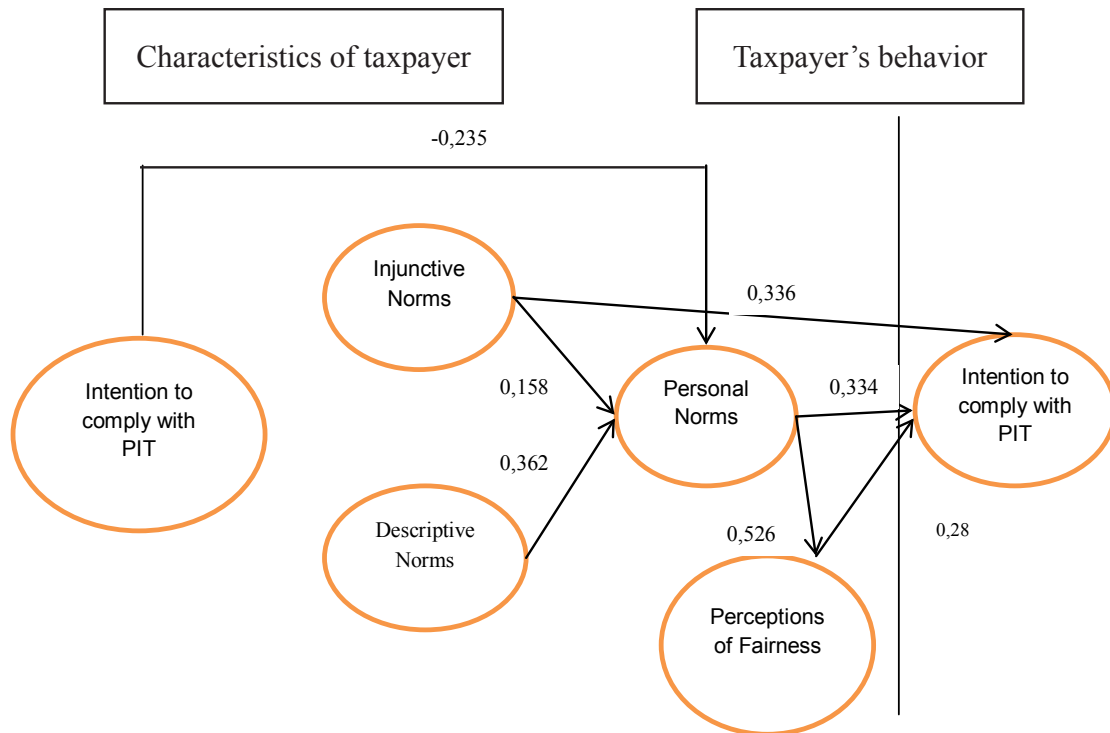
**Table 7. Regression coefficients of relationships (unnormalized)**

Hypothesis	The relationship between 2 concepts	Standardized Regression Weights	P	The result of test the research hypothesis
H <sub>1a</sub>	Perception of corruption → Mandatory norms	0,023	0,806	Do not accept
H <sub>1b</sub>	Perception of corruption → Descriptive standards	-0,008	0,935	Do not accept
H <sub>1c</sub>	Perception of corruption → Subjective norms	0,007	0,929	Do not accept
H <sub>1d</sub>	Perception of corruption → Personal standards	-0,235	0,016**	Accept
H <sub>2a</sub>	Perception of petty corruption → Mandatory norms	-0,060	0,456	Do not accept
H <sub>2b</sub>	Perception of petty corruption → Descriptive standards	-0,003	0,973	Do not accept
H <sub>2c</sub>	Perception of petty corruption → Subjective norms	0,049	0,469	Do not accept
H <sub>2d</sub>	Perception of petty corruption → Personal standards	-0,062	0,433	Do not accept
H <sub>3</sub>	Personal standards → Tax compliance intentions	0,334	0,000***	Accept
H <sub>4a</sub>	Descriptive Criteria → Intended Tax Compliance	0,083	0,273	Do not accept
H <sub>4b</sub>	Descriptive Criteria → Personal Criteria	0,362	0,000***	Accept
H <sub>5a</sub>	Required Criteria → Intended Tax Compliance	0,336	0,000***	Accept
H <sub>5b</sub>	Mandatory standards → Personal standards	0,158	0,049**	Accept
H <sub>6a</sub>	Subjective norms → Intended tax compliance	0,087	0,254	Do not accept
H <sub>6b</sub>	Subjective norms → Personal standards	-0,067	0,373	Do not accept
H <sub>7a</sub>	Personal standards → Feeling fair	0,526	0,000***	Accept
H <sub>7b</sub>	Perceived fairness → Tax compliance intention	0,280	0,000***	Accept

Source: Author synthesizes research from AMOS software

Thus, out of the 17 hypotheses the model proposed, the test showed that there were 7 accepted hypotheses (Figure 6).

**Figure 6. After testing model**



Source: Author's survey result

## 5. Conclusion and policy implications

SEM results show that the theoretical model is compatible with the analytical data and 7 out of 17 hypotheses about the relationship of concepts in the theoretical model are accepted. Overall, perceived corruption, mandatory standards of tax compliance, descriptive standards of tax compliance, personal standards of tax compliance, perceived fairness of the tax system explain nearly 40% variance of taxpayers' intention to comply with tax. Of the above factors, the mandatory standard of tax compliance has the strongest impact (=0.336), followed by the individual standard of tax compliance (=0.334). In it, the mediating role of individual standards of tax compliance is clarified how and how it affects personal standards of tax compliance (through social norms), from that to increase taxpayers' intention to comply with income tax. Specifically, the study showed the following results:

*Firstly*, the research results confirm that a fair perception of the tax system will promote the intention to comply with income tax. This also opens up opportunities for policymakers to continue to promote and reform the PIT system so that taxpayers can feel that the PIT system is really fair to taxpayers and will motivate them to voluntarily comply. income tax. To do this, the income tax policy needs to have specific plans as follows:

*Number one, for corporate income tax*

- Add new taxpayers. In the context of Vietnam's deeper and deeper international economic integration, the increasing presence of foreign organizations and individuals

as well as production and business activities, incomes, their assets in Vietnam are also increasing, the CIT policy needs to consider and regulate more fully for these objects and activities. Adjustment of corporate income tax rates. Conduct a review of CIT incentives, exemption and reduction regimes in the direction of focus, focus and ensure the principle of concentrating incentives and incentives for economic purposes and are applied in a short period of time. certain period and does not distinguish between two types of domestic enterprises and FDI enterprises.

- Strengthen the signing of tax avoidance agreements. This Agreement is really a tool to protect the legitimate interests of foreign investors and also a measure to limit multinational companies from evading and avoiding double taxation in international treaties with other countries. international trade organisations.

*Number two, for personal income tax*

- Expand the taxable area and clearly define taxable income to ensure fairness in tax obligations. Currently, the PIT in Vietnam stipulates that taxable income includes 10 items and basically covers most of the main incomes of the people. However, there are still some incomes that are not currently taxable, such as income from interest on deposits, income from remittances. While these incomes, if they belong to an enterprise, are subject to CIT.

- Completing the tax schedule for incomes subject to PIT and perfecting the method of tax calculation and collection for each income in a simple way, in line with international practices to improve legal compliance. laws of taxpayers and favorable for tax collection.

- Completing the PIT policy of foreigners. Strengthening the signing of agreements to avoid double taxation between countries, expanding international cooperation with foreign tax authorities. The General Department of Taxation also needs to consider concluding tax agreements with all other countries to create better conditions for investment activities of investors from these countries. The Agreement on Avoiding Double Taxation that Vietnam signed with other countries has the effect of avoiding double taxation of PIT of foreigners earning in Vietnam, preventing tax evasion and ensuring fairness in tax payment obligations.

*Second*, the research results also show that in general, perception of corruption is not a factor that reduces social standards on tax compliance. However, perception of corruption has a negative impact on personal standards of tax compliance, which will reduce the intention to comply with income tax. This result also shows the importance of promoting anti-corruption, strengthening inspection work in the tax field, and thereby intending to increase income tax compliance. Specifically, the State needs to supplement regulations on transfer pricing and transfer pricing control, regularly inspect the activities of FDI enterprises in the CIT Law to ensure it is suitable with the context of international economic integration. as the transfer pricing phenomena of multinational companies have become a key tax problem in many countries, creating corruption and large loss of tax revenue.

*Third*, besides, the research results also suggest that social norms affect personal standards of compliance. This implies that policy makers and tax agencies can research deep and wide propaganda programs to support taxpayers in addition to inspection and examination measures.



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# PROTECTING FINANCIAL CONSUMERS IN PEER-TO-PEER LENDING: INTERNATIONAL EXPERIENCE AND LESSONS FOR VIETNAM

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## **Abstract**

In recent years, the strong development of Fintech has brought both consumers and businesses new financial products and services with outstanding technology, in which, peer-to-peer lending (P2P lending) is becoming more and more popular. Besides advantages such as convenience, low cost, and easy access, P2P lending also has many potential risks (lending risk, information risk, money laundering risk, network security risk...) that could adversely affect consumers of financial services as well as the financial system of the country. This paper uses a case study method to examine how to implement and evaluate the experience of financial consumer protection in peer-to-peer lending in the UK, the US and China. On that basis, this paper draws some lessons to improve the effectiveness of financial consumer protection in peer-to-peer lending in Vietnam.

**Keywords:** Financial consumer protection, peer-to-peer lending, United States, United Kingdom, China

## **1. Introduction**

In the context that financial technology (Fintech) is increasingly developing and playing an important role in the economy, many new online payment and transaction methods have appeared, helping consumers to easily access financial products and services. One of them is peer-to-peer lending or P2P lending. Peer-to-peer lending is an activity designed and built on a digital technology application platform to directly connect borrowers with lenders without going through financial intermediaries. All loan approvals, disbursements, or repayments between borrowers and lenders are carried out on the online trading platforms of P2P lending companies, stored by electronic records, digitized on the company's database system. Therefore, compared to the traditional banking model, investors' interest rates will increase, while borrowers' interest rates and transaction costs will decrease. In addition, P2P lending also improves the accessibility of people and small and medium-sized enterprises to financial services, which can promote financial inclusion. Thanks to the application of a digital technology platform, lending and disbursement procedures are also simplified and become less time-consuming.

Despite various advantages, peer-to-peer lending also has some limitations: (i) the lender may not be able to collect the debt when the borrower is unable to repay; (ii) the peer-to-peer lending companies advertise fraudulently and misappropriate customers' capital; (iii) the risk of having information and accounts stolen; (iv) the peer-to-peer lending model easily becomes a tool for tax evasion, money laundering, terrorist financing

or illegal activities. Hence, in order for P2P lending platforms to be applied more widely as well as gain credibility from both investors and borrowers, it is necessary to strengthen the mechanism to protect financial consumers in this activity. Currently, peer-to-peer lending is growing rapidly worldwide, and countries also have different measures to protect financial consumers in the P2P lending area. In Vietnam, though not yet popular, P2P lending has developed strongly in recent years. However, this activity also has many potential risks (lending risk, information risk, money laundering prevention risk, cyber security risks...) that can adversely affect consumers of financial services as well as the financial system of the nation.

As a result, it is extremely important to study international experiences on financial consumers protection in peer-to-peer lending activities in the current context. This paper focuses on clarifying this issue in order to make appropriate policy recommendations for the Vietnamese economy. In addition to part (1) Introduction and (5) Conclusion, the research paper includes 3 main parts: (2) Theoretical background for financial consumer protection and peer-to-peer lending; (3) International experience in financial consumer protection in peer-to-peer lending and (4) Lessons for Vietnam.

## **2. The theoretical basis**

### ***2.1. Financial Consumer Protection Overview***

Consumer protection is generally a term used to describe an action or group of actions intended to protect consumers from unethical, unfair transactions, unsafe products or interests infringing. According to World Bank (2012), financial consumer protection means that the legal system and government organizations are set up to operate to ensure the legitimate interests of financial consumers. According to the International Finance Corporation (IFC) (2015), financial consumer protection is understood as any activity, action or set of rules that seeks to reduce risks and harm to consumers in the use of any financial product or service. Following these approaches, the legal framework for financial consumer protection includes laws, regulations, and policies to protect consumers in financial markets. In other words, formulating and perfecting policies to protect financial consumers is about establishing a legal system and defining mechanisms (including who oversees the implementation) to ensure the legal interests of financial consumers, ensure fair transactions and competition, transparent financial product/service information; prevent financial institutions from committing frauds, unlawful acts, or illegally benefiting from transactions with individuals or other financial institutions.

### ***2.2. Peer-to-peer lending Overview***

The development of digital technology has played a role in promoting a new online lending method, Peer-to-peer Lending/P2P Lending. There are different views on the origin of peer-to-peer lending. According to Omarini (2018), peer-to-peer lending originated hundreds of years ago in England, its predecessor is lending in the community from the Friendly Societies organization since the 1630s. -1640. This organization connects members after registering into a community of mutual financial support and granting membership rights to them. The size of the association has grown larger and exists as an essential requirement in satisfying financial needs. After the 4.0 revolution, based on the

development of Internet technology, peer-to-peer lending is being developed and enhanced at an increasingly high level of scale and convenience. According to the Monetary Policy Department, State Bank of Vietnam (SBV) (2020), the essence of peer-to-peer lending is understood as an online financial exchange, between individuals or organizations without going through an intermediary. directly like a traditional financial institution. Thus, depending on the regulatory regulations in each country, banks have a role or not a contributing role in peer-to-peer lending.

Although there are many different views on the origin of P2P Lending, in general, P2P Lending is generally understood to be an operation based on a financial technology platform designed and built on an online trading platform with the goal of connecting directly between borrowers and lenders without going through financial intermediaries such as credit institutions. All loan approvals, disbursements, or repayments between borrowers and lenders are carried out on the online transaction platform of P2P Lending companies, and these transactions are stored on the electronic records, digitized on the database system of the company. It can be seen that P2P Lending companies do not use the difference between interest rates for mobilizing capital and lending for profit like banks. Instead, P2P Lending companies make profit through the management fee from the credit rating, risks classification, and account registration. Therefore, compared to the traditional banking model, investors' interest rates will increase, while borrowers' interest rates and transaction costs will decrease. Besides, P2P Lending also increases the accessibility to financial services for people and small and medium enterprises, promoting financial inclusion. Although there are many advantages over traditional lending, P2P Lending has certain disadvantages: (i) The lender may not be able to collect the debt when the borrower is unable to repay; (ii) P2P Lending Company fraudulently advertises and appropriates customer's capital; (iii) Risk of having information and accounts stolen; (iv) The P2P Lending model easily becomes a tool for some people to conduct tax evasion, money laundering, terrorist financing or illegal activities.

### **3. International experience in protecting financial consumers in peer-to-peer lending**

#### ***3.1. Experience in protecting financial consumers in peer-to-peer lending in the UK***

The United Kingdom is known as the cradle of P2P Lending activity with the appearance of the world's first P2P Lending platform - Zopa in 2005. With the arrival of Zopa, the UK became the first country to appear P2P Lending activities and started with the financing of personal unsecured loans. After a long time of establishment and development, by the end of 2017, there were more than 50 P2P Lending platforms in the UK market, of which the three largest platforms are RateSetter, Zopa and The Funding Circle with total outstanding loans for loans are 2.2 respectively; 2.9 and 3 billion pounds. These three companies hold a total of 69% market share and the remaining 31% is divided among more than 47 other P2P Lending platforms (Nguyen, Luong and Vo, 2019). The UK P2P Lending market was initially targeted at individual customers only. However, the platforms have evolved into lending institutions and expanded their audience to both small and medium-sized organizations. Although the proportion of P2P Lending in this area is still low compared to traditional forms, it still maintains the growth trend over the years in terms of competition.

To protect financial consumers in peer-to-peer lending, the UK focuses on building a strong and coherent regulatory framework. Specifically, in 2014, the UK once again became the first country in the world to build a system of legal regulations on P2P Lending activities. The Financial Conduct Authority (FCA) is currently the main regulator for the P2P Lending industry. This agency and the Prudential Regulation Authority (PRA) are two separate entities from the Financial Services Authority (FSA). Accordingly, P2P Lending platforms must be licensed to operate through the FCA in order to grant credit and become a member of the National Credit Information Center (Nguyen et al, 2019). The prominent regulations on P2P Lending in the UK set forth by the FCA to ensure the safety of P2P Lending companies as well as protect financial consumers include: (i) Capital regulations; (ii) Operation licensing process, (iii) Market supervision regulations; and (iv) Borrower protection regulations. First, the capital regulations require P2P Lending companies to have a minimum capital greater than the total fixed minimum capital and capital calculated on the residual value of the loan in the market. According to regulations, from April 1, 2017, the minimum fixed capital is £50,000. Peer-to-peer lending companies are required to meet capital requirements once fully licensed by the FCA. This ensures investors will be compensated in the event of a mishap. Second, the licensing process requires that a company that wants to establish and operate a P2P Lending online trading platform needs to satisfy the following conditions: Have a detailed and appropriate business plan that clearly outlines the expected activities, risks, budget and human resources, capital system, etc. Third, market supervision regulation: FCA monitors the activities of P2P Lending companies through the website and monthly management reports of P2P Lending companies to ensure financial consumers. always obtain full information of P2P Lending companies and minimize information asymmetry. In addition, FCA also directly inspected some peer-to-peer lending companies to assess the governance, management and credit risk, check money laundering activities and check customer identification at the company, ensuring that the lender has access to clear information about the borrower. Finally, regulations to protect borrowers: FCA stipulates that P2P Lending companies must comply with regulations on customer money in receiving money from the lender, receiving payment from the borrower and transferring money to pay the borrower. lenders. Therefore, the UK regulatory framework for peer-to-peer lending is essentially based on the following principles:

(1) P2P lending should provide a safe and effective investment channel for a broad segment of society.

(2) P2P lending should allow borrowers to access reasonable and reliable capital under reasonable terms.

(3) The lending needs to distinguish borrowers based on default risk.

(4) P2P lending platforms must provide investors with an accurate understanding of credit risk, and investors should hold at least some risk to prevent moral hazard.

(5) Non-viable lending platforms must be able to exit the market without causing damage to investors or shorting funds for borrowers.

(6) Lending should be robust enough during the downturn of the business cycle to prevent sudden loan outages, excessively high default rates, and errors associated with lending platforms.

(7) It is necessary to maintain a competitive market among P2P platforms to promote consumer choice; prevent monopolies; and avoid systemic risk.

(8) The sector must be useful to society and serve the real economy.

### ***3.2. Experience in protecting financial consumers in peer-to-peer lending in the United States***

In general, the United States (US) is one of the countries with the largest P2P lending volume in the world, and P2P lending in the US is growing at the fastest rate compared to other financial services. Currently, Lending Club is the largest peer-to-peer lending company in the US market in terms of loan volume and revenue, followed by Prosper. Lending Club is also the biggest peer-to-peer lending platform globally, with lending rates ranging from 5.6% - 35.8% (Steinisch, 2012). In the past 7-8 years, the P2P lending market in the US entered a period of strong development with outstanding growth in both volume and quality of loans. According to IBISWorld (2020), since 2012, the size of the peer-to-peer lending market in the United States has grown significantly, especially in the 2017-2019 period. In 2020, although this market size has decreased due to the effects of the Covid-19 pandemic, peer-to-peer lending platforms will continue to play an important role in financing small business owners. The leading technologies of P2P lending platforms increase the efficiency of processing large volumes of loan requests, making the disbursements more rapid. Peer-to-peer lending platforms play an increasingly important role in the lending ecosystem. As estimated by IBISWorld, the size of the peer-to-peer lending market in the US is about 870 million USD in 2021, while PwC (2015) predicted that P2P loan sales in the US will reach 150 billion USD by 2025.

In order to effectively carry out the financial consumer protection in P2P lending, the US government has introduced relatively cautious and strict regulations. The management mechanism of P2P lending companies in the US is very complicated, which involves two levels: Federal and State. At the State level, each State will govern in different ways: some states prohibit P2P lending, some allow limited activities (high requirements for lenders and borrowers), some states authorized to operate subject to compliance with SEC regulations or several other conditions. At the Federal level, regulations regarding P2P lending activities are issued by the SEC. The lender's investment certificate is considered a security, so it must follow the standards of the SEC. Both P2P lending platforms and partner banks must report and disclosure information related to investments and loans on a monthly basis, and must comply with the laws on banking business, electronic money transfer, information security, crowdfunding...

From the end of 2015, the SEC decided to apply regulatory rules to crowdfunding for peer-to-peer lending. Therefore, currently in the US, the legal framework of peer-to-peer lending activities focuses on four main items as follows:

The first is the regulation of capital limitation. P2P lending companies are only allowed to raise a maximum of 1.07 million USD per year from investors, except in special cases that

must be licensed by a competent authority. P2P lending companies that want to crowdfund must meet SEC standards (Nguyen et al, 2019).

The second is the regulation of individual investment limits. An individual's investment limit is calculated as the sum of investments made by an investor within 12 months, not including foreign currency. The investment limit is determined by the investor's annual income or net worth.

The third is licensing and operating standards for P2P lending companies. Peer-to-peer lending companies that want to operate must be licensed by the SEC. Specifically, companies need to register investment certificates and contracts with the SEC because without the registration certificate and approved prospectus, it is illegal to sell securities.

The fourth is standards and requirements for information disclosure for P2P lending companies. In order to be licensed to operate, P2P lending companies need to provide "32 types of information" in addition to accounting documents for 3 consecutive financial years to the SEC. After registering for operation, these companies are responsible for reporting annual performance. In addition, P2P lending companies are required to issue loan certificates through an intermediary organization (platform), to ensure public access via the Internet or electronic means, and the free exchange of loan information.

Regarding the oversight, the SEC is responsible for the investors of P2P lending platforms, while the Consumer Financial Protection Bureau and the Federal Trade Commission are in charge of the borrowers. New entrants to P2P lending in the US have to face significant regulatory hurdles, as well as the need to obtain a license from the state government (Government Accountability Office, 2011). Platforms are only allowed to accept investors until they register with the SEC, and also face strict reporting requirements after registration. Furthermore, in order to minimize the risks that both investors and borrowers may confront, P2P lending platforms are built with the same legal status as lenders, which are responsible for complying with the regulations of clear and fair disclosure of loan terms to borrowers, explaining credit disapproval to those who are denied credit, and preventing unequal debt collection practices (Lo, 2016).

### ***3.3. Experience in protecting financial consumers in peer-to-peer lending in China***

There is no country in the world that can compete with China in terms of P2P platform usage and development speed. In order to foster "inclusive finance" in this country, the Chinese government appears to have supported P2P enterprises in the Fintech industry for a long time. With an increase in allegations of P2P investors not being paid on time and of owners and executives of numerous platforms departing, investors were panicked and attempted to cash out, disrupting the market. Numerous consultants request assistance from the government to cover account losses.

In order to supervise P2P activities and safeguard financial users, the CBRC stipulated in 2016's "Temporary Measures on Management of P2P Lending Information Between Intermediaries" that supervisors are necessary. On the other hand, P2P companies are required to act only as a platform to provide information between lenders and borrowers, and cannot engage in the following activities: directly or indirectly fund the main platform;

directly or indirectly accept or not the lender's funds; provide signals by directly or indirectly providing leadership or guaranteed promises and interest rates to borrowers; and conduct business securitization or transfer debentures in the form of production. End of 2016, the CBRC, the Ministry of Industry and Information Technology, and the Administration of Industry and Trade, along with the executive board, drafted "Documents for management and online loan registration of information intermediaries." As a result, P2P must register with the local financial regulator in addition to obtaining the standard business license.

Early in 2017, the CBRC issued Guidelines on Supervision of Online Lending Funds and Tightening Peer-to-Peer Lending, which included supervisory criteria for business operations as well as interest rates and annual fees up to 36 percent

In April of 2019, a new program was leaked in the news. According to the program test, the platform will be registered and categorized at the level of platform or region. For registration as a national platform, the platform must have a minimum prepaid capital of 500 million yuan; for the platform area, it is 50 million yuan. The subscription pilot program mandates that the international platform maintain a risk reserve equal to 3 percent of all loans made via their business and set aside 6 percent of each loan as collateral. This scale for regional platforms is 1 percent and, accordingly, 3 percent. Investments by individual lending institutions are capped at a maximum of RMB 200,000 per platform and RMB 500,000 across all platforms for advisers. Nonetheless, it appears that regulators subsequently made amendments to the affiliate program pertaining to insurance risks, deposits, shareholder status, and other P2P sites. According to Caixin Global's analysis, regulators urge P2P platforms to convert into licensed micro-lending enterprises or finance organizations rather than function as intermediaries. Obtaining licenses that need to be converted is, however, difficult.

In September 2019, China's Internet Financial Risk Administration announced that peer-to-peer (P2P) lenders must reduce their loans within a year and move to a small or quit lending business model. On the other hand, the agency also announced the strengthening of the building of a credit information system in the field of P2P online lending, facilitating the connection of P2P enterprises with the available information systems and information systems. Reportedly, it would implement corrective measures, taking severe action against P2P lending institutions that oppose responsibility and the requirement to restore investor funds.

However, the authorities have indicated that by the end of 2020, P2P lending goods would no longer be the primary products of Chinese Fintech, and that all P2P operations will be shut down and transformed into the public business model "self-lending FinTech enterprise".

January 2021, the guidelines for the online lending platform are anticipated to go into effect in 2022. As a rule, FinTech companies will be forced to have a larger pool of capital in loans. The proposal requires online lending platforms to participate in 30 percent of the loans for which they engage with banks. In addition, the proposal restricts the capital sources of commercial banks that commit to online lending in cooperation with platform



technology. The purpose of this law is to pick profitable FinTech startups, such as ruthless competitors, while placing established financial institutions at danger.

#### **4. Lessons for Vietnam**

The management of peer-to-peer businesses in the UK, US, and China can teach Vietnam the following lessons:

*First*, it is required to acknowledge peer-to-peer lending and allow peer-to-peer lending organizations to operate, but it is also necessary to produce legal documents as soon as possible in order to regulate this sort of lending. These legal documents must clearly specify the conditions for licensing peer-to-peer lending activities, such as minimum capital requirements, maximum loan limits, and the need to meet technology standards, as well as the need to ensure operational safety for the company, concretize regulations on inspection and supervision of peer-to-peer lending business activities, and establish clear and strict regulations on the right to access information of borrowers and borrowers, elucidating the liability of peer-to-peer lending enterprises towards investors in the event of a collapse. In Vietnam, where peer-to-peer lending organizations are not yet governed by the Law on Credit Institutions but merely by the Civil Code, it is important to quickly enact a legal framework for peer-to-peer lending and its providers.

*Second*, peer-to-peer lending regulations are typically perceived to be highly complex and cumbersome, especially for new entrants to this industry. In Vietnam, low-income individuals and small and medium-sized businesses have resorted to internet lending channels due to the high administrative expenses and limited incentives of bank loans allowing “masquerading” loan sharking businesses to operate. Consequently, while creating and refining suitable management measures for the peer-to-peer lending sector, the SBV must issue explicit regulations and instruct banks and non-bank credit organizations. Its lending activities are transparent, and the public publication of information regarding its lending activities, together with the strengthening of the implementation of numerous preferential loan policies, offers advantageous conditions for all economic actors to access bank resources.

*Thirdly*, the management of peer-to-peer lending must be implemented strictly at both the central and local levels. From there, Vietnam must build a stringent and particular peer-to-peer lending oversight framework. The State Bank of Vietnam should be given authority for peer-to-peer lending oversight (SBV). In addition, the SBV must grant peer-to-peer lending platforms access to credit information via the borrower connection site of the Vietnam National Credit Information Center (CIC). This method ensures that lending platforms are aware of their customers’ current credit obligations.

*Fourthly*, the credit scoring method of P2P enterprises warrants special consideration. Because only an accurate evaluation of the borrower’s reputation can maintain order and foster the growth of online lending companies. Combining the US experience with the peculiarities of Vietnam’s bank-based financial system, banks can permit peer-to-peer lending companies to use or assist them in developing a credit scoring system, thereby reducing credit risk for both peer-to-peer lending platforms and investors. By observing

what China has done, Vietnam can learn how to analyze credit risk using non-traditional databases.

Lastly, it is vital to build financial education programs in several ways to increase people's understanding and awareness of the financial sector, thereby directly and effectively assisting society's members. enhancing the economy's access to financial and banking services, such as peer-to-peer lending. Compared to Europe and the United States, one of the downsides of China's peer-to-peer business is that the majority of ordinary investors lack sophistication and have a low risk tolerance (Au and Sun, 2019). In Vietnam, the same is true. Even when investors have investment expertise, they continue to purchase hazardous items with the expectation that the government will provide a safety net in the event of investment failure. Simultaneously, P2P investment has attracted a large number of investors due to its convenience and its stated high-return advantages. Even investors from rural areas or the elderly, who are often less financially knowledgeable, are many. Consequently, a market for peer-to-peer transactions that are laxly regulated and populated by investors who are not well-understood is prone to crises.

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# FACTORS AFFECTING CUSTOMERS' DECISION TO BUY XIAOMI PHONES IN HANOI CITY

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## **Abstract**

Researching customer behavior in general and purchasing decisions in particular is a big goal of businesses. It helps businesses make more appropriate sales policies. This study focuses on “Factors affecting customers’ decision to buy Xiaomi phones in Hanoi City” with the content focusing on synthesizing theories of consumer behavior, and buying decisions, models related to the theory of consumer behavior and research to explore the factors affecting customers’ decision to buy Xiaomi phones in Hanoi City. The research results will help managers improve the ability to attract consumers for Xiaomi phone product manufacturers and distributors in Hanoi.

**Keywords:** Consumer behavior, consumers, buy Xiaomi phones

## **1. Introduction**

Smartphones are a huge step forward in the technology industry. Smartphones have completely changed human habits with the following conveniences: B. With just a few taps, you can connect with your loved ones, from video chatting to texting. for loved ones, picture messaging, instant and lively online chat, status updates, and photos on social networks increasingly. Therefore, along with the economic development, the mobile phone market is becoming more and more exciting. In particular, Chinese phone products currently account for nearly 50% of the market share in the Vietnamese market, and there are many brands such as Oppo, Xiaomi, Realme, Vivo, Huawei, Meizu, and Lenovo ... products. This gradually has many varieties from cheap to high-end, meeting the needs of the vast majority of connoisseurs of Vietnam.

There are quite a few studies on customer behavior or purchasing decisions such as Schiffman and Kanuk, 2005 indicating that consumer behavior is the study of individuals, groups, or organizations and the processes that an individual or a group that chooses, secures uses, and gives up products, services, experiences, or ideas to satisfy certain consumer and societal needs. It is the behaviors that consumers display in finding, purchasing, using, and evaluating products and services that they expect will satisfy their individual needs (Bennett, 1995). Consumer behavior is the dynamic interplay of factors influencing cognition, behavior, and the environment through which people change their lives (Schiffman and Kanuk, 2005). Consumer behavior is the behavior that consumers display in research about the purchase, use, and evaluation of products and services and the opinions that they expect will satisfy their needs. surname (Schiffman and Kanuk, 2005). According to Blackwell et

al (2006): “Consuming behavior is all activities directly related to the process of finding, acquiring, purchasing, possessing, using, and disposing of products/services... It includes the decision-making processes that take place before, during, and after those actions.”

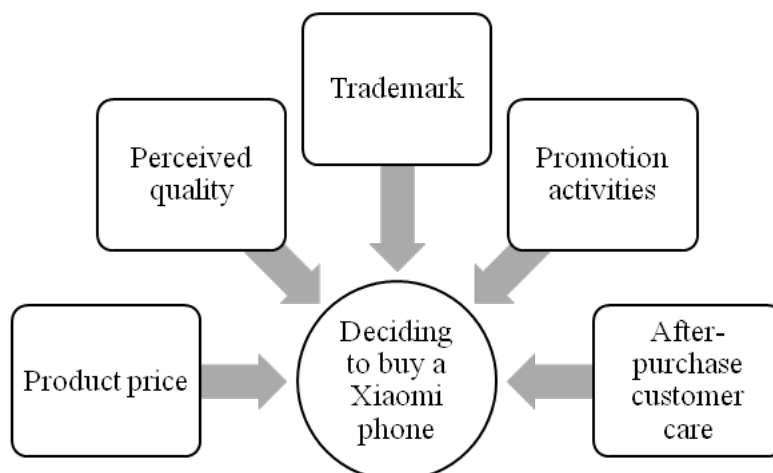
According to Kotler and Keller (2012), the study of consumer behavior is an important task that has a great influence in the decision-making process about the marketing strategy of enterprises. In the past, marketers could understand consumers through their daily contact, transaction, and sales experiences. However, the growth in size and market of enterprises has made many marketing managers no longer have direct contact with customers, and information from the sales department is still very subjective. Therefore, more and more managers have to put the study of consumer behavior in their field to help the company make appropriate and accurate decisions and build an effective marketing plan. To attract and create customers.

With the above studies, it is necessary to study the factors affecting the decision to buy Xiaomi phones of customers in Hanoi and does not overlap with previous studies.

## 2. Research model and hypothesis

This study chooses a model based on the theory of consumer behavior of Kotler and Keller (2012), The theory of rational action of Ajzen and Fishbein (1980), The theory of intended behavior of Ajzen (1991). These are selected models for research in many fields in many countries around the world, including a number of studies in the field of smartphone purchase decisions. In addition, research based on empirical studies on smartphone purchase decisions has been studied by several authors such as: Mesay Sata (2013), Renjith Kumar.R and Diana Fernandez (2020), Nguyen Huu Hoang and Hsin-Kuang Chi (2019), Sun Hongchun (2018), Do Hai Hung and Nguyen Thi Mai Huong (2020). Based on the same research on mobile phone purchase decisions, this will be a solid theoretical basis, helping to research and apply the model suitable to Xiaomi’s smartphone product research conditions. Thus, the author’s proposed model includes 06 factors affecting the decision to buy Xiaomi phones of customers in Hanoi City (1) Product price, (2) Perceived quality, (3) Trademark, (4) Promotion activities, (5) After-purchase customer care.

**Figure1. Proposed model to study the factors affecting the decision to buy Xiaomi phones of customers in Hanoi**



*Source: author of theoretical research and proposal*

## **Research hypothesis**

### ***Product price***

Product price is one of the most important factors in the consumption of a product. If a business can determine a reasonable selling price, it will help increase product sales, increase revenue and limit inventory, stagnation, and loss. In the studies of Mesay Sata (2013), Renjith Kumar.R and Diana Fernandez (2020), Nguyen Huu Hoang and Hsin-Kuang Chi (2019), Sun Hongchun (2018), Do Hai Hung and Nguyen Thi Mai Huong (2020) ) both show the relationship between product price and purchase decision. Based on the above, the author hypothesizes:

*H<sub>1</sub>: Product price has a positive impact on customers' decision to buy Xiaomi phones in Hanoi City.*

### ***Perceived quality***

Perceived quality is a customer's subjective assessment of product quality through use, product parameters, information about other customers' evaluations, etc. Product quality includes product features. product, durability, performance, safety in use. Businesses need to know the customer's response to quality to fix errors and forecast the amount of products produced to hit the market. In the studies of previous research models and the theory of intended behavior of Ajzen (1991) have shown a positive relationship between product quality and purchase decision. From that, the author hypothesized the following:

*H<sub>2</sub>: Product quality has a positive impact on customers' decision to buy Xiaomi phones in Hanoi City.*

### ***Trademark***

A brand is the way in which a company is created and perceived, either tangible or intangible, by those who have experienced it. Brand is not simply a name, a symbol, brand is the perception, product or service recognition that a business evokes. Although brand is intangible by nature, it is the leading tool to promote commercial business. In previous studies as well as the rational action theory of Ajzen and Fishbein (1980) both showed the relationship between brand and buying decision. Based on the above, the author hypothesizes:

*H<sub>3</sub>: Brand has a positive impact on customers' decision to buy Xiaomi phones in Hanoi City.*

### ***Promotion activities***

In daily business activities, promotion is understood as activities to promote or promote the consumption of products of enterprises. Besides, it also increases the value of the corporate brand to the market. Promotional activities aim to create excitement, provide sufficient information to customers, increase brand value, stimulate customer needs, and show product differences. In the study of Do Hai Hung and Nguyen Thi Mai Huong (2020) showed the relationship between promotional activities and purchasing decisions. Based on the above, the author hypothesizes:

*H<sub>4</sub>: Promotion activities have a positive impact on customers' decision to buy Xiaomi phones in Hanoi City.*

### *After-purchase customer care*

Post-purchase customer care (remarketing) in various activities to ensure that customers are as satisfied as possible with the products and services of the business, thereby stimulating repurchase and contributing to brand promotion. Remarketing is an important stage of the business process and cannot be ignored. The study of Mesay Sata (2013) shows the relationship between post-purchase customer care and buying decisions. Based on the above, the author hypothesizes:

*H<sub>5</sub>: After-sales customer care has a positive impact on customers' decision to buy Xiaomi phones in Hanoi City.*

**Table 1. Summary of research hypotheses of the author's proposed model**

Sign	Content
H <sub>1</sub>	Product price has a positive impact on customers' decision to buy Xiaomi phones in Hanoi city.
H <sub>2</sub>	Perceived quality has a positive impact on customers' decision to buy Xiaomi phones in Hanoi city.
H <sub>3</sub>	Brand has a positive impact on customers' decision to buy Xiaomi phones in Hanoi.
H <sub>4</sub>	Promotion activities have a positive impact on customers' decision to buy Xiaomi phones in Hanoi city.
H <sub>5</sub>	After-purchase customer care has a positive impact on customers' decision to buy Xiaomi phones in Hanoi City.

*Source: Author's proposal and synthesis*

Research and conduct customer surveys through detailed questionnaires. The sampling method is convenience, non-probability sampling. After collecting data, it will be processed by statistical software SPSS 23. The scale is tested by Cronbach's Alpha coefficient and EFA exploratory factor analysis. Then, the author tests the theoretical model by means of multiple regression analysis, thereby determining the intensity of the impact of the factors affecting the customer's decision to buy Xiaomi phone products in Ha Noi City. Internal (Appendix: Research survey table).

## **3. Research results**

### **3.1. Preliminary analysis**

The study was conducted with survey subjects who are customers who have bought Xiaomi phones in Hanoi City. A total of 288 questionnaires were distributed, collected 288 tables, excluded 17 unsatisfactory questionnaires, remaining 271, reaching the rate of 94.1%. The questionnaire was coded and put into data processing using SPSS 23 software for analysis. Classify 271 respondents according to gender, age, income, education level for processing.

## Gender Factor

**Table 2. Descriptive statistics for gender**

	Frequency	Ratio (%)	accumulation (%)
Male	182	67.16	67.16
Female	89	32.84	100
<b>Total</b>	<b>271</b>	<b>100</b>	

*Source: Compiled from the survey results of the research team*

Research results show that there are 182 male customers, accounting for 67.16%, 89 female customers, accounting for 32.84%. The number of samples has a large difference in gender, male customers account for twice as many as female customers. This is true with the current reality, when most people feel and see that men have more access and sensitivity to electronic devices than women.

## Age Factor

**Table 3. Descriptive statistics for age**

	Frequency	Ratio (%)	% accumulation
16-20 years old	59	21.77	21.77
21-30 years old	49	18.08	39.85
31-45 years old	75	27.68	67.53
over 45 years old	88	32.47	100
Total	271	100	

*Source: Compiled from the survey results of the research team*

According to the results, the largest number of customers over 45 years old accounted for 32.47% (88 customers). Followed by customers aged 31-55 accounted for 27.68% (75 customers). There is no significant difference between the 2 groups from 16-20 years old (59 customers) and from 21-30 years old (49 customers). That shows that Xiaomi has not really succeeded in conquering young customers.

## Factor Education level

**Table 4. Descriptive statistics for Education level**

	Frequency	Ratio (%)	accumulation (%)
High school	76	28.04	28.04
Intermediate college	86	31.73	59.78
University	71	26.20	85.98
Graduate	38	14.02	100
Total	271	100	

*Source: Compiled from the survey results of the research team*

The survey results showed that the number of customers participating in the questionnaire with the highest level of education at the intermediate or college level accounted for 31.73% (86 customers), the second was high school level (28 customers). 0.04%, 76 customers), the number of customers with university degrees was not significantly different from the second group (26.20%, 71 customers). The group with the most difference in this factor is the Graduate group, accounting for at least 14.02% (38 customers).

### Factor Monthly income level

**Table 5. Descriptive statistics Monthly income**

	Frequency	Ratio %	% accumulation
less than 5 million	126	46.50	46.50
from 5-10 million	101	37.27	83.77
over 10 million won	44	16.23	100
Total	271	100	

*Source: collected and compiled by the author*

According to the results of data processing, people with low income under 5 million are the customers with the most purchases, accounting for 46.50% (126 customers). The second highest is the number of customers with incomes from 5-10 million, accounting for 37.27% (101 customers). The lowest is the number of customers with income over 10 million. That shows, Xiaomi phone company is not an ideal object for high-income customers. That may be because many factors from brand value to product quality are not enough to satisfy this high-end customer group.

### 3.2. Analysis of factors affecting customers' decision to buy Xiaomi phones in Hanoi City

#### Evaluation of the scale by Cronbach's Alpha reliability

**Table 6. The results of evaluating the reliability of the scale**

No	Variable group	Number of variables	Discarded variable	Number of remaining variables	Cronbach's Alpha
1	Product price (GSP)	4		4	0.883
2	Perceived Quality (CL)	4		4	0.855
3	Brand (TH)	4		4	0.817
4	Promotion activities	4	HDCT4	3	0.852



No	Variable group	Number of variables	Discarded variable	Number of remaining variables	Cronbach's Alpha
5	After-purchase customer care	4	Customer Service 1	3	0.638
6	Deciding to buy a Xiaomi phone (QDM)	4		4	0.952
	Total	24		22	

Source: Data processing results via SPSS

The results of evaluating the reliability of the scale are done through the calculation of Cronbach's Alpha coefficient for 6 factors (product price, perceived quality, brand, promotional activities, after-care customer care). buy, decide to buy Xiaomi phones). Through the results of quality inspection of the scale in Table 6, we see that the coefficients of all variables are greater than 0.6. Thus, the scale system is built with 6 scales to ensure good quality with 22 characteristic variables.

### Exploratory Factor Analysis - EFA

*EFA . suitability test*

In Table 3.6, we have  $KMO=0.726$  satisfying the condition  $0.5 < KMO < 1$ , so exploratory factor analysis is appropriate for actual data.

**Table 7. KMO and Bartlett's Test**

Kaiser-Meyer-Olkin Measure of Sampling Adequacy		.726
Bartlett's Test of Sphericity	Approx. Chi-Square	2,949.576
	DF	153
	Sig.	.000

Source: data processing results via SPSS

*Correlation test of observed variables in representative measure*

In Table 7, we see that Bartlett's test has a Sig significance level.  $< 0.05$ , so the observed variables are linearly correlated with the representative factor.

*Test the explanatory level of the observed variables for the factor*

The Cumulative column of the Table shows that the extracted variance is 73.293%, which means that 73.293% of the variation of the factors is explained by the observed variables.

**Table 8. Total Explained Variance**

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	4.893	27.185	27.185	4.893	27.185	27.185	3.188	17.710	17.710
2	3.204	17.801	44.986	3.204	17.801	44.986	2.985	16.584	34.293
3	2.095	11.638	56.624	2.095	11.638	56.624	2.912	16.177	50.470
4	1.762	9.791	66.416	1.762	9.791	66.416	2.297	12.759	63.229
5	1.238	6.877	73.293	1.238	6.877	73.293	1.811	10.063	73.293
6	.772	4.287	77.580						
7	.732	4.069	81.648						
8	.558	3.101	84.750						
9	.524	2.912	87.661						
10	.454	2.524	90.185						
11	.353	1.963	92.148						
12	.319	1.773	93.921						
13	.254	1.413	95.334						
14	.238	1.321	96.655						
15	.200	1.112	97.767						
16	.185	1.027	98.795						
17	.150	.835	99.630						
18	.067	.370	100.000						

Extraction Method: Principal Component Analysis.

Source: data processing results via SPSS

*Model results*

Through the quality inspection of the scale and the verification of the EFA model, it was identified that there are 6 scales representing the factors affecting the buying decision and 1 scale representing the customer’s decision to buy Xiaomi phones in Hanoi City.

**Table 9. Rotation Component matrix**

**Rotated Component Matrix<sup>a</sup>**

	Component				
	1	2	3	4	5
GSP2	.851				
GSP4	.842				
GSP3	.829				
GSP1	.811				
CL1		.882			
CL2		.802			
CL4		.800			
CL3		.799			
TH1			.880		
TH4			.834		
TH3			.814		
TH2			.712		
HĐCT2				.873	
HĐCT3				.816	
HĐCT1				.776	
CSKHSM4					.800
CSKHSM2					.769
CSKHSM3					.725

Extraction Method: Principal Component Analysis.  
Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 5 iterations.

Source: data processing results via SPSS

### Multivariate regression analysis

In order to identify the factors affecting the decision to buy Xiaomi phones of customers in Hanoi, the overall correlation model has the form:

$$QDM=f(GSP, CL, TH, HDCT, CSKSM)$$

In which: QDM: Dependent variable.

GSP, CL, TH, LC, CSC: Independent variable

The consideration of the factors GSP to customer care, which factor really affects the buying decision of Hanoi customers for Xiaomi phones directly will be done by linear regression equation:

$$QDM= \beta_0 + \beta_1 GSP + \beta_2 CL + \beta_3 TH + \beta_{4ACT} + \beta_5 CM + \epsilon_i$$

In which, the variables included in the regression analysis are determined by calculating the factor score (Factor score).

In Table 10, the correction factor  $R^2$  is 0.593. Thus, 59.3% of the change in customers' purchasing decisions is explained by the independent variables of the model.

The results in Table 10 show that the variance exaggeration factors (VIF) are all less than 10, so the regression model does not have multicollinearity. Durbin Watson coefficient ( $1 < d = 1.899 < 3$ ), so the regression model does not have autocorrelation. The results from the chart show that the regression model does not have the phenomenon of variance of the error to change.

In Table 10, with the Sig significance level.  $< 0.01$  of the F test, it can be concluded that the given model is consistent with the actual data. In other words, the independent variables are linearly correlated with the dependent variable and with a 99% confidence level. Exclude the Customer Care variable with the value Sig. = 0.962  $> 0.01$ , so we remove this variable from the model. The linear regression equation looks like this:

$$QDM= \beta_0 + \beta_1 GSP + \beta_2 CL + \beta_3 TH + \beta_4 LC + \epsilon_i$$

In Table 10, the significance level column shows that all variables from GSP to HDCT have statistical significance greater than 0.05. Thus, all the factors GSP to the activities have a significant influence on the satisfaction of tourists with the services with 95% confidence.

**Table 10. Model Summary**

Independent variables	Unnormalized regression coefficient (B)	Valuet	Sig statistical significance level.	VIF	Normalized Regression (Beta)	Beta	Contribution of variables (%)	The importance of variables
Constant	-2,395E-17	.000	1,000 yen					
GSP	.250	6,436 ***	.000	1,000 yen	.250	.250	16.79	4
CL	.481	12,375 ***	.000	1,000 yen	.481	.481	32.30	first
th	.476	12,259 ***	.000	1,000 yen	.476	.476	31.97	2
HDC	.282	7,267 ***	.000	1,000 yen	.282	.282	18.94	3
Total						1.489	100	

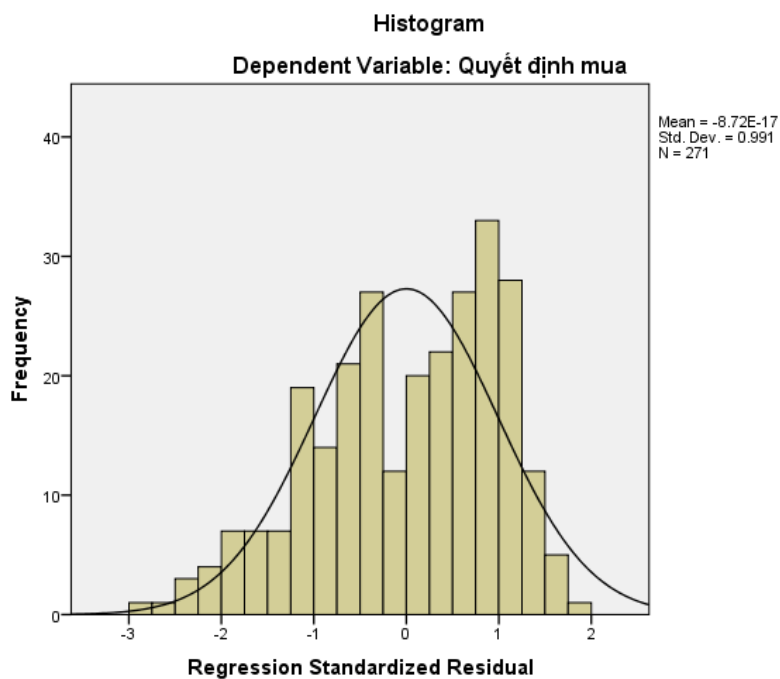
Dependent variable: QDM - Decision to buy Xiaomi phone	
Observation capacity	271
F (5;162.027)	79,533 ***
R factor <sup>2</sup>	.600
Corrected R2 <sup>Factor</sup>	.593
Durbin Watson	1,899
Note: *** Significance level Sig. < 0.01, ** Sig significance level. < 0.05, * Significance level Sig. < 0.10 (Two-sided test).	

Source: data processing results via SPSS

From the above table, the author obtains the following regression equation:

$$QDM = -2.395E-17 + 0.250GSP + 0.481CL + 0.476TH + 0.282HDCT$$

**Figure 2. Results of testing the phenomenon of variance of variable error**



Source: data processing results via SPSS

### 3.3. Discuss regression results

The variables GSP, CL, TH, and activities have a positive relationship with the variable QDM. To determine the influence of the independent variables, we determine the coefficient of normalized regression. Unnormalized regression coefficients that can be converted as percentages are shown in Table 11.

Through the results of Table 11, we see that the order of importance of variables affecting satisfaction is as follows: The highest is CL “Perceived quality” (32.3%); followed by TH “Brand” (31.97%); Executive Council “Promotion activities” (18.94%); The lowest is GSP “Product price” (16.79%).

**Table 11. Summarize the results of testing the research hypotheses**

<b>Sign</b>	<b>Hypothetical content</b>	<b>Sig.</b>	<b>Conclusion</b>
H <sub>1</sub>	Product price has a positive impact on customers' decision to buy Xiaomi phones in Hanoi city.	0.000	Accept hypothesis
H <sub>2</sub>	Product quality has a positive impact on customers' decision to buy Xiaomi phones in Hanoi city.	0.000	Accept hypothesis
H <sub>3</sub>	The brand has a positive impact on customers' decision to buy Xiaomi phones in Hanoi.	0.000	Accept hypothesis
H <sub>4</sub>	Promotion activities have a positive impact on customers' decision to buy Xiaomi phones in Hanoi city.	0.000	Accept hypothesis
H <sub>5</sub>	After-purchase customer care has a positive impact on customers' decision to buy Xiaomi phones in Hanoi city.	0.962	Reject the hypothesis

#### **4. Conclusions and recommendations**

##### **4.1. Conclusion**

Based on the theoretical review, a research model was developed for this study. This model was tested with a sample of 271 customers who have purchased Xiaomi phones. With the results obtained, this study has positive contributions in practice, specifically as follows:

- Regarding the decision to buy Xiaomi phones of customers in Hanoi today, this study has shown that the decision to buy a Xiaomi phone is at a relative level, above the average (average value = 3,215) . Thus, administrators need solutions to increase their decision to buy Xiaomi phones even higher in the near future.

- About the scale used in this study. The results show that the entire scale used in the study is reliable (Cronbach's Alpha > 0.6) and can be used for other studies.

- Regarding the factors affecting the decision to buy Xiaomi phones of customers in Hanoi city, the research shows that there are 04 components that affect from the strongest to the lowest in the following order: Perceived quality, Brand, Promotion, and Product Price.

##### **4.2. Proposed Solutions**

###### *Group of factors "Product price"*

The research results show that "Product price" is the factor with the lowest influence ( $\beta=0,250$ ) on the decision to buy Xiaomi phones of customers in Hanoi city in the group of 04 influencing factors in the research scope of the topic. To increase the decision to buy Xiaomi phones through this factor, the author proposes some solutions as follows:

Firstly, the majority of survey respondents' income is at low-income level and they think that the price of the phones Xiaomi offers is reasonable, and is the first choice. However, in today's vibrant phone market, Xiaomi no longer occupies a unique position in the low-cost phone segment. Facing competitors such as Oppo, Realme, Samsung A series, etc., Xiaomi needs to come up with some strategies to support prices for products by reducing production costs, marketing and distribution costs. The author proposes some measures as follows:

- Promote online sales activities. The cost of a product is not only the cost of materials, and wages but also marketing, advertising, brand positioning, retail store rental, staff

payment, etc. Online sales activities help Xiaomi not have to worry about warehousing and distribution costs.

- Cut costs at every stage: in marketing, do not use the traditional advertising model, but depend entirely on social networks as well as word of mouth because the cost of advertising on social networks is lower and has more influence. radiate much stronger.

- Extended product production time to maintain 18-20 months of launch. Because according to Moore's law "Assembly costs will decrease over time, but the price of the phone will remain stable in the long run".

Second, in order to increase its market share, it is time for Xiaomi to change its pricing strategy. "Cheap" is the most obvious "face" of the Xiaomi brand, but this invisibility has generally made this company fade. As evidence, Xiaomi's phone lines are not enough to convince high-income customers, consumption according to the author's investigation this group of people is the lowest. Therefore, Xiaomi needs to make a new move in the near future to capture market share in the high-end phone segment. The author recommends the following measures:

- Create high-end segment products to compete with "big guys" like Samsung, and Apple, ... Because today's phone is not only a utility device but also "jewelry" of users. Creating quality products at high prices is the first step for Xiaomi to attract these high-end customers.

#### *Group of factors "Perceived quality"*

The research results show that "Perceived quality" is the factor with the highest degree of influence ( $\beta=0.481$ ) on the decision to buy Xiaomi phones of customers in Hanoi city in the group of 04 influencing factors in the research scope of the topic. To increase the decision to buy Xiaomi phones through this factor, the author proposes some solutions as follows:

- Focus on developing and improving product quality.

Xiaomi needs to focus on investing later in quality in the process of building the Xiaomi phone product development strategy. The perceived quality of a brand is the main cause of consumer trust and loyalty. Moreover, perceived quality can help Xiaomi sell products at a premium price as well as make it easier for the company to introduce new product lines into the market. To do this, Xiaomi must constantly improve the quality of its current products as well as any new product lines that come to the market. And the company also needs to invest in improving product quality to create specific products such as style, design, color, and user experience... for different customer groups.

- Create product differentiation.

In today's smartphone market, copying the functions, uses, forms and designs of the product is easy to do, while the smartphone product life cycle is very short. because technology has advanced tremendously. Only the brand difference factor helps the brand to have a superior and more prominent position compared to other brands, thereby increasing customer loyalty to the brand. This difference can come from product differences, customer experience differences, after-sales service differences, and a host of other differences.

In addition, stores, authorized dealers or phone supermarkets in Hanoi can make a difference in the process of bringing Xiaomi phone products to consumers by enhancing existing facilities. At the point of sale, unifying a set of brand images when selling Xiaomi

products, in the way that Xiaomi is aiming for: community-focused design philosophy and communication with customers, with space maximum openness, continuous operation, and providing customer care services with the best customer experience.

#### *Group of elements “Brand”*

The research results show that “Brand” is the second most influential factor ( $\beta = 0.476$ ) on the decision to buy Xiaomi phones of customers in Hanoi city in the group of 04 influencing factors in the area of Xiaomi. micro-research of the topic. To increase the decision to buy Xiaomi phones through this factor, the author proposes some solutions as follows:

- Brand enhancement,

Consumers have the opportunity to experience the value of a business’ brand when they scan a product code. Enhance the support for the website and facebook of the business by taking advantage of the information available on it and optimizing the content for each product, ensuring the best experience for consumers.

- Collecting user information to identify customer needs and their assessment of the company’s product quality.

- Improve product quality.

This is the most important method because quality is the face of the brand and makes the success or failure of that brand.

#### *Group of factors “Promotional activities”*

The research results show that “Promotional activities” is the third most influential factor ( $\beta=0,282$ ) on the decision to buy Xiaomi phones of customers in Hanoi city in the group of 04 influencing factors. within the scope of the study. To increase the decision to buy Xiaomi phones through this factor, the author proposes some solutions as follows:

- Implement effective marketing strategies.

Currently, many studies show that Xiaomi’s advertising coverage in the Vietnamese market is still poor compared to two direct competitors, Samsung and Apple. Therefore, in order to improve the attitude of customers towards promotion, Xiaomi and its stores and authorized agents need to do more to increase the coverage of advertising forms, hitting the depth of Vietnamese culture. Nam when building advertisements and promotional programs. Xiaomi can create psychological tactics that cause fever for the user community instead of simply advertising on the mass media, creating rumors and predictions for new products for consumers, instead of disclosing all information to users. Or Xiaomi can create controversial topics on social media. To make up for those debates, Xiaomi can reach out to the press, and influencers of the target public, providing them with some information about the product offering.

- Promote information and communication activities.

Personalized communication to customers. The system of stores and authorized dealers of Xiaomi in Hanoi must collect specific and detailed information from customers, effectively improving the ability to interact with each customer. This will make customers feel closer and more trusting of the Xiaomi brand.

Customer brand loyalty is an extremely important factor for the success and development of the business. Therefore, creating and maintaining customer loyalty to your brand is one

of the great challenges for all marketers of all industries and sectors, especially in the competitive field. competition as fierce as smartphones in the near future.

### ***4.3. Limitations of the study and directions for further research***

Although the study has completed the research objectives set out, there are still some limitations as follows:

Firstly, the study is conducted with survey subjects who are customers who have bought Xiaomi phones with random sampling method, so the research results are not representative. Therefore, further research should use probabilistic sampling to increase representativeness.

Second, this study only explains 59.3% of the variation of Xiaomi phone purchase decision by the variation of 5 independent variables. Thus, there are many other factors affecting the decision to buy Xiaomi phones that the research has not found. Therefore, the next research needs to do more in-depth research to find out some new factors affecting the decision to buy Xiaomi phones of customers in Hanoi city.

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# THE SITUATION OF VIETNAMESE COMERCIAL BANKS' CODE OF CONDUCT

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## **Abstract**

Business integrity will ensure sustainable development goals for Vietnamese commercial banks. One of the tools for conducting business with integrity a code of conduct (CoC) within the bank. The article will analyze in depth the code of conduct, the relationship between CoC and business integrity, thereby ensuring the sustainable development of commercial banks.

**Keywords:** Code of conduct, commercial banks, Vietnam

## **1. Introduction**

Many oorganizations realized that good conduct will contribute to integrity and then the marketplace success (IFAC, 2007). It is also assert by many theorist that clear core values are essential to high-performing organization, and that good conduct is good business (Gorenak& Košir, 2012). Facilitating ethical behavior in organizations can help to safeguard reputation and to convey a commitment to responsible practice to both society and regulators.

## **2. Literature review**

### ***2.1. Integrity business***

To develop sustainably, it is important for businesses to have an integrity business system. Some business integrity concepts are known such as: Business integrity is “Put honesty above profit”, or Business integrity is “Transparency and positive growth”; “Create minimal negative impact on society” ; “Doing the right thing even when no one is watching”; “Doing business while caring for people and the planet”; “Take responsibility for what we promise to deliver to consumers” (UNDP, 2020).

### ***2.2. The importance of integrity to the sustainable development***

Vietnam’s economy needs to create confidence for foreign investors about business prospects, so along with efforts to implement e-government and cut administrative procedures to reduce the burden on businesses, the government is also determined to build a government of integrity by increasing transparency and mobilizing actors in the economy to act together.

Building and implementing the internal control mechanism and the Code of Conduct is one of the effective measures to help enterprises do good corporate governance towards sustainable development by ensuring the implementation of commitments with stakeholders.

An enterprise with a weakened internal control mechanism coupled with a loose code of conduct, governance and control functions will be less effective, leading to increased opportunities for fraud or non-compliance with the law and regulations. In contrast, with a strict and appropriate Code of Conduct, monitoring functions can be effectively promoted and detection and prevention of fraud/non-compliance with the law can be done earlier.

In addition, an effective Code of Conduct also helps business leaders analyze risks, factors and subjects responsible for fixing vulnerabilities, and at the same time control future activities. Code of Conduct helps prevent fraud/non-compliance by reducing the chance of camouflage for such behavior and controlling factors such as motives and justifications for behavior. help prevent bribery, promote anti-corruption activities in business (VCCI, 2019). The development and implementation of a code of conduct and a code of professional ethics is one of the six groups of basic measures to prevent corruption as stipulated in the 2018 Anticorruption Law.

### 2.3. The CoC tool to practice integrity

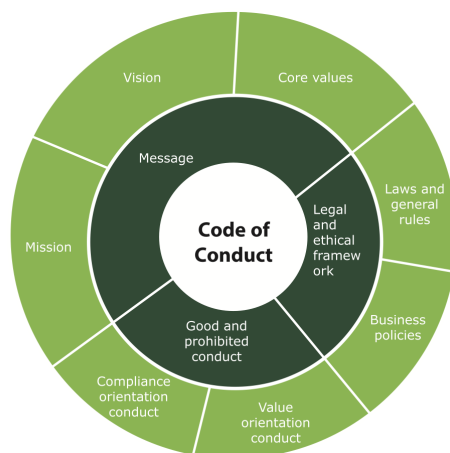
Definition:

Code of conduct is “a set of principles and standards of conduct issued and applied by businesses in order to achieve core values; preventing violations of professional and business ethics; promoting a fair and responsible business spirit”. (VCCI, 2019).

The Code of Conduct is a basic tool through which management gives guidance to employees and agents about what they expect of employees, and agents to conduct in the business (US Department of Commerce, 2004).

*Codes of conduct are “principles, values, standards or codes of conduct that guide an organization’s decisions, processes and systems” (IFAC, 2007)*

Thus, CoCs are principles and standards of behavior that are built to ensure that the core values of the business will be implemented, minimizing the risk of violating professional ethics. The set of CoC in the enterprise has many different names such as: Code of Ethics, Code of Values, Code of Professional Ethical Standards and Code of Conduct.



(VCCI, INDP and British Embassy in Hanoi, 2020)

The CoC applies to all members of the business, including from the BOD to official employees, service contract staff, and affiliated entities (VCCI, 2021). In general, the CoC often focuses on issues of ethics, social responsibility and how it applies to individuals in

the business. Therefore, CoC plays a major role in building and maintaining professional ethics.

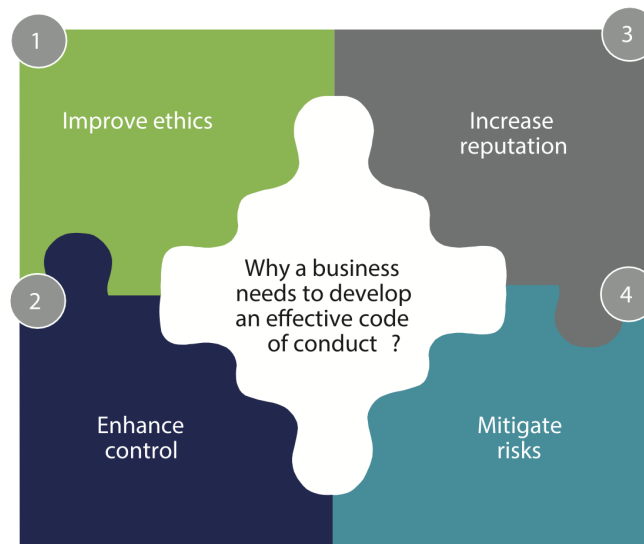
Current regulation of CoC related to banking industry

Law on Anti-corruption	According to the legislation, companies and other economic organizations adopt CoCs to prevent conflicts of interest, acts of corruption and for the sake of a healthy and corruption-free business environment. In addition, the Law also requires public companies, credit institutions to implement measures of publicity and transparency; control conflicts of interests; identify clearly the responsibilities of the heads and deputy heads of organization. The 2018 Law on Anti-Corruption also expands the scope of regulation by covering corrupt acts committed by persons in office in the non-state sector’s businesses and organizations, which include: embezzling property; taking bribes; offering bribes, intermediating bribes by persons in positions and/or powers to settle affairs of businesses and organizations for personal gain.
Code of Conduct and Code of Ethics issued by the Banking Association of Vietnam	“Professional code of ethics and code of conduct of bank staff” issued together with Decision No. 11/QD-HHNH dated February 25, 2019 by the Council of Vietnam Bankers Association.

*- Role of CoC in business integrity practice*

So, why is the Code of Conduct crucial and necessary for achieving integrity and long-term development? The response is that establishing and maintaining a CoC would increase the value of the company. Businesses will not be able to ensure that their employees and business partners will conduct professionally and retain a focus on maximizing company benefits without a proper Code of Conduct.

According to VCCI and UNDP (2020), businesses need to have their own code of conduct because it can i) enhance transparency in operations and professional **ethics** of the leadership team as well as employees, ii) help to increase the **reputation** of domestic and international enterprise, iii) **Minimize legal risks**, save time and resources for businesses and iv) reflect the **vision, strategic goals and corporate culture**, so enhance the control environment as well as the internal control of the organizations because it can be seen as a basis for the compliance check process, as a basis for sanctioning violations



VCCI, INDP and British Embassy in Hanoi, 2020

*- The crucial content of CoC*

In the Control Environment component of Internal Control, the Code of Ethics and the CoC are a central component. The board should set the “tone at the top” and oversee management’s role in fostering and maintaining a sound corporate and risk culture. Management should develop a written code of ethics or a code of conduct. Either code is intended to foster a culture of honesty and accountability to protect the interest of its customers and shareholders (Basel, 2015, Corporate governance principles for banks)

The heart of the Control Environment lies in Code of Ethics or Conduct. While the two terms - “ethics” and “conduct” - are often used interchangeably, there is in fact a difference between the two:

A Code of Ethics is a wide-ranging, non-specific set of general principles that enable employees to make independent judgements about the most appropriate course of action. It is in essence a statement of values, providing moral guidance to help the company make the right decision when facing ethical dilemmas or debatable situations in business. Ethical codes are commonly used in the context of “professional ethics”.

By contrast, the CoC is a more detailed, specific set of moral and legal principles for the members of a company, which governs their employees’ actions on how to behave and do business with the other stakeholders. A widely-used definition of Code of Conduct CoC is the one given by the International Federation of Accountants in its 2007 International Good Practice Guidance - Defining and Developing an Effective Code of Conduct CoC for Organizations. According to the guidance, a Code of Conduct is the “*principles, values, standards, or rules of behavior that guide the decisions, procedures and systems of an organization in a way that (a) contributes to the welfare of its key stakeholders, and (b) respects the rights of all constituents affected by its operations.*”

Large organizations may have both a Code of Ethics and a CoC, or just one of the two. Some companies may have a Code of Ethics which acts as a CoC, or vice versa. For example, on its web site, Shell publishes both “The Shell General Business Principles”, which is a Code of Ethics, and “Our Code of Conduct” under Our Values section, using the

CoC to support its Code of Ethics. In order to give more detailed guidance for Principle Three: Business Integrity in “The Shell General Business Principles”, the company wrote a whole nine-page chapter “Managing Risk in Third Party and International Interactions” in its CoC, clarifying employees’ responsibility to ensure the integrity of Shell in any aspect of business. Johnson & Johnson publishes not only “Our Credo”, which is a Code of Ethics, but CoC for different parts of the workforce and in various languages.

In general, the CoC provides standards for professional and ethical behavior, clarifying what is and is not acceptable in internal and external relations, including key issues such as:

- + Missions, vision and core values of businesses

- + Scope of legal framework and standards for compliance by businesses: risks of non-compliance

- + Basic principles for conduct of businesses such as: Integrity, Cooperative union; Social responsibility

- + The do’s and don’ts

- + Action plans

- + Detecting and handling of violation

- *Disclosing the CoC:*

In general, the bank should apply the disclosure and transparency section of the 2004 OECD principles as following:

“Disclosure should include, but not be limited to, material information on:

1. The financial and operating results of the company.

2. Company objectives.

3. Major share ownership and voting rights.

4. Remuneration policy for members of the board and key executives, and information about board members, including their qualifications, the selection process, other company directorships and whether they are regarded as independent by the board.

5. Related party transactions.

6. Foreseeable risk factors.

7. Issues regarding employees and other stakeholders.

8. Governance structures and policies, in particular, the content of any corporate *governance code or policy* and the process by which it is implemented”

The corporate governance framework should ensure that timely and accurate disclosure is made on all material matters regarding the corporation, including the financial situation, performance, ownership, and governance of the company.

Article 10, Law on Anti-Corruption No. 36/2018/QH14 (2018) also stipulates the contents that need to be made public and transparent about the organization and operation of the unit, including: c) Organization and personnel of agencies, organizations and units; code of conduct of people.

### 3. Methodology

There are 2 research questions:

- How is the disclosure of the code of ethics/Code of conduct of the bank and
- In case they are disclosed, how is the suitable and relevant of the CoC with the normal practices?

#### **For the first question about the disclosure of CoC**

Pursuant to the requirements of the OECD (2004) and Basel (2015) and the anti-corruption law on corporate governance (2018), banks are required to disclose information on issues related to standards. standards of ethics and code of conduct, the author conducted a survey on the website of commercial banks to check whether Vietnamese banks have published the above code, who are involved Is it accessible or not? The results show the following:

**Table 1. Survey the banks disclosing Code of Conduct**

	<b>Name of the bank</b>	<b>Disclosed in website</b>
1	An Binh Commercial Joint Stock Bank	Y
2	Asia Commercial Joint Stock Bank	N/A
3	Bac A Commercial Joint Stock Bank	N/A
4	Bao Viet Commercial Joint Stock Bank	Y
5	Ho Chi Minh City Development HDBank	N/A
6	Joint Stock Commercial Bank for Foreign Trade of Vietnam (VCB)	Y
7	JSCB for Investment and Development of Vietnam (BIDV)	N/A
8	Kienlong Commercial Joint Stock Bank	N/A
9	LienViet Post Joint Stock Commercial Bank	N/A
10	Military Commercial Joint Stock Bank	N/A
11	National Citizen Commercial Joint Stock Bank	N/A
12	Orient Commercial Joint Stock Bank	N/A
13	Petrolimex Group Commercial Joint Stock Bank	N/A
14	Sai Gon JSCB	N/A
15	Saigon - Hanoi Commercial Joint Stock Bank	N/A
16	Saigon Bank for Industry and Trade	N/A
17	Saigon Thuong Tin Commercial Joint Stock Bank	N/A
18	Southeast Asia Commercial Joint Stock Bank	N/A
19	Tien Phong Commercial Joint Stock Bank	N/A
20	Vietnam Bank for Agriculture and Rural Development (Agribank)	Y
21	Vietnam Export Import Commercial Joint Stock Bank	N/A
22	Vietnam International Commercial Joint Stock Bank	N/A

	<b>Name of the bank</b>	<b>Disclosed in website</b>
23	Vietnam Joint Stock Commercial Bank for Industry and Trade (Vietinbank)	N/A
24	Vietnam Maritime Commercial Joint Stock Bank	N/A
25	Vietnam Prosperity JSCB	Y
26	Vietnam Technological and Commercial Joint Stock Bank	N/A
27	Housing development Commercial Joint Stock Bank (HDBank)	N/A
28	Southern Commercial Joint Stock Bank	N/A
29	Viet Capital Commercial Joint Stock Bank (Viet Capital Bank)	N/A
30	Viet A Commercial Joint Stock Bank	N/A
31	Nam Viet Commercial Joint Stock Bank	N/A
32	Viet Nam Thuong Tin Commercial Joint Stock Bank	N/A
33	Western Bank (Phuong Tay Bank)	N/A
34	Viet Nam Public Bank (PVcomBank)	N/A

*By: Author*

- Among the 34 banks surveyed, there are

+ 14.7% banks publish CoC on website (marked as Y in table 1) and make it accessible including: An Binh Commercial Joint Stock Bank, Bao Viet Commercial Joint Stock Bank, Joint Stock Commercial Bank for Foreign Trade of Vietnam, Vietnam Bank for Agriculture and Rural Development and Vietnam Prosperity JSCB.

+ 85.2% of banks do not publish on the website (marked as N/A in table 1). However, this does not mean that they have not built CoC. Many banks have issued but only for internal circulation, thus reducing the credibility of related parties.

+ With 5 announced banks, the names of the Code of Conduct are different, for example:

**Table 2. The diversified Code of Conduct in Vietnamese Banks**

	<b>Name of the bank</b>	<b>Name of the CoC</b>
1	An Binh Commercial Joint Stock Bank	Code of Ethics
2	Bao Viet Commercial Joint Stock Bank	Code of Conduct and Code of Ethics of Baoviet Holdings.
3	Joint Stock Commercial Bank for Foreign Trade of Vietnam (VCB)	VCB Handbook Culture
4	Vietnam Bank for Agriculture and Rural Development (Agribank)	Code of ethics and code of conduct issued by the banking association, not the bank's own
5	Vietnam Prosperity JSCB (VP Bank)	VPBank Code of Conduct and Code of Ethics.

*By: Author*

## **For the second question about the suitable and relevant CoC:**

There are two main groups as below:

*The first group build a sketchy set of standards:*

In some banks like An Binh Bank, the set of standards consists of only 8 professional ethics, including: Compliance with laws and regulations, confidentiality of information, not abusing power, preserving and improving image of the bank, behave properly with colleagues, serve customers professionally and friendly, avoid conflicts of interest. Other than that, there isn't any additional content. Or Baovietbank uses the same content of the whole group, not the CoC of the bank itself or just uses the code of conduct issued by the Vietnam banking association, not the organization's own (Agribank).

The second group, the set of standards that have been made public, meets the required basic contents.

For VCB, all contents are recorded in the cultural handbook including: Mission, vision, operating philosophy, image and brand, cultural identity with 5 words Trust, standards, availability. willing to innovate, sustainable and humane; ethics and responsibilities of Vietcombank people; The standards of behavior of Vietcombank people are very complete and detailed; Or for VP Bank, it also introduced 6 core values, Code of Conduct and Professional Ethics (responsibility towards the bank, colleagues, customers, partners, suppliers, management agencies).

## **4. Discussion and Recommendations**

It can be seen there are some limitations with the CoC in Vietnamese Bank currently:

In the world, finding the CoC version of any big bank is extremely easy, but in Vietnam, it is difficult. Many banks are not aware of the importance of information disclosure, so they have not yet announced it. The number of undisclosed banks on CoC is too large (more than 80%). Even among them, many banks have built but only circulated internally, it also reduces the value of the CoC a lot, because when it is transparently announced, it shows the strength and commitment.

Not only small banks, but also big banks, belonging to the Big 4 group, have not been built (Agribank, Vietinbank) and have not been announced. These banks only use general codes of conduct issued by banking associations or just have set up professional ethics standards for some departments such as internal audit.

For banks that have been built the CoC, the content is still sketchy, not meeting the requirements of Basel or the OECD. Many banks have issued CoCs nearly 10 years ago but have not yet updated or supplemented (VP Bank issued in 2013, VCB in 2010). The last but not least, the form of the CoC is not eye-catching and has not created motivation for readers to research and implement.

Some reasons can be found:

Firstly, CoCs in business are precisely defined in the 2018 Anti-Corruption Law. Companies implement CoCs to avoid conflicts of interest, acts of corruption, and to



promote a healthy and corruption-free corporate environment, according to the law. CoCs in business, on the other hand, are not expressly or systematically addressed under Vietnam’s present legislation, which treats them as recommendations for the purpose of preventing corruption rather than as necessary standards that businesses must follow.

Secondly, many banks themselves have not really paid attention to CoC which is a mechanism along with internal control system that will create a safe and healthy control environment and help build solid defenses for operations. Therefore, some recommendations for the CoC as following:

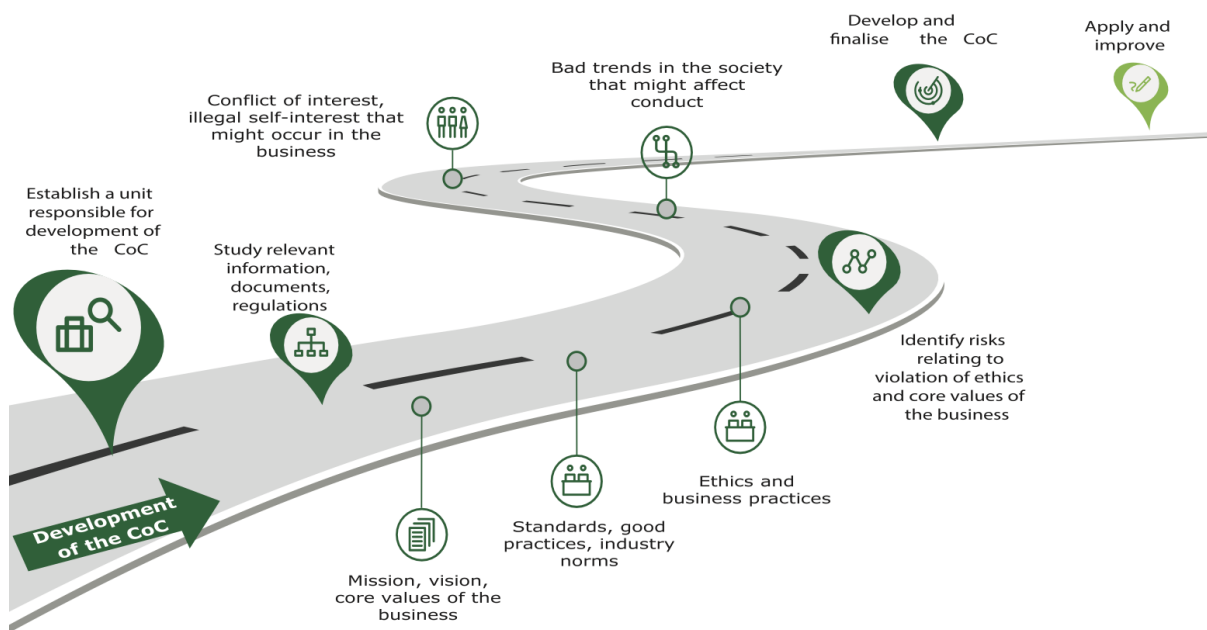
*- The need for Code of Conduct’s Legal basis*

This will make legislators need to further improve the legal basis of the Code of Conduct and introduce regulations to encourage Vietnamese businesses to apply and implement.

*- Raise awareness of managers:*

Implement the formulation and promulgation of the Code of Conduct applied to all levels from leaders to employees. Each manager must be an example to their subordinates in their daily behavior. Commend employees who demonstrate good performance regarding ethical standards in a timely manner and impose strict discipline on those who are dishonest or involved in fraud, negatively affecting the interests of the business.

*- Building CoC methodically and scientifically through the following steps:*



+ The vision, mission, core values of the bank should be identified first.

+ Then, identify the Standards, good practices, industry norms, ethics in the same field with the same scale

+ Identify risks leading to violations of ethics or core values of the business.

+ The draft of code of conduct can be developed and improved.

+ Issue the CoC

+ Evaluate and improve the CoC

- *Build CoC easy to understand, easy to implement:*

+ Language: CoC should use plain language and avoid legal terms. Besides, wording should be positive and encouraging

+ Format: CoC should be designed eye-catching

- *Using the checklist to make sure the conditions are satisfied before building the CoC:*

+ Firstly, about the Information and document: Mission, vision and core values? The most recent documents governing moral standards? The most recent anti-corruption and anti-bribery documents and legislation? Practice/performance in comparison to other businesses in the same industry's moral standards (including both domestic and foreign businesses)? Regulations relating to social and environmental responsibilities are also included (especially towards businesses operating in fields that may affect the environment)? Understanding the social standards of the area in which the firm operates, as well as potential conflicts of interest in sectors of activity?

+ Secondly, about the resources and participation: Is the Board of Leaders really paying attention and devoting time to developing and implementing the Code of Conduct? Creating/implementing a Code of Conduct working group? Periodic performance evaluations include assessments of Code of Conduct compliance and violations? Having a role or position that focuses on advising on how to put the Code of Conduct into action?

## 5. Conclusion

Sustainable development of the economy requires a sustainable business sector. Building a solid CoC helps the bank to ensure that their employees and business partners will conduct professionally and retain a focus on maximizing company benefits. However, the CoC in Vietnamese banks are not paid attention to build so far. Some recommendations have been raised to assure that CoC can attain the interest of related parties.

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# FACTORS AFFECTING THE DECISION TO USE GENZ'S PAYMENT IN KIND

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## **Abstract**

Payment in Kind in general and electronic payment is an inevitable trend of the whole world and Vietnam is no exception. According to the annual report of the State Bank of Vietnam, by the end of 2021, there are over 80 organizations providing payment services via the internet and 44 organizations providing mobile payment services, with the number of transactions reaching several hundred million billion dong. The methods of shopping malls are constantly increasing strongly. Account opening and use by individuals continues to increase. In 2021, Vietnam currently has about 40 million people using the bank payment system every day, the growth rate of mobile banking services (Mobile Banking) over the past 5 years is 262.5%. Vietnam has a population of more than 90 million people, mostly young people, 80-90% of the population uses the Internet. These numbers are the main reason why experts consider Vietnam a potential FinTech (financial technology) market. However, the commercial center in Vietnam has not developed as expected, the rate of transactions using cash is still high. Consumers have been facing barriers when making a decision to use the service. What are these barriers when the utilities of financial technology services have been upgraded, security risks as well as technical infrastructure will be reduced day by day?

The research "Factors affecting the decision to use GenZ's cashless payment" will find out the compatibility between the service and the user, the utility and the customer's expectations when using the service to increase the number of access to this form.

**Keywords:** Payment in kind, electronic payment, GenZ, Vietnam

# RESEARCH OF FACTORS AFFECTING CAPITAL STRUCTURE OF PHARMACEUTICAL ENTERPRISE ON THE VIETNAM STOCK EXCHANGE

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## **Abstract**

The study was conducted with the main objective of examining the relationship between capital structure and firm-specific factors including profitability, tangibility, growth, size, liquidity and operating leverage. Quantitative data were collected from 25 listed pharmaceutical companies on HNX and HOSE between the period from 2016 to 2020, resulting in 125 observations. The authors apply and compare Pool OLS, FEM and REM models to find most suitable model to analyze the influence of the factors on capital structure. The regression results basing on FEM model - the most suitable model shows that *asset structure, business efficiency, firm age, solvency* have negative impact on corporate capital structure. On the other hand, *firm size* has negative impact on corporate capital structure.

**Keywords:** Capital structure, firm-specific factors, listed pharmaceutical companies.

## **1. Introduction**

Although Vietnam's pharmaceutical market is still small, it is expected to continue to grow the fastest in Asia and has high potential for investment in the Asia-Pacific region. According to the Vietnam Drug Administration, the industry will grow in numbers over the next few years and reach \$16.1 billion in 2026, with a compound growth rate of up to 11%. Vietnam is a country that plays an important role in promoting the global pharmaceutical industry. When the COVID-19 pandemic occurs, Vietnam's pharmaceutical firms are not only supporting the country to prevent the pandemic, but also finding the way to overcome the difficult financial situation. For firms in general and pharmaceutical firms in particular, creating appropriate capital structure is one of the means to help them can achieve their objectives.

Capital structure is affected depending on the characteristics of each enterprise (size, profitability, tangibility, growth, liquidity and leverage...), the field of operation (manufacturing, financing, construction and pharmaceutical industry...) or the impact of macro economy (import, export index and inflation...). A number of researches has showed that capital structure of a firm has a relationship with firm - specific factors, some factors has positive and the others has negative impact on capital structure. Therefore, this study was conducted in order to examine the relationship between firm's capital structure and firm's characteristics in pharmaceutical industry in Vietnam. The result of the study can contribute for pharmaceutical firms in Vietnam a better view in constructing capital structure.

## 2. Background studies and hypothesis development

### 2.1. Background studies

There has been number of studies on corporate capital structure in the world. These studies are carried out in many different fields with very diverse research methods. The results of previous studies have shown a number of factors that affect the capital structure of enterprises.

*Nadeem Ahmed Sheikh (2015)* identified important factors affecting the capital structure of non-financial listed companies in the service sector. Empirical results show that profitability is inversely proportional to all capital structure measures. Liquidity is negatively related to total leverage and short-term leverage. Firm size is positively related to all capital structure measures, except it is negatively related to short-term leverage in the fixed-effects method. More importantly, tangibility is inversely proportional to total and short-term leverage. Finally, dividends are positively related to total financial leverage and short-term financial leverage.

*Ondiek (2010)* also carried out a study on the relationship between capital structure and financial performance of companies listed on the Nairobi Stock Exchange. This study concludes that a firm's profitability, tangible assets, and firm size are key determinants of capital structure to varying degrees. Therefore, firm size and profitability are important determinants of capital structure.

*Philippe et al. (2003)* analyzed the capital structure determinants for a group of 106 Swiss companies listed on the Swiss stock exchange using static and dynamic analysis methods for the period 1991 to 2000. The authors find that firm size, firm importance, tangible assets, and business risk have a positive effect on leverage, while growth and profitability have the opposite effect. direction with leverage.

*Titman and Wessels (1988)* found that the factors affecting the choice of capital structure of 469 companies listed on the US stock exchange from 1974 to 1982, using estimation method. The research results show that the short-term debt ratio is negatively related to the firm's size, and profitability is negatively related to the debt ratio measured at market prices. Small businesses tend to use more short-term debt than large firms, reflecting the high costs small businesses face when issuing long-term financial instruments. Business characteristics have a negative relationship with debt ratio. The remaining factors such as tangible assets, zero-debt tax shield, business risk, growth opportunities, industry pseudo-debt are not correlated with debt ratio.

*Vo Xuan Vinh (2017)* used a sample from the data of enterprises listed on the Ho Chi Minh City Stock Exchange from 2006 to 2015. The explanatory variables include growth, assets, tangibles, profitability, firm size and liquidity. This study shows that growth opportunity has a positive but not significant relationship for long-term and short-term leverage. Tangible assets have a positive and significant effect on long-term debt ratio but negative in explaining short-term leverage ratio. Firm size is positive and significant when used to explain long-term debt, and has a negative relationship with short-term debt.

*Tran Dinh Khoi Nguyen (2006)* discovered significant factors in explaining the capital structure of state-owned enterprises in the period 2001-2005, including loan interest, the proportion of fixed assets investment in total assets, rate of return on total assets, industry factors.

Although there have been many previous studies on the issue of capital structure, there has not been a comprehensive study in the field of medical pharmaceutical production. Therefore, the objective of this study is to fill this gap, to perform a comprehensive analysis of the factors that affect the capital structure of medical pharmaceutical enterprises, thereby creating a basis for other businesses. capital management to maximize corporate value.

## **2.2. Hypothesis development**

### *Profitability*

Profitability is reflected in the return on assets (ROA) ratio. Profitability has both a positive effect on the trade-off analysis and an opposite effect on the dissection analysis. The empirical studies also give different results, however, most of the studies show that ROA has a negative relationship with the debt ratio of the enterprise.

Empirical studies support this idea, including Titman and Wessels (1988); Wald (2001); Booth et al. (2001); Chen (2004); Viviani (2008); Jong and associates. (2008); Sheikh and Wang (2011); Saeed et al. (2014).

Hypothesis 1: Profitability is negatively related to the capital structure of the firm.

### *Growth*

Growth rate refers to the percentage change of a particular variable over a particular period of time and given a certain context. For investors, growth rate typically represents the compound annual growth rate of a company's revenue, earnings, dividends, or even macro concepts, like gross domestic product (Gross Domestic Product). GDP) and retail sales. Projected or tracked growth rates are two common types of growth rates used for analysis.

Ellili and Farouk (2011) found that the expected growth rate of the firm has a positive effect on long-term leverage and a negative effect on short-term leverage. The results confirmed that businesses prefer to finance their growth with long-term debt rather than short-term debt. However, the results of previous empirical studies on the relationship between expected growth and firm's capital structure have been rather ambiguous. This suggests that there is a negative relationship between expected growth and firm leverage

Hypothesis 2: Growth rate has a positive effect on the capital structure of the enterprise.

### *Enterprise size*

The size of the business is measured by the natural logarithm of the total assets of the business. Typically, the larger a company is, the more debt it can borrow, since large firms are more diversified and have lower risk of asymmetric information than small firms. According to agency cost theory, large firms tend to use more debt, this relationship is explained by information asymmetry between shareholders and managers.. It is supported by many empirical studies around the world, including Titman and Wessels (1988), Tran and Ramachandran (2006), Saeed et al (2014), Sheikh and Wang (2011).

Hypothesis 3: Firm size is positively related to the capital structure of the firm.

### *Asset structure (Fixed tangible assets)*

Fixed tangible assets is a variable reflecting the asset structure of an enterprise, which is determined by the ratio between fixed assets and total assets of the enterprise. Based on the theory of agency costs and trade-offs, owning more fixed assets can make it easier for a business to borrow money because it has collateral. Most research results show a positive relationship between tangible assets and capital structure, including Titman and Wessels (1988), Myers (2001), (Degryse et al., 2012), Michaelas et al. the (2000).

Hypothesis 4: Asset structure has a positive effect on the capital structure of the enterprise.

### *Solvency*

Solvency is an economic term used to refer to the ability to pay receivables and payables of the state budget, banks and economic organizations in a certain period of time. It is the result of the balance between revenue and expenditure sources or between economic capital (Capital) and available resources (Resource). For each specific objective, solvency is defined in a different way. Here, the authors only focus on the concept of solvency in business. For businesses, solvency refers to the ability of a business to be able to repay its due debts. In enterprises, solvency analysis is one of the powerful tools to assess the ability of an enterprise to meet its long-term and short-term financial tasks. Investors and lenders rely on solvency as a means of assessing a business's current and future credit rating and risk profile.

Hypothesis 5: Short-term solvency has a negative effect on the capital structure of the enterprise.

### *Age of business*

Usually, when a business has a high number of years of listing, the reputation of that business is built more firmly if the business is effective. This creates a solidity in the business process and product consumption. Therefore, the older an enterprise is, the more reliable the information about the business on the market will be, because this will make it easier for investors to access capital sources rather than borrow in the market. On the other hand, the life of an enterprise usually has 4 stages, the old business will be in the saturation stage, this stage has developed to the peak, the lack of capital will put less pressure on the manager and the business. Businesses tend to borrow less. Studies from Ellili and Farouk (2011), Hall et al. (2000); Kieschnick & Moussawi (2018) supported this result.

Hypothesis 6: The age of the firm has a positive effect on the capital structure of the enterprise.

## **3. Methodology**

### **3.1. Research model**

Basing on literature review and hypothesis from part 2, combined with the development status and characteristics of pharmaceutical companies listed on the Vietnamese stock exchange, the authors selected and analyzed factors affecting capital structure including: profitability, company size, corporate age, growth rate, assets structure and ability short-term payments. Then, the regression model is

$$TL = \beta_0 + \beta_1 \text{LnTSit} + \beta_2 \text{AGEit} + \beta_3 \text{GRit} + \beta_4 \text{TANGit} - \beta_5 \text{CRit} - \beta_6 \text{ROAit} + \text{eit}$$

The variables are explained and measured in table 1 below



**Table 1. Variables in the model**

Variables	Explanation	Symbol	Measurement
Capital structure	Capital structure of enterprise i at year t	Tlit	Total debt over total assets
Firm size	Size of firm i at year t	LnTSit	Total assets
Firm age	Age of enterprise i at year t,	AGEit	Number of operating years
Growth rate	Growth rate of enterprise i at year t	Grit	(Total assets in year t - total assets in year t-1)/ Total assets in year t-1
Assets structure	Assets structure	TANGit	Fixed assets over total assets
Short term solvency	Short-term solvency of enterprise i at year t	Crit	Current assets over current liabilities
Profitability	Profitability of enterprise i at year t	ROAIt	Profit after tax on total assets
E	Component of random error	Eit	

### 3.2. Data collection

The data in this research paper are collected from the financial statements of 25 companies in the medical pharmaceutical industry listed on the Vietnamese stock exchange from 2016 to 2020. The financial statements are prepared based on the principle of complying with the Vietnamese accounting standard system. The data source on the financial statements of the companies in the sample is taken from a highly reliable website: Vietnam Securities and Financial Data Portal (cafef.vn); ACB Securities Company www.acbs.com.vn; Vietstock.vn; cophieu68.vn. This results in 125 observations.

## 4. Research results

### 4.1. Descriptive statistics

**Table 2. Descriptive Circular**

View	Proc	Object	Print	Name	Freeze	Sample	Sheet	Stats	Spec	
				TL	ROA	AGE	GR	LNTS	CR	TANG
Mean				0.452906	0.064877	39.64000	0.080748	13.09716	2.036217	0.184332
Median				0.456887	0.063081	41.00000	0.060782	12.87810	1.541146	0.159663
Maximum				0.933766	0.201820	74.00000	1.063378	15.48033	5.054704	0.525966
Minimum				0.018564	-0.166288	10.00000	-0.889023	11.12147	0.619159	0.002605
Std. Dev.				0.241630	0.060099	16.67981	0.206344	1.187678	1.098353	0.119183
Skewness				0.248261	-0.223086	0.072217	0.081028	0.434434	0.920033	0.831615
Kurtosis				1.998538	4.544749	1.983972	9.849014	2.263619	2.656499	2.967105
Jarque-Bera				6.507604	13.46520	5.485281	244.4545	6.756187	18.24916	14.41363
Probability				0.038627	0.001191	0.064400	0.000000	0.034112	0.000109	0.000742
Sum				56.61321	8.109615	4955.000	10.09350	1637.145	254.5272	23.04152
Sum Sq. Dev.				7.239750	0.447870	34498.80	5.279635	174.9119	149.5909	1.761375
Observations				125	125	125	125	125	125	125

Source: Author's Statistics

Table 2 gives summary statistics of all variables used in the model. Descriptive statistics show that the average debt-to-total assets (TL) ratio of pharmaceutical manufacturing

enterprises listed on the Vietnamese stock exchange in the period 2016 - 2020 has an average ratio of 45.3 %.

The average operating efficiency (ROA) is low at only 6.48%, showing that the business performance of the industry is not high.

The age of enterprises (AGE) has a big difference, the smallest is 10 years and the largest is 74 years, the average age of enterprises is approximately 40 years, which shows the age of formation. Experience, competitive advantages in the market of enterprises are very diverse.

The average growth rate (GR) is about 8.07%, the highest increase is 106.34% and there are businesses with negative growth at -88.90%.

The average enterprise size (profitability tax) is quite high at 13.1 billion, in the variable of enterprise size, there is not much difference with the largest scale of 15.48 billion and the lowest of 11.12 billion. This shows that the size of enterprises is relatively uniform.

The relatively high short-term solvency ratio (CR) of 2,036 shows that the enterprise is able to pay its due debts, which shows a good signal of the enterprises.

The structure of tangible assets (TANG) on total assets is about 18.5% on average, this ratio is unevenly distributed among enterprises, in particular, there are enterprises with fixed asset value below 0.3%. but there are also enterprises with asset value reaching 52.59%.

Through descriptive statistics, it can be seen that there is a rather large difference in the size of enterprises between enterprises in the industry and business efficiency. There are very large scale enterprises (FIT, Hau Giang) but there are also small scale enterprises (Dong Nai, Hanoi). There are enterprises with relatively high profit margins (Nam Duoc, Nam Ha) but there are also enterprises with losses (Ladophar, TW25).

**Table 3. Correlation matrix**

View	Proc	Object	Print	Name	Freeze	Sample	Sheet	Stats	Spec	
<b>Correlation</b>										
				TL	ROA	AGE	GR	LNTS	CR	TANG
TL				1.000000	-0.430414	0.463837	-0.009671	0.029368	-0.665418	-0.384853
ROA				-0.430414	1.000000	-0.011092	0.202213	0.095776	0.344588	-0.058398
AGE				0.463837	-0.011092	1.000000	-0.117969	0.104525	-0.440379	-0.123559
GR				-0.009671	0.202213	-0.117969	1.000000	0.164693	-0.049487	-0.255089
LNTS				0.029368	0.095776	0.104525	0.164693	1.000000	0.245220	-0.389135
CR				-0.665418	0.344588	-0.440379	-0.049487	0.245220	1.000000	-0.001268
TANG				-0.384853	-0.058398	-0.123559	-0.255089	-0.389135	-0.001268	1.000000

*Source: Author's Statistics*

The results of the correlation analysis between the variables in the table 3 model show that the correlation coefficients between the variables are all less than 0.8, so the model does not exist multicollinearity, so there are conditions to Perform regression analysis to test the hypotheses. The results also show that the independent variables are all correlated with the dependent variable TL, however, the GR variable alone has a relatively small correlation.

#### **4.2. Regression results**

To evaluate and analyze the influence of factors on the capital structure of pharmaceutical enterprises, the authors performed a regression analysis on the capital structure variable

measured by the ratio of debt to total assets (TL). according to 6 influencing factors including: business performance (ROA), age of the business (AGE), growth rate (GR), business size (LnTS), short-term solvency (CR) and Asset structure is measured by the ratio of tangible assets to total assets (TANG).

### Regression results according to Pooled OLS. model

Regression results according to Pooled OLS model are reflected in the table below (table 4):

**Table 4 : Regression results according to Pooled OLS model**

View	Proc	Object	Print	Name	Freeze	Estimate	Forecast	Stats	Resids
Dependent Variable: TL									
Method: Panel Least Squares									
Date: 01/20/22 Time: 13:09									
Sample: 2016 2020									
Periods included: 5									
Cross-sections included: 25									
Total panel (balanced) observations: 125									
Variable	Coefficient	Std. Error	t-Statistic	Prob.					
C	0.744057	0.161734	4.600493	0.0000					
ROA	-1.078854	0.234595	-4.598785	0.0000					
AGE	0.002667	0.000910	2.931431	0.0041					
GR	-0.070280	0.067351	-1.043491	0.2989					
LNTS	0.003605	0.012298	0.293111	0.7700					
CR	-0.109929	0.015046	-7.306405	0.0000					
TANG	-0.784245	0.117568	-6.670595	0.0000					
R-squared	0.683355	Mean dependent var	0.452906						
Adjusted R-squared	0.667254	S.D. dependent var	0.241630						
S.E. of regression	0.139382	Akaike info criterion	-1.048823						
Sum squared resid	2.292433	Schwarz criterion	-0.890437						
Log likelihood	72.55142	Hannan-Quinn criter.	-0.984479						
F-statistic	42.44277	Durbin-Watson stat	0.331676						
Prob(F-statistic)	0.000000								

Source: Author's Statistics

### Regression results according to fixed effects model (FEM)

**Table 5. Regression results according to fixed effects model**

View	Proc	Object	Print	Name	Freeze	Estimate	Forecast	Stats	Resids
Dependent Variable: TL									
Method: Panel Least Squares									
Date: 01/20/22 Time: 13:19									
Sample: 2016 2020									
Periods included: 5									
Cross-sections included: 25									
Total panel (balanced) observations: 125									
Variable	Coefficient	Std. Error	t-Statistic	Prob.					
C	-0.536718	0.309138	-1.736176	0.0858					
ROA	-0.539899	0.181279	-2.978276	0.0037					
AGE	-0.016356	0.004012	-4.077191	0.0001					
GR	-0.038189	0.032781	-1.164991	0.2470					
LNTS	0.141158	0.025099	5.624124	0.0000					
CR	-0.065741	0.008768	-7.498187	0.0000					
TANG	-0.210637	0.105800	-1.990893	0.0494					
Effects Specification									
Cross-section fixed (dummy variables)									
R-squared	0.964442	Mean dependent var	0.452906						
Adjusted R-squared	0.953093	S.D. dependent var	0.241630						
S.E. of regression	0.052332	Akaike info criterion	-2.851426						
Sum squared resid	0.257435	Schwarz criterion	-2.150005						
Log likelihood	209.2141	Hannan-Quinn criter.	-2.566476						
F-statistic	84.98440	Durbin-Watson stat	1.306624						
Prob(F-statistic)	0.000000								

Source: Author's Statistics

## Choosing Pooled OLS model or FEM model?

To choose between Pooled OLS model or FEM model, it is necessary to test the equality of fixed effects with the following hypothesis:

H0: Equal alphas (Pooled OLS Model)

H1: The alphas are not equal (REM Model)

Regression results show that, Cross Section F and Chi-square statistics both have  $\text{Prob}=0.00 < 0.05$ , so the conditions for rejecting H0, accepting H1, mean that the fixed-effects model (FEM) is suitable for the Pooled model.

Regression results according to random effects model (REM)

The results of the random effects regression model are reflected in the table below:

**Table 6. Regression results according to random effects model**

View	Proc	Object	Print	Name	Freeze	Estimate	Forecast	Stats	Resids	
Dependent Variable: TL										
Method: Panel EGLS (Cross-section random effects)										
Date: 01/25/22 Time: 15:19										
Sample: 2016 2020										
Periods included: 5										
Cross-sections included: 25										
Total panel (balanced) observations: 125										
Swamy and Arora estimator of component variances										
Variable	Coefficient	Std. Error	t-Statistic	Prob.						
C	0.035221	0.229757	0.153298	0.8784						
ROA	-0.424787	0.165227	-2.570936	0.0114						
AGE	0.001334	0.001542	0.865224	0.3887						
GR	0.023471	0.029598	0.793002	0.4294						
LNTS	0.047674	0.016974	2.808676	0.0058						
CR	-0.075745	0.008407	-9.009543	0.0000						
TANG	-0.432408	0.095850	-4.511317	0.0000						
Effects Specification						S.D.	Rho			
Cross-section random						0.133457	0.8667			
Idiosyncratic random						0.052332	0.1333			
Weighted Statistics										
R-squared	0.558483	Mean dependent var	0.078230							
Adjusted R-squared	0.536033	S.D. dependent var	0.087763							
S.E. of regression	0.059780	Sum squared resid	0.421691							
F-statistic	24.87678	Durbin-Watson stat	0.923300							
Prob(F-statistic)	0.000000									
Unweighted Statistics										
R-squared	0.515690	Mean dependent var	0.452906							
Sum squared resid	3.506283	Durbin-Watson stat	0.111043							

Source: Author's Statistics

## Choosing between FEM model and REM model?

To choose between the FEM model and the REM model, it is necessary to perform the Hausman test with the following hypothesis:

H0:  $Cov(\varepsilon_i, X_s) = 0$ , there is no correlation between the explanatory variable and the random component

H1:  $Cov(\varepsilon_i, X_s) \neq 0$ , there is a correlation between the explanatory variable and the random component

### 4.3. Hausman test

**Table 7. Hausman test**

View	Proc	Object	Print	Name	Freeze	Estimate	Forecast	Stats	Resids
Correlated Random Effects - Hausman Test									
Equation: EQ01									
Test cross-section random effects									
Test Summary		Chi-Sq. Statistic		Chi-Sq. d.f.		Prob.			
Cross-section random		41.976676		6		0.0000			
Cross-section random effects test comparisons:									
Variable		Fixed		Random		Var(Diff.)		Prob.	
ROA		-0.539899		-0.424787		0.005562		0.1227	
AGE		-0.016356		0.001334		0.000014		0.0000	
GR		-0.038189		0.023471		0.000199		0.0000	
LNTS		0.141158		0.047674		0.000342		0.0000	
CR		-0.065741		-0.075745		0.000006		0.0001	
TANG		-0.210637		-0.432408		0.002007		0.0000	

Source: Author's Statistics

Regression results show that the Chi-square statistic has  $Prob=0.0000 < 0.05$ , so it is sufficient to reject H0, accept H1, that is, the FEM model should be selected.

Thus, the results of regression analysis show that the FEM model is most suitable to analyze the influence of factors on capital structure.

## 5. Discussion

The results of the study were evaluated and analyzed according to the fixed effects model (FEM). Regression results show that there are 5 factors affecting the capital structure of pharmaceutical manufacturing enterprises:

*Firm size factor (LNTS)* has the strongest positive impact on firm's capital structure (coefficient  $\beta=0.14115$ ), this result is consistent with the research results. by Wessels (1988). Larger businesses have easier access to debt, and have assets and reputation to back loans.

*Asset structure factor (TANG)* has a negative impact on corporate capital structure (coefficient  $\beta=-0.2106$ ). This result is inconsistent with the previous research results of Myers (2001), (Degryse et al., 2012), Michaelas et al. (2000), meaning that businesses

with a high percentage of tangible assets are have a lower ability to access debt because businesses already have a stable capital, so they limit debt loans.

*The business efficiency factor (ROA)* has the strongest negative impact on the capital structure of the enterprise (coefficient  $\beta = -0.5399$ ). This result is similar to that of Mehdi Janbaz (2010), and is consistent with pecking order theory. The pecking theory suggests that firms will first use retained earnings to reinvest and then issue new bonds and shares if necessary. In this case, firms with high profitability will be able to accumulate large profits and tend to borrow less.

*Firm age factor (AGE)* has a negative effect on the capital structure of the enterprise (coefficient  $\beta = -0.01636$ ). This result is similar to the research results of Ellili and Farouk (2011), businesses with a long operating time mean that the financial health of the business is quite stable and the ability to access debt will decrease. compared with young, newly established enterprises.

*The solvency factor (CR)* has a negative effect on the capital structure of the enterprise (coefficient  $\beta = -0.066$ ), high solvency means that the enterprise has a high ability to be ready to pay due debts. The higher the ratio, the more solvency the business can be, and the higher the liquidity, the less debt it will tend to take.

*The growth rate factor (GR)* has Prob = 0.247 > 0.05, so there is not enough basis to conclude that the growth rate has an effect on the capital structure of the enterprise. The reason may be because the characteristics of the pharmaceutical industry are different from other manufacturing and industrial sectors.

In addition, with the coefficient = 0.9644 showing that the model has a very high degree of fit, up to 96.44% of the variation of the dependent variable is explained by the independent variable.

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# IMPACT OF FINANCIAL INCLUSION AND INSTITUTIONAL QUALITY ON AIR QUALITY: EVIDENCE FROM OECD COUNTRIES

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## **Abstract**

This study aims to investigate the impact of financial inclusion and institutional quality on air quality in OECD countries. Using the panel time series data from 2002 to 2017 for 38 OECD countries, this study employs advanced panel econometrics from cross-sectional dependency and slope heterogeneity. The results show that both financial inclusion and institutional quality exacerbate the problem of environmental degradation. While we do not find evidence for the Granger causality between institutional quality and air pollution, our results reveal that carbon dioxide emissions Granger cause financial inclusion, but not the other way around. Our findings imply that any policy associated with improving air quality will have an impact on financial inclusion, but not vice versa.

**Keywords:** financial inclusion, institutional quality, air quality, OECD, panel cointegration

## **1. Introduction**

According to the announcement of WHO (2022), air pollution has become a major issue that in many countries worldwide. Particularly, air quality remains poor with nearly 99% of the world's population breathing air that contains high levels of pollutants and more than 4.2 million people die every year because of various diseases caused by air pollution.

In recent years, economists have been debating the effectiveness of financial inclusion in reducing or increasing environmental pollution because it contributes to the development of the financial sector to promote inclusive and sustainable economic growth (Baek et al., 2022; Du et al., 2022; Le et al., 2020; Qin et al., 2021; Rehman et al., 2022; Renzhi & Baek, 2020; Zaidi et al., 2021). On one hand, financial inclusion might create many pollutions to the environment, especially increasing air pollution (Baek et al., 2022; Le et al., 2020; Qin et al., 2021; Rehman et al., 2022; Zaidi et al., 2021). On the other hand, Du et al. (2022) and Renzhi & Baek (2020) have pointed out that there were an improvement of environmental quality by financial inclusion. Moreover, Renzhi & Baek (2020) revealed the relationship between financial inclusion and CO<sub>2</sub> emissions in a U-shape that will help to reduce the air pollution in the next stage after financial inclusion is spread out with the cognition of humans about saving the environment.



Additionally, numerous researchers have looked into the connection between institution quality and pollution and CO2 emissions (Abid, 2016; Ali et al., 2019; Maduka et al., 2022; Minh Huynh et al., 2020; Rehman et al., 2022; Subramanian, 2007; Zakaria & Bibi, 2019). Several studies have shown the influence of institutional quality would increase environmental degradation by Maduka et al., (2022); Rehman et al., (2022). As well as other findings, Abid, (2016); Ali et al., (2019); Minh Huynh et al., (2020); Subramanian, (2007); Zakaria & Bibi, (2019) found negative connection between institutional quality and environmental degradation.

In previous studies, the association between financial inclusion and air quality has not been thoroughly investigated. There has been an increase in research on financial inclusion in recent years, although the vast majority of them focus on national-level challenges. Studies on the impact of financial inclusion on air quality and whether it has a positive, negative, or neutral effect have not reached consensus due to disparities in study goals and econometric approaches. Moreover, as to our knowledge, there is no literature has discussed the impact of financial inclusion and institutional quality on air quality. There is a wide variation in financial inclusion, institutional quality, and air quality between nations, particularly in OECD countries. It would be necessary for OECD countries to formulate corresponding policies for different regions to achieve financial inclusion in increasing air quality.

## **2. Methodology and data**

### **2.1. Model specification**

To examine the impact of financial inclusion and insitutional quality on air quality, we employ the following model specification:

$$CO2_{i,t} = \alpha + \beta FI_{i,t} + \delta IQ_{i,t} + \mu_{i,t} \quad (1)$$

in which  $CO2_{i,t}$  represents the amount of CO2 emission (measured in tonnes/capita) by country  $i$  in year  $t$ .  $FI_{i,t}$  and  $IQ_{i,t}$  respectively represent financial inclusion and insitutional quality of country  $i$  in year  $t$ . The model shown in Equation (1) demonstrates that financial inclusion and insitutional quality are the determinants of the country's carbon emissions. After establishing the model and regression equation, this study employs panel econometric approaches for the empirical estimation.

### **2.2. Estimation strategy**

#### **2.2.1. Slope heterogeneity and panel cross-section dependence**

Nowadays, there are multiple factors including globalisation, foreign direct investment, trade, among others, that make one country depend on other countries. Such a dependency on other countries replicates similarities or differences across these countries, affecting the market structure, economy, and environment structure. As pointed out by Campello et al. (2019), the cross-section dependence across the panel leads to unreliable results. Therefore, in this study we first utilise the cross-section

dependence (CD) test by Pesaran (2004) to explore the possible interdependence in our data and the results of which could help us choose suitable estimators for robust and reliable estimates. Specifically, the test statistics for CD are as follows:

$$CD = \sqrt{\frac{2T}{N(N-1)}} (\sum_{i=1}^{N-1} \sum_{j=i+1}^N \hat{\rho}_{ij}) \quad (2)$$

where  $\hat{\rho}_{ij}$  represents the pairwise residual correlation.

On the other hand, countries in our sample may have varying rates of economic and demographic structure, leading to differing country-specific characteristics which is also known as slope heterogeneity. In conventional panel econometric analysis, the homogeneous characteristics of economies across the selected panel of countries (i.e. slope homogeneity) may provide biased results. Thus, we investigate whether 38 OECD countries vary or hold similar characteristics regarding selected variables. To detect the issue of slope heterogeneity, we employ the delta tests by Pesaran and Yamagata (2008) with the following equations:

$$\hat{\Delta}_{SCH} = \sqrt{\frac{N}{2k}} \left( \frac{1}{N} S' - K \right) \quad (3)$$

$$\hat{\Delta}_{ASCH} = \sqrt{\frac{N}{\frac{2k(T-k-1)}{T+1}}} \left( \frac{1}{N} S' - 2K \right) \quad (4)$$

where  $\hat{\Delta}_{SCH}$  and  $\hat{\Delta}_{ASCH}$  are the slope coefficient homogeneity and the adjusted slope coefficient respectively.

### 2.2.2. Panel unit root test

After examining the panel slope heterogeneity and cross-section dependence, we check for the presence of a unit root in the variables' data under consideration. It is important that the panel data consisting of time series and cross-sections should not have a unit root as this issue exclusively provide biased or inconsistent estimates. Therefore, we employ the Pesaran (2007) cross-sectionally augmented IPS (CIPS) test for unit root. This is a second-generation unit root test as it considers both the cross-section dependency and heterogeneity issues. The null hypothesis is that the unit root is present in the panel data and the alternative hypothesis is that the panel data are stationary. Here, we check for the stationarity at level and at first difference of the data.

### 2.2.3. Panel cointegration tests

Before estimating the long-run parameters, the cointegration between the studied variables should be tested. We utilise the Kao (1999) and the Westerlund (2005)'s panel cointegration test. Kao (1999) assumes that all panels share a common slope coefficient and proposes five test statistics: the DF  $t$ , the modified DF  $t$ , the unadjusted DF  $t$ , the unadjusted modified DF  $t$ , and the ADF  $t$ . On the other hand, Westerlund (2005) assumes panel-specific cointegrating vectors so that all panels have individual slope coefficients.

#### 2.2.4. Long-run estimation

Once the pre-requisites of panel cross-section dependence, slope heterogeneity, stationarity and cointegration tests are analysed, the Continuously Updated Fully Modified (CUP-FM) technique is used to investigate the long-run relationship between air quality, financial inclusion, and institutional quality. Further, the Continuously Updated Bias-Corrected (CUP-BC) approach is also utilised as a robustness test. These two estimation methods introduced by Bai et al. (2009) are proved to perform better than conventional techniques such as DOLS, FMOLS, and DSUR. In particular, the FMOLS and DOLS provide robust results against the endogeneity and residual correlation problem but assume independence among cross-sections. DSUR, even though can handle the issue of cross-section dependence, but is unable to tackle the serial correlation and endogeneity issues. The CUP-FM and CUP-BC estimation techniques employed in this study however are robust to cross-section dependence, slope heterogeneity, serial correlation, and endogeneity. The test equation is as follows:

$$\hat{\beta}_{CUP}, F_{CUP} = \underset{\beta}{\operatorname{argmin}} \frac{1}{nT^2} \sum_{i=1}^n (y_i - x_i\beta)' M_F (y_i - x_i\beta) \quad (5)$$

#### 2.2.5. Panel Granger causality test

Even though the long-run estimation results can provide some useful information about the long-run effects of financial inclusion and institutional quality on air quality, the causal relationship may also be crucial for policy implications. In this regard, this study utilises the Dumitrescu and Hurlin (2012) causality test to examine the Granger causal association among the variables. The test equation is given as:

$$G_{i,t} = \phi_i + \sum_{j=1}^p \lambda_i^j G_{i,t-j} + \sum_{j=1}^p \gamma_i^j T_{i,t-j} \quad (6)$$

### 2.3. Data

In this study, we use annual data from 2002 to 2017 for 38 OECD countries<sup>1</sup>. This time span is based on data availability for the key variable - air quality. Specifically, this study chooses CO2 emission (tons per capita) as a proxy for air quality following previous scholars (for example, Zaidi et al., 2021; Ullah et al., 2022; Liu et al., 2022). The carbon emission data is retrieved from the OECD Statistics<sup>2</sup>.

We also include data representing financial inclusion and institutional quality. Regarding the former, we derive a financial inclusion index (FI) from six indicators via multiple factor analysis (MFA) that is introduced by Escofier and Pages (1983, 1994). The six chosen indicators include the number of ATMs per 100,000 adults, the number of branches of commercial banks per 100,000 adults, the number of bank branches per

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<sup>1</sup> 38 OECD countries include Austria, Australia, Belgium, Canada, Chile, Colombia, Costa Rica, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Israel, Italy, Japan, Korea, Latvia, Lithuania, Luxemburg, Mexico, the Netherlands, New Zealand, Norway, Poland, Portugal, Slovak Republic, Slovenia, Spain, Sweden, Switzerland, Turkey, the United Kingdom and the United States.

<sup>2</sup> <https://data.oecd.org/air/air-and-ghg-emissions.htm#indicator-chart>

100,000 adults, the number of borrowers from commercial banks, and the number of depositors with commercial banks. Departing from the literature that employs the PCA approach to derive the financial inclusion index (Datta and Singh, 2019; Le et al., 2019; Dinh and Nguyen, 2019), we use the MFA approach as it allows us to analyse observations described by several variables that are characterised by a structure (Ayoub et al., 2020). In our case, this is particularly useful because on the one hand observations are grouped by time (from 2002 to 2017) and on the other hand the six chosen indicators can be categorised into supply-side variables (commercial bank branches per 100,000 adults, ATMs per 100,000 adults, bank branches per 100,000 adults) and demand-side variables (bank accounts per 1,000 adults, borrowers from commercial banks, depositors with commercial banks). Thus, it is important to preserve such a data structure.

Similarly, we establish an institutional quality index by PCA based on six insitutional dimensions, including control of corruption, government effectiveness, political stability no violence, rule of law, regulatory quality and voice accountability. Information for six dimensions of financial inclusion and six indicators of institutional quality is gathered from the World Bank database.

### 3. Empirical results

Table 1 presents the descriptive statistics of the three variables under examination. We observe that on average OECD countries emit 7.8 tonnes of carbon dioxide per person annually. However, the level of CO2 emissions vary greatly among countries, which is evident from the standard deviation, minimum and maximum values. Another observation from Table 1 is the comparable degree of financial inclusion and insitutional quality among OECD countries. Table 1 also shows the pairwise correlation matrix. We see that CO2 emissions are positively correlated with insitutional quality, but negatively correlated with financial inclusion.

**Table 1. Summary statistics**

Variable	N	Mean	Std. Dev.	min	max
CO2	608	7.762	4.471	0	24.66
IQ	608	.004	1.000	-2.48	1.561
FI	608	-.029	1.032	-3.134	6.119

*Pairwise correlation*

Variable	CO2	IQ	FI		
CO2	1.000				
IQ	0.434	1.000			
FI	-0.133	-0.034	1.000		

Before the formal empirical analysis, we examine the CD and slope heterogeneity among the selected three variables CO2, IQ and FI. Table 2 depicts the results of the CD and rejects the null hypothesis of cross-sectional independence for CO2 and IQ. In fact, OECD countries have a variety of economic, trade and financial agreements. Therefore, these countries are strongly interconnected, as it is evident from the CD test results. Despite the strong integration, OECD countries have varying rate of demographic and economic structure that may lead to slope heterogeneity problems causing biased estimates. According to Table 3, the slope heterogeneity test by Pesaran and Yamagata (2008) indicates the presence of country-specific heterogeneity in the panel data set of OECD countries.

**Table 2. Test results of CD**

Variable	Test statistic	Prob	Corr	Abs(corr)
CO2	29.189	0.000	0.28	0.62
IQ	2.697	0.007	0.003	0.40
FI	-0.164	0.869	0.00	0.49

**Table 3. Slope heterogeneity test results**

Test	Value	p-value
$\hat{\Delta}_{SCH}$	15.571	0.000
$\hat{\Delta}_{ASCH}$	17.979	0.000

After checking the CD and slope heterogeneity, the stationary properties of the selected variables are examined using CIPS test. The results displayed in Table 4 show that all variables have unit root at the level; however, they are stationary after taking the first difference. We then proceed with the panel cointegration tests and the results are reported in Table 5. Both the Kao (1999) and the Westerlund (2008) cointegration tests show that the test statistics are significant at the 5% significance level. Therefore, there exists a cointegration relationship among the selected variables.

**Table 4. Panel unit root test results**

Variable	CIPS	
	Level	First-difference
CO2	-1.693	-3.386*
IQ	-2.225**	-2.338*
FI	-1.440	-3.193*

**Table 5. Results of panel cointegration tests**

	<b>Value</b>	<b>p-value</b>
Kao test - Modified Dickey-Fuller t	4.1881	0.0000
Kao test - Dickey-Fuller t	4.9151	0.0000
Kao test - Augmented Dickey-Fuller t	5.2592	0.0000
Kao test - Unadjusted modified Dickey-Fuller t	1.7808	0.0375
Kao test - Unadjusted Dickey-Fuller t	1.7503	0.0400
Westerlund test	1.9779	0.0240

After performing these initial investigations, the CUP-FM and CUP-BC estimation methods are employed to estimate long-run elasticities in this study. Table 6 exhibits the estimation results. The coefficient of financial inclusion (FI) is significantly positive at 10% significance level. The estimated coefficient implies that a 1% increase in FI is associated with a 0.05% increase in CO<sub>2</sub> emissions in the long run. This positive relationship indicates that improved financial access in OECD countries could enable their citizens to purchase large-ticket products such as air conditioners, automobiles, and other electronic devices, which can heighten energy demand and thus exacerbating the problem of air pollution. Our findings point to the ineffectiveness of financial inclusion strategies in these countries and demonstrate the lack of synergies between environmental policies and financial inclusion initiatives. Similar conclusion has also been echoed in the studies by Le et al. (2020), Hussain et al. (2021), Qin et al. (2021), Rehman et al. (2022), and Ahmad et al. (2022). Our results, however, contradicts the finding by Renzhi and Baek (2020), Du et al. (2022) who advocate the usefulness of financial inclusion strategies in reducing environmental pollution.

The results further indicate that insitutional quality (IQ) shows a significantly positive relationship with carbon emissions at the 1% significance level. Particularly, the elasticity of 0.346 reveals that a 1% increase in insitutional quality is associated with a 0.346% increase in CO<sub>2</sub> emissions. Our findings agree with those by Rehman et al. (2022) and Maduka et al. (2022). These authors often point to the moderating role of other factors such as poverty reduction, FDI, or green trade openness. However, these results are not in line with Subramanian (2007), Abid (2016), Ali et al. (2019) and Zakaria and Bibi (2019) who discover a negative connection between institutional quality and environmental degradation.

Following the long-run elasticity evaluation, the Dumitrescu and Hurlin (2012) panel Granger causality test is utilised. The results in Table 7 show the unidirectional causal linkage running from CO<sub>2</sub> emissions to financial inclusion. This means that any policy associated with curbing carbon dioxide emissions will have an impact on financial inclusion, but not vice versa.

**Table 6. Long-run estimation results**

Variables	CUP-FM		CUP-BC	
	Coefficients	t-statistics	Coefficients	t-statistics
IQ	0.3465*	8.0887	0.4569*	10.6067
FI	0.0546**	1.6730	0.0869*	2.6270

Note: \* and \*\* depict 1% and 10% significance level, respectively.

**Table 7. Causality check**

	Wald-stats	p-value
CO2-FI	0.209	0.647
FI-CO2	4.728	0.029
CO2-IQ	0.266	0.606
IQ-CO2	2.266	0.132

#### 4. Conclusion

The goal of this study is to add to the existing environmental literature by investigating how financial inclusion and insitutional qualit affect air quality, especially in 38 OECD countries from 2002 to 2017. Our findings point to the ineffectiveness of financial inclusion strategies in these countries and demonstrate the lack of synergies between environmental policies and financial inclusion initiatives. Our findings imply that any policy associated with improving air quality will have an impact on financial inclusion. Moreover, we have found the positive relationship between institutional quality and carbon emissions. Therefore, OECD countries need to establish environmentally conscious financial facilities. It is essential to invest in green technologies to reduce carbon dioxide emissions. There are several ways in which environmental policy might benefit from open trade and improved political institutions. Environmental protection may require political stability, an independent judiciary, and a reduction in corruption in the future.

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# THE EFFECT OF DEPOSIT INSURANCE ON CREDIT UNION DEPOSIT: EVIDENCE FROM A QUASI-NATURAL EXPERIMENT

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## **Abstract**

This paper investigates the impact of deposit insurance on credit union deposit growth. We exploit the exogenous increase in the insured deposits coverage following the passage of the Emergency Economic Stabilization Act in 2008 as a quasi-natural experiment to examine whether an increase in the insured deposits facilitates or dampens credit union deposit mobilization. Using a difference-in-difference estimator, we find that the affected credit unions (i.e., those experiencing a sharp increase in insured deposits) tend to expand their deposit mobilization activities, both in terms of volume and number of accounts in comparison with their non-affected counterparts (i.e., those experiencing only a minor change in insured deposits amounts). Further analyses reveal that affected credit unions might experience various deposit growth rate, depending on the deposit terms. These results are robust to the inclusion of other fixed effects, alternative econometric specifications, as well as other influences, including confounding events such as TARP capital injection.

**Keywords:** Deposit insurance, credit union deposit, difference-in-difference estimator

# BEHAVIOURAL HEURISTICS IN STOCK INVESTING OF STUDENTS IN HANOI

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## **Abstract**

In this study, the authors focus on clarifying the behavioural heuristics of students in Hanoi based on Behavioural Finance Theory. In there, behavioural heuristics are known that are commonly defined as cognitive shortcuts or rules of thumb that simplify decisions, especially under conditions of uncertainty (Kahneman, 2003); heuristics can also lead to cognitive biases. The authors use a quantitative analysis research method through SPSS 26 software with independent variables: Investment intention, Overconfidence bias, Risk aversion bias, Herd bias, Investment method have any meaning to the dependent variable: Investment results. The results of multiple regression model analysis show that only two variables overconfidence and risk aversion have significant influence on the dependent variable KQ because of sig. < 5%. From the research results, the authors propose some solutions to improve the research results of students in Hanoi.

**Keywords:** Behavioural finance theory, behavioural heuristics, investment behaviour

## **1. Introduction**

Data from the Vietnam Securities Depository (VSD) showed that by the end of January 2022, the total number of trading accounts of domestic individual investors was 4.45 million accounts. The number of accounts of foreign individual investors is 35,676 accounts, an increase of 4 accounts compared to the end of 2021. In February 2022, domestic investors opened 210,883 new stock accounts, an increase of more than 16,000 accounts compared to the previous month. The above data shows that the scale of the stock market in recent years has increased rapidly and achieved high efficiency, the number of young investors participating in the market is also very high.

Students are the young generation of the country, the freest age of people, so they have a lot of advantages when investing in the stock market. Students are very active, ready to face challenges, and quickly grasp market information. However, at this age, you do not have much experience, do not understand the nature of this field, so if you want to become stable in the financial environment, the more students there should participate. Students can participate in the stock market with a small amount of capital to learn and research about the stock market, thereby investing with high efficiency.

The previous research gaps and the importance of the problem prompted the authors to conduct a quantitative study on the behavioural heuristics in investment behaviour of students in Hanoi. The purpose of the article is to measure the bias factors affecting investment results: Investment intention, Overconfidence bias, Risk aversion bias, Herd

bias and investment methods are based on data analysis of survey answer sheets on SPSS 26 software.

The article consists of 5 parts: part 1 is the introduction, part 2 is the theoretical basis of behavioural finance and the main psychology in the behaviour of individual investors, part 3 presents methodology, part 4 is to summarise and evaluate research results, part 5 is to propose solutions and part 6 concludes research results.

## **2. Literature review**

### ***2.1. Behavioural finance theory***

At present, behavioural finance is a phrase that is unfamiliar to individual investors and affects their investment decisions and performance (Kengatharan & Navaneeth Krishnan, 2014). Behavioural finance studies and explains the psychological manifestations of investors in financial markets, using knowledge of psychology, sociology and finance to explain abnormal behaviour of investors. Investors whose basic background is “the market is not always right”, this means that investor behaviour is influenced by psychology and subsequently investor behaviour affects financial decisions and investment results. In addition, behavioural finance is defined as a field of finance that explains stock market anomalies by using biases rather than ignoring random outcomes consistent with the efficient market hypothesis (Fama, 1998).

Fernandes et al. (2007) divided behavioural biases into two groups: cognitive biases (confirmation bias, decision anchoring, availability, and typical situations stemming from incorrect inference) and emotional biases (conservation, overconfidence, risk-aversion, herd from impulsive feelings or intuition rather than conscious reasoning), although both unreasonable decisions.

Prospect theory (Kahneman & Tversky, 1979) provides a descriptive framework for how people make decisions under conditions of risk and uncertainty.

### ***2.2. Theory of behavioural heuristics in investor behaviour on the stock market***

Empirical rules are methods that investors use that minimise the search for information needed to come up with a solution to a problem, i.e., problem-solving based on experience. Empirical rules provide convincing subjective approaches, while also reflecting the fact that people’s judgments about likelihood and risk often do not exactly conform to the theory of probability. People tend to associate probability not with events but with descriptions of events (Tversky and Kochler, 2002). Empirical rules are especially important when there is uncertainty because uncertainty reduces the efficiency of complex logical computations.

Overconfidence bias: describes a psychological state in which investors often overestimate themselves and often overstate their understandings (Trivers, 1991). The phenomenon of overconfidence has been studied by many researchers, such as Bakar and Yi (2016), and Longjie and Anfeng (2017). Overconfident investors believe they can make

more out of the market using their emotions, even though this is unlikely. However, selfish investors, who consider themselves geniuses by knowing when is the best time to trade and to get a quick profit from the stock market, but they just can't be beat. market as they assume. Bakar and Yi (2016) find that investors' decisions are significantly influenced by overconfidence.

Risk aversion bias: developed by Daniel Kahneman and Amos Tversky (1979) states that investors are often more motivated to avoid losses than to seek profits. The obsession with loss discourages investors from selling losing investments even though they see these investments with little or no prospect of recovery. However, when the investment starts to turn a profit, investors with this mentality are in a hurry to take profits because they are worried that the market will correct and take their profits.

Herd bias: can occur when investors follow the actions of investors or make decisions based on the actions of other investors (Keynes, 1937). When herding is rational, stock price changes will change to reflect information about the underlying change in the firm's value (Devenow and Welch, 1996). Chiang and Zheng (2010) find that the crowd effect has a negative impact on the stock market, as it can cause volatility, bubbles, and undervalued securities. The effect of the crowd effect can also negatively affect the supply and demand mechanisms of the market.

### ***2.3. Behavioural heuristics affects investment efficiency***

Vo Thi Hieu, Bui Huu Phuoc and Bui Nhat Vuong (2020) analysed and researched the investment behaviour of individual investors on the Ho Chi Minh stock market. Research results have shown that there are 5 components of behavioural finance that affect investment decisions from strongest to lowest in order as follows: decision anchor, overconfidence, availability bias, crowd effect, typical situation. In addition, investment decisions have negatively affected investment performance.

According to Nguyen Duc Hien (2012) shows that individual investors in the Vietnam stock market have many deviations in investment behaviour: overoptimism, herd, overconfidence, risky attitude and pessimism. Therefore, individual investors often make unreasonable investment decisions when the purchased shares have a lower return than the rate of return of the sold shares.

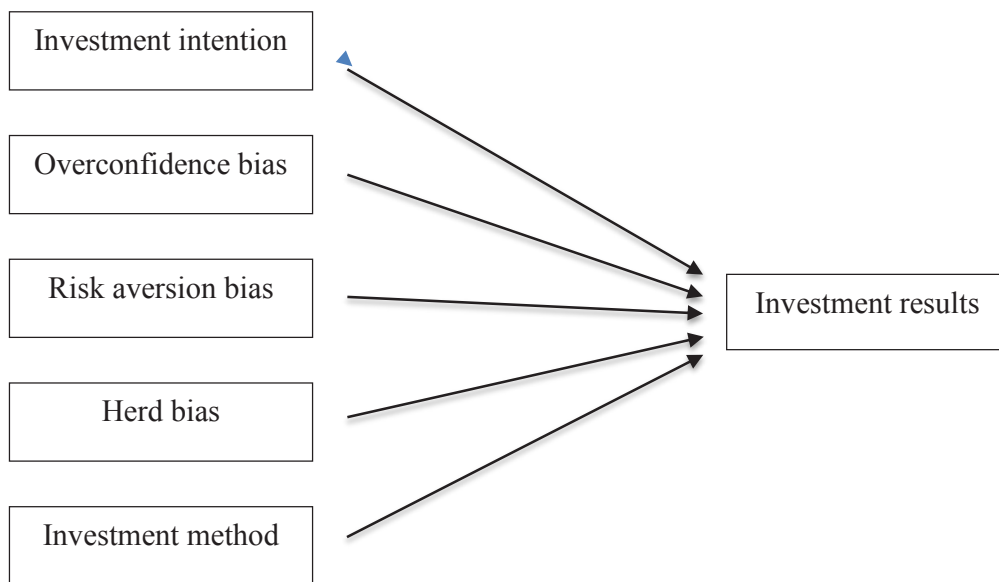
## **3. Methodology**

Primary data is the data collected by the authors through surveying the investment behaviour of 130 students in Hanoi using an online survey questionnaire. The questionnaire is designed with 35 questions divided into 2 parts, including part 1: General information about the respondents, part 2: Information on students' investment behaviour in Hanoi.

### ***3.1. Proposed research model***

From the basis of theoretical background, previous domestic and foreign research models, and from qualitative research results, the authors choose a model to study behavioural financial factors affecting investment results of students in Hanoi, including 5 factors: (1) Investment intention, (2) Overconfidence, (3) Risk aversion, (4) Herd, (5) Investment method. The proposed research model is as follows:

**Diagram 1. Proposed research model**



*Source: Author's construction*

Table 1 describes how the variables and indicators were coded in the study.

**Table 1. Coding of latent variables and indicators**

<b>Latent variable</b>	<b>Encoding</b>	<b>Indicators</b>
Investment intention	YD	YD1, YD2, YD3
Overconfidence bias	TT	TT1, TT2, TT3, TT4
Risk aversion bias	RR	RR1, RR2, RR3
Herd bias	BD	BD1, BD2, BD3
Investment method	PP	PP1, PP2, PP3, PP4
Investment results	KQ	KQ1, KQ2

*Source: Author's construction*

### **3.2. Research hypothesis**

*Hypothesis 1: Investment intention has a positive impact on the investment results of students in Hanoi.*

In The Theory of Planned Behaviour (TPB), behavioural intention is central to the model and represents the extent to which an individual intends to perform or not perform a certain behaviour (Ajzen, 1991). Based on the survey results, the thesis shows that student investors intend to invest because they want to learn knowledge and experience from the stock market or earn more income or invest according to people around.

*Hypothesis 2: Overconfidence bias has a positive impact on investment results*

The thesis hypothesised that students' bias is overconfident about: fully understanding the information in the portfolio; stock valuation; own experience and belief in winning the stock market have a positive impact on investment results.

*Hypothesis 3: Risk aversion bias has a positive impact on investment results*

Most of the students are investors with small capital. The risk aversion bias when the investment results of student's loss or gain positively affect their investment results.

*Hypothesis 4: Herd bias has a positive impact on investment results*

In the process of making an investment decision, there are many factors that influence this process, especially the opinions of those around them. Students are young investors, with little experience, so they tend to invest according to investment decisions from others. Therefore, herd mentality deviation has a positive effect on investment results.

*Hypothesis 5: Investment method has a positive impact on investment results*

In investing there are many methods, but not individual investors, especially students, have enough knowledge and experience to properly apply their investment methods and processes. Therefore, the investment method also has a positive effect on investment results.

## 4. Results

### 4.1. The results of testing the reliability of the scale - Cronbach's Alpha

In this research, the variables measuring investment intention, overconfidence, risk aversion, herd, investment method and investment result have Cronbach's Alpha standard  $> 0.6$  and variable-total correlation coefficients is greater than 0.3. So, for the model to be effective, we should not remove any variables. The measurement variables of these components are all standard, ensuring good model quality.

**Table 2. Cronbach's Alpha of the components**

Factor group	Observed variables	Coefficient of correlation of total variables	Cronbach's Alpha if the variable is excluded
Investment intention	Cronbach's Alpha = 0,729		
	YD1	0,625	0,556
	YD2	0,728	0,441
	YD3	0,355	0,891
Overconfidence bias	Cronbach's Alpha = 0,860		
	TT1	0,737	0,809
	TT2	0,712	0,819
	TT3	0,684	0,831
	TT4	0,693	0,827
Risk aversion bias	Cronbach's Alpha = 0,645		
	RR1	0,48	0,52
	RR2	0,444	0,603
	RR3	0,45	0,563



Factor group	Observed variables	Coefficient of correlation of total variables	Cronbach's Alpha if the variable is excluded
Herd bias	Cronbach's Alpha = 0,693		
	BD1	0,369	0,765
	BD2	0,631	0,434
	BD3	0,54	0,558
Investment method	Cronbach's Alpha = 0,736		
	PP1	0,603	0,598
	PP2	0,567	0,642
	PP3	0,521	0,698
Investment result	Cronbach's Alpha = 0,903		
	KQ1	0,823	0,741
	KQ2	0,832	0,802

Source: Data run from SPSS 26

## 4.2. Exploratory factor analysis (EFA) result

### 4.2.1. Group of independent variables

#### a) Check model suitability

KMO and Bartlett test on the appropriateness of exploratory factor analysis for the above 5 factors.

**Table 3. Check model suitability**

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.	0,678	
Bartlett's Test of Sphericity	Approx. Chi-Square	685
	df	120
	Sig.	0

Source: Data run from SPSS 26

#### b) KMO test

We see that the KMO value = 0.685 > 0.5 proves that it satisfies the requirements to perform EFA exploratory factor analysis.

#### c) Bartlett's test

In the table above, sig. = 0.000 < 0.05, we reject the hypothesis H0 (the correlation matrix is the unit matrix), and it means that the observed variables are correlated with each other in the factor, so we can perform the factor analysis. discovery element. Thus, this data is suitable for performing EFA discovery factor.

d) Test the explanatory level of observed variables with representative measure (Analysis of extracted variance)

**Table 4. Sum of Variances Explained**

Total Variance Explained									
Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	3,41	21,315	21,315	3,41	21,315	21,315	2,877	17,98	17,98
2	2,513	15,705	37,019	2,513	15,705	37,019	2,26	14,128	32,108
3	1,846	11,539	48,558	1,846	11,539	48,558	2,017	12,605	44,712
4	1,765	11,033	59,591	1,765	11,033	59,591	1,902	11,887	56,599
5	1,305	8,153	67,744	1,305	8,153	67,744	1,783	11,145	67,744

*Source: Data run from SPSS 26*

The results in the table above show that, with 5 main components, the total explanatory rate at 67.744% means that the total explainable variance of the model reaches 67.744%, or in other words, the explainability of the model when practical application is able to explain 67.744% of the actual value and represent the lost factors of 32.256% of the observed variables.

**Table 5. The rotated factor matrix<sup>a</sup>**

Rotated Component Matrix <sup>a</sup>					
	Component				
	1	2	3	4	5
TT1	0,838				
TT3	0,83				
TT4	0,816				
TT2	0,815				
YD2		0,875			
YD1		0,874			
YD3		0,814			
PP1			0,823		
PP3			0,802		
PP2			0,784		
BD2				0,857	
BD3				0,804	
BD1				0,653	
RR1					0,791
RR2					0,734
RR3					0,718

*Source: Data run from SPSS 26*

The table **Rotated Component Matrix<sup>a</sup>** above has 5 columns, it means that 5 factors are drawn from the above observed variables. The results of the rotation matrix show

that 16 observed variables are classified into 5 factors, all observed variables have Factor Loading coefficients greater than 0.5 and there are no bad variables.

4.2.2. *Group of dependent variables*

a. *KMO test*

The KMO = 0.51 test result is greater than 0.5, so it satisfies the requirements to perform the discovery factor.

b. *Bartlett's test*

Because sig. = 0.000 is less than 0.05, so we reject the hypothesis H0 (the correlation matrix is the unit matrix), which means that the variables are related, so this data is suitable for performing exploratory factor analysis (EFA).

**Table 6. Check model suitability**

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		0,51
Bartlett's Test of Sphericity	Approx. Chi-Square	144,23
	df	1
	Sig.	0

Source: Data run from SPSS 26

c. *Test the explanatory level of observed variables with representative measure (Analysis of extracted variance)*

**Table 7. Sum of Variances Explained**

Total Variance Explained						
Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	1,823	91,151	91,151	1,823	91,151	91,151
2	0,177	8,849	100			

Source: Data run from SPSS 26

Test the explanatory level of the observed variables with representative measure (Analysis of extracted variance). The results in the table below show that, with 1 major component, the total explanatory rate is at 91.151%, which means that the total variance is able to explain 91.151% of the total variation of the survey sample, in other words, The explanatory power of the model explains 91.151% of the actual value.

**Table 8. Factor Matrix<sup>a</sup>**

Component Matrix <sup>a</sup>	
	Component
	1
KQ2	0,955
KQ1	0,925

Source: Data run from SPSS 26

The analysis results show that there are no variables that need to be removed from the model because the Factor Loading coefficients are all greater than 0.5. The dependent variable is “Investment results”.

### 3.3.4. Results according to regression analysis

To determine, measure and evaluate the influence of the group of factors (From X1 to X5) on the investment results of students in Hanoi city, the following multiple linear regression method is used:

$$\text{Result} = \beta_1 * YD + \beta_2 * TT + \beta_3 * RR + \beta_4 * BD + \beta_5 * PP$$

**Table 9. Model Summary<sup>b</sup>**

Model Summary <sup>b</sup>					
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	0,658a	0,47	0,445	0,71187	1,784

a. Predictors: (Constant), PP, BD, YD, TT, RR

b. Dependent Variable: KQ

*Source: Data run from SPSS 26*

Looking at the table above, used to evaluate the fit of the multivariable regression model, the adjusted R-squared coefficient R Square is 0.445. It means that 44.5% variation of the dependent variable on investment results of students in Hanoi is explained by 5 independent variables. This shows that this linear regression model fits the sample’s data set at 44.5%, that is, the independent variables explain 44.5% of the variation of the dependent variable on investment results.

**Table 10. Anova<sup>a</sup>**

ANOVA <sup>a</sup>						
	Model	Sum of Squares	df	Mean Square	F	Sig.
1	Regression	36,931	5	7,386	14,575	,000b
	Residual	62,839	124	0,507		
	Total	99,769	129			

a. Dependent Variable: KQ

b. Predictors: (Constant), PP, BD, YD, TT, RR

*Source: Data run from SPSS 26*

The above table tests the hypothesis about the overall fit of the model,  $F = 14,575$  with  $\text{sig.} = 0.000 < 5\%$ . Show that the R squared of the population is non-zero (that is, the regression coefficients of the independent variables are non-zero). That is, the linear regression model built is suitable for the population (R-squared of the population cannot be calculated specifically, but knowing it will be non-zero proves that the independent variables have an impact on the dependent variable).

**Table 11. Regression coefficient**

Coefficients <sup>a</sup>								
Model	B	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		Std. Error	Beta				Tolerance	VIF
1	(Constant)	1,723	0,632		2,728	0,007		
	YD	0,011	0,07	0,011	0,155	0,877	0,969	1,032
	TT	0,657	0,091	0,539	7,2	0	0,907	1,102
	RR	-0,158	0,071	-0,172	-2,242	0,027	0,863	1,158
	BD	0,015	0,095	0,012	0,161	0,873	0,911	1,098
	PP	-0,033	0,068	-0,035	-0,477	0,634	0,967	1,034

a. Dependent Variable: KQ

Source: Data run from SPSS 26

The above data table is an estimate from SPSS software and has all the parameters of the regression model including: coefficients, standard behavioural heuristics and significance levels to be able to know which coefficients are statistically significant or not. Looking at the above table, hypothesis testing using SPSS 26 software (value in column Sig.) has only 2 variables TT and RR that have sig. < 5% shows that these two independent variables have a statistically significant impact on the dependent variable; and 3 variables YD, BD and PP have sig. > 5%, so these 3 independent variables have an influence but not statistically significant on the dependent variable.

The analysis results show that the regression equation is as follows:

$$KQ = \beta_2 X_2 + \beta_3 X_3 = 0,539TT - 0,172RR$$

## 5. Proposed solutions

### 5.1. Solutions and recommendations for the Ministry of Finance and the State Securities Commission

*Promote the performance of individual investor protection agencies and enhance the transparency of Vietnam's stock market:* The State Securities Commission should promote the protection of student investors through the obligations of securities companies, such as: securities companies are responsible for timely and fully informing customers of interests arising in connection with the securities business. related to the customer's securities about the arising interests related to the customer's securities. The authors recommends that information related to the following factors be required by the State Securities Commission to request the Stock Exchange to focus on fully disclosing to investors such as interest rates, inflation rates, and other information of the State Securities Commission, GDP growth rate,...

*Pay attention to psychological factors in the development of legal documents and policies in the stock sector:* Biases to considerations and decisions in financial and accounting legal systems.

Limit the mechanism that promotes overconfidence, risk aversion and herd bias:

- Control unofficial sources of information and rumours about the stock sector, thereby avoiding causing confusion and causing investors to have false psychological states and make unreasonable investment decisions.

- Limit investment incentives for State-owned enterprises as well as incentives for State-owned enterprises when equitized. Restructure economic groups and state-owned enterprises.

- Implement control of information supply when performing equitization of State-owned enterprises; evaluate and control the IPO process (especially the valuation) of these enterprises.

- Completing the handling of violations on the stock market. The authors recommends that the State Securities Commission raise the penalties for sophisticated violations on the stock market; the Ministry of Finance needs to decentralise and give more powers to the State Securities Commission.

### ***5.2. Solutions and recommendations for the Stock Exchange and stock companies***

*Building a system of indicators to measure psychological factors in student behaviour in Hanoi:* The research results of Chapter 3 have confirmed that the investment behaviour of students in Hanoi is influenced by three groups of bias factors: overconfidence, risk aversion and herd mentality. These factors are measured through 10 properties that have been discovered and tested. Based on these research results, the authors recommends that the Stock Exchange can investigate online and on the basis of the investigation results will conduct an analysis of the behaviour of student investors, from which there are market regulation policies.

*Strengthening knowledge for student investors, especially students in Hanoi:* The authors recommend strengthening the role of the Stock Exchange in training and scientific research on securities. In addition, behavioural finance courses are also essential to help students self-assess and analyse their own behavioural characteristics, thereby proposing specific investment strategies and philosophies. avoid short-term investments and generate biases in investment behaviour.

### ***5.3. Solutions and recommendations for student investors***

*Improving the capacity of student investors:* Students need to be aware of the stock market and the importance of investing in securities. Students need to actively participate in securities training courses from the time they are still in university lecture halls in order to give themselves a solid and basic knowledge base. Develop a suitable investment philosophy to avoid arising deviations in the investment process.

Building a reasonable valuation method: Student investors should note the impact of deviations on valuation behaviour:

- Availability bias: Investors make estimates in the starting valuation and depend on an initial value, this value is adjusted to give the final valuation result. This deviation occurs when investors are too conservative.

- Overconfidence bias: Student investors due to narrow confidence intervals. Investor bias due to overconfidence will lead to undervaluation of risk aspects.

## 6. Conclusion

The results of the regression analysis through SPSS 26 software show that 2 biased hypotheses about overconfidence and risk aversion have an impact on investment results, while the remaining hypotheses about investment intention investment, herd and investment methods are negated. However, the results of this study are only partially consistent with the research results of Dahoui et al. (2013) - proving that all psychological factors (optimism, pessimism, over-psychology, etc.) and investment rationality both affect trading volume on the French stock market.

However, the study also reflects the investment practice of students in Hanoi, where there are young individual investors who have new experience in participating in the Vietnamese stock market and are overconfident when making decisions. They are determined and risk averse in the investment process (tend to often sell stocks as soon as they are profitable), which greatly affects their investment results.

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# CHARACTERISTICS OF GEN Z CONSUMERS FROM THE VIEW OF CYCLIC THEORY

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## **Abstract**

Gen Z is a remarkable generation, because it is not only the current young generation, but also as a transitional generation between generations Y and Z. It is becoming the new consumer of a new market, with the characteristics of its own generation. From the perspective of cyclic theory, I'll use a combination of history and logic methods, a comparative approach as well, to study the characteristics of Gen Z consumer (such as it is digital consumer, it has a diverse personality), and from which to continue discussing educational and protecting principles for it as consumer - that is the main content of this article.

**Keywords:** Consumer, cycle, generation, Gen Z, theory

## **1. Introduction**

In the past, time was often thought of as linear, like a one-way line. However, when viewed from another dimension, time is cyclical, like successive circles.

Cyclic theory goes from the periodicity of time to consider the periodicity of generations, and the periodicity of the human life cycle. Accordingly, in the current time cycle, there are four generations, commonly known as Baby Boomers (born between 1940-1959), Gen X (Generation X, 1960-1979), Gen Y (Generation Y, 1980-1999), and Gen Z (Generation Z, 2000-2019).

So that, at this point Gen Z is starting to enter adolescence, then it has a mix of Gen Y (mid-cycle) and Gen Z (late-cycle) traits. In the context of today market economy, Gen Z reveals its characteristics as the consumer, who needs to be studied for education and protection.

## **2. Literature Review**

In human history, there have existed a number of legends about the cyclicity of time, from the ancient civilizations of Maya, Etruria, to Buddhism, Hinduism, which consider time as a cycle, and capable of regeneration.

Currently, the world's scientific community has been conducting research on this same topic, its resulting is the formation of the cyclic theory, which describes the periodicity of time, of generation, and of human life cycle. Let's take a look at some notable studies.

Mannheim (1928) was the earliest proponent of generation theory in his essay "Das Problem der Generationen" (The Problem of Generations), which was translated into

English, giving some arguments about generation initially, setting the basis for generation theory, and opening a new research direction.

Toynbee (1954) in *Heroic Ages; Contacts between Civilizations in Space* (Volume 8, of the 12-volume *A Study of History book series*), when studying the interaction between civilizations, commented that historical characteristics are associated with generational characteristics.

Marcus (1970) with *Saeculum: History and society in theology of St Augustine*, found that Augustine's theology describes time as a historical circle, representing shows a succession of conceptions of the saeculum from the Etruscans (Etrurian civilization) to the Romans.

Levinson (1978), in *The Seasons of a Man's Life*, compared a person's life to the seasons of the year, stretching and changing through each period, corresponding to childhood, adulthood, and fade away to make way for the next generation.

Toffler (1980), in *The Third Wave*, focused on discussing changes across different sectors during the third industrial revolution, but made some mention of cyclicity of time too, and thereby showing the characteristics of generations born in America.

Esler (1982), with *Generations in History: An Introduction to the Concept*, examined generations in historical length, and thereby proposed that recognition history from the generational perspective will give us a new understanding of it.

Schlesinger (1999), in *The Cycles of American History*, went from analyzing important events in American history to stating that the history of this country is cyclical, like loops of stitches that flow through time.

Most notable the co-authors Strauss and Howe in *Generations: A History of America's Future, 1584-2069* (1991), *The Fourth Turning: An American Prophecy* (1997), *Millennials Rising: The Next Great Generation* (2000), continuously discussed periodicity of time, the periodicity of the generation, and the seasonal law of the human life cycle, from which to apply them in practice.

Some other authors published scientific papers on Gen Z such as: Roseberry-McKibbin (2017), Kakodkar (2018a, 2018b), Fath and Sugianto (2018), Dwidienawati and Gandasari (2018), Ayuni (2019), Cook (2019), Dastider (2019), Ninan et al. (2020), Orchard (2020),... discuss about Gen Z with its generational characteristics, learning and employment, consumption shopping habits, etc.

For Vietnam, there are almost no studies on the cyclicity of time, of generations, of the human life cycle, including Gen Z as the consumer, apart from a few scientific articles by Vo Minh. Tuan (2020a, 2020b), and short articles by other authors published on websites that are not sources of scientific data.

### **3. Methodology**

To serve the research, there are two main methods are used.

The first, it is the method that combines history and logic: from within the line of history succeeding generations to study Gen Z, and derive the internal development logic of this generation.

The second, it is the comparison method: compare Gen Z with other generations (such as X, Y) to find out the inheritance and development of generations.

Both methods are used in conjunction with each other, the purpose is to find out the consumption characteristics of Gen Z, from which some principles can be proposed for the education as well as protection of Gen Z consumer.

## **4. Results**

### ***4.1. Cyclic theory***

Looking back at history, it can be seen that in ancient civilizations there often existed a concept of the rhythm of time. Some traditional religions such as Buddhism and Hinduism also talk about life as circles of time (kalpa). Seasonal rhythms, or circles of time, can vary in length: either according to the cycles of the Sun or Moon; or according to the cycle of a dynasty, a lifetime; or even thousands, tens of thousands of years,...

Regarding the Middle Ages, Whitrow (1980, 120) observes, "During the Middle Ages, the notions of periodicity and linearity of time were contradictory". And in the view of Landes (1998, 78), "Other societies see time as cyclical, the return to the previous period and the beginning again".

In the past few decades, world scientists are really more interested in cyclic theory, which is reflected in systematic studies, both theoretical and applied aspects, describing the development of social history as well as human generations according to the cycle, which is divided into different eras and generations.

Although they differ in their conceptions of the length of a period, all agree that the period has two similar properties. The first, each period of time is usually symbolized by a circle, symbolizing the cycle. The second, each period of time is divided into roughly equal stages, usually four, sometimes two, going from birth to destruction.

The theory of the periodicity of time continued to be developed into the theory of the periodicity of generation. Appreciating the study on the problem of generational cyclicality, Toynbee (1954, 319) wrote, "the measure of the time available to humanity is the average length of an individual's conscious life"; Esler (1982, 152) wrote, "the generational approach can be one of the comprehensive historical approaches"; Strauss and Howe (1997, 16) wrote, "History creates generations, and generations make history".

As discussed, generation theory was the first mentioned by Mannheim (1928), as the "sociology of generation". According to him, the generation is a group of individuals of a similar age who have shared notable historical events in a definite period of time. He considered generation as a "social phenomenon", that the characteristics of a generation formed in a particular time and space, called "generational position", influenced by context of society, especially at the young age.

Similarly, according to Strauss and Howe (1997, 16), "a generation is the set of all persons born in the same period of a life stage, having a common place in history, and there is therefore a common collective character". To be able to distinguish one generation from another, Strauss and Howe (1997) suggested three basic attributes: 1. The common position

of a generation in history; 2. The common beliefs and behaviours; 3. The membership is felt within the same generation.

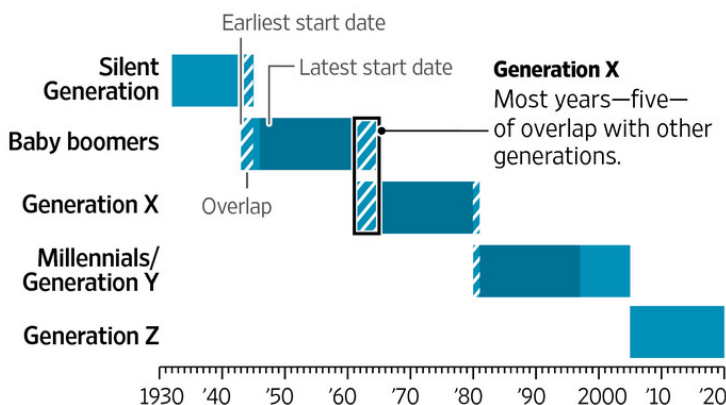
Strauss and Howe (1997), Vandegrift (2015), and some other authors, argued that a time cycle of modern society is about 80 years long, corresponding to four generations, each generation is about 20 years old. Accordingly, in the current cycle of time, there are also four generations, often named Baby Boomers, Gen X, Gen Y, and Gen Z respectively.

However, each individual in the same generation still has its own characteristics, and the time limit of a generation is not fixed, because it still depends on other factors. Therefore, the evolution of generational rhythms is not like simple natural cycles, but rather complex social cycles, the stages can be intertwined and between the two periods there will be a blur of intersection. (Figure 1).

**Figure 1. Flow is not clear**

**Blurred Lines**

Generations refer to people associated with a distinct era of history based on their birth years, but the cutoffs are fuzzy.



Sources: Pew Research Center, Social Security Administration, United States Office of Personnel Management, Generations: The History of America's Future

THE WALL STREET JOURNAL.

Source: *The Wall Street Journal*. 2016

From the generation cycle, I'll continue the discussion of the human life cycle. Strauss and Howe (1997, 33) observed, "the human life is perhaps the only cycle that one cannot avoid or change".

The Etruscans believed that their Etruria often experienced four seasons: growth, saturation, chaos, and destruction; each of these seasons corresponds to a lifetime (Banti, 1973). Pythagoras - the ancient Greek philosopher - thought that life is a cycle of four stages, each of which corresponds to a season: spring - childhood, summer - youth, autumn - middle age, and winter - old age. According to Jung (1933), each season is an organic part of the human life cycle, connecting and containing both the past and the future.

Viewed from a biological perspective, Diamond (1993, 59) concedes, "With any species, something can be said about its biological term 'life cycle'". From a social perspective, Strauss and Howe (1997, 16) assert, "Of all the cycles known to mankind, the one that we all know best is *the human life cycle*."

According to Levinson (1978), Strauss and Howe (1997), and Yang (2016), the basic length of each stage in human life is about 20 years, including: 1. Adolescence (0-20 years old); 2. Youth (21-41 years old); 3. Middle age (42-60 years old); 4. Old age (61 onwards). It has also been suggested that there is a longer period of senescence, or late senescence, from the age of 81, in the context of increasing life expectancy, but this does not change the nature of senescence.

#### 4.2. Characteristics of Gen Z consumer

Cyclic theory is used to understand the following two basic characteristics of Gen Z as consumer today.

*The first, Gen Z is the digital consumer.*

McCrinkle (2011) calls Gens X, Y, and Z are “global generations”, and Tapscott (1998) calls Gen Z is the Net Generation, in addition Gen Z is also called the Internet Generation, the Digital Generation, the Digital Natives. The reason is that this generation was born and raised in the age of the Internet, information technology, and globalization. Stansbury (2017) calls Gen Z is “phigital”, implying that this is the generation that lives in both the physical and nonphysical worlds, they are interchangeable, signifying a seamless exchange.

If Gen Y is considered the digital pioneer, then Gen Z is the true digital citizen (Mowforth, 2018), because it was born and raised in the digital age, considering “digital is king”. According to a survey by Sözer (2019), the usage rate of information technology applications in Gen Z is always approximately 50% or more (Table 1). In fact, this number is probably even higher.

**Table 1. Percentage of Gen Z using information technology applications**

Characteristic	Application entertainment (%)	Application the media (%)	Application network (%)	Total (%)
Sex				
- Male	48,0	47,8	52,4	49,3
- Female	52,0	52,2	47,6	50,7
Job				
- Student	60,0	52,2	52,4	55,1
- Worker	40,0	47,8	47,6	44,9

*Source: Sözer. 2019*

Gen Z grew up in an environment that includes the countless of information, images, and advertisements in the media, it constantly uses mobile information technology devices, which are connected to the Internet, with variety of software applications. This made Gen Z quickly join the global media network; in turn, that network regulates the way Gen Z thinks, behaves, and lives, and also how it buys for goods and uses services. Ayuni (2019) said, Gen Z is a generation that is friendly with applications and Internet-savvy in almost all of its daily activities, it has a habit of using social networks to express itself: what to eat, what to wear, where to go, what to play,...

Codrington and Grant-Marshall (2012) stated that Gen Z in Asia is not outside the common flow of Gen Z in the world, with similar characteristics in terms of consumption such as shopping preferences, commercial goods and services brands, love technology and shop with technology.

Gen Z's everyday behaviors revolve around digital applications, including shopping behavior. It is very familiar with online shopping via using mobile devices, especially smartphones (Dabija and Lung, 2018). Although many Gen Z members still shop in person at brick-and-mortar stores, the increasing presence of online stores also makes them quick to access this new experience. Ninan et al. (2020) show that social media marketing has a more positive impact on Gen Z's purchase intention than traditional marketing. Therefore, Parashar and Rasiwala (2018) highly appreciate the role of social media through the way Gen Z uses it, and think that this is a new communication channel capable of maintaining customer's loyalty. Thangavel et al. (2019) recommend that retailers need to understand Gen Z's online shopping orientation, because it easily accepts e-commerce due to its usefulness and convenience (Lestari, 2019).

People are witnessing that how Gen Z affects the business strategies of many companies, causing many of them have to change their business models: from a traditional business model to an e-business model (also known as an e-commerce model) through online stores are now appearing more and more, especially in the context of the COVID-19 pandemic forcing companies to make digital transformation efforts.

*The second*, Gen Z is the consumer with diverse personalities.

Researching on recent generations, Crampton and Hodge (2007) observe, the later generations appear to have more and more diverse personalities. Gen Z's diverse personality is mainly due to the influence of social media, which according to Wilson et al. (2017) is a generation that both desires autonomy and hopes for expansion of space. Being relatively young and living in a mixed physical-nonphysical space, Gen Z's diverse personalities also exhibit changeability, even instability.

In the diversification of personality, the highlight is the personalization, starting from Gen Y, and coming to Gen Z even more clearly. Gen Z is pushing it to the next level, expressing itself mainly through extroverted activities, sometimes despite personal abilities as well as reality, paying little attention to other people's comments, and taking it personally to be center.

In relationships, Gen Z often values its own feelings. Researching how to deal with its relationships on Valentine's Day, Orchard (2020) finds that Gen Z tends to refuse commitment in relationships, it just prefers random and relative short relationships. The main reason is technical: powered by information technology, Gen Z easily connects on a large scale, so it is willing to give up a relationship to continue establishing new ones.

Along with individuality is practicality, valuing what it really has, intuitively. Gen Z is more realistic than previous generations in thinking and acting, its measure is self-interest and practicality, it focus its efforts on what it wants to have at the moment instead of what it can have on tomorrow. Research on Gen Z in Indonesia, Dwidienawati and Gandasari (2018) find that Gen Z in this country values work and money, it is willing to work hard to be well paid, willing to go to cities and other countries for better jobs.

A common expression of practicality in Gen Z is that it promotes the slogan “enjoy it now”. It tends to focus on the needs of the present, and not care about accumulation and provision for the future. Wilson et al. (2017) comment, Gen Z’s need for instant gratification is quite high.

This feature makes many companies changing the way they do business: towards individual products, and serve only one person (Lufkin, 2020). Because today Gen Z has the ability to “alone” consume goods and services, as a sign of personal confidence and independence, instead of needing companions like previous generations.

In Vietnam, Gen Z is presenting itself as a whole new generation. According to the General Statistics Office (2019), as of 1/4/2019, Vietnam’s population has more than 96.2 million people, of which Gen Z accounts for over 25%. Gen Z Vietnam is mostly still in the process of learning and growing up, starting to reveal its generational characteristics.

## **5. Discussion**

Different socioeconomic conditions will shape different generations with different values, behaviors, and attitudes (Dwidienawati and Gandasari, 2018). Born in a period of economic development, Gen Z spends more on learning, technology, entertainment, travel, dining, fashion,... By the end of 2019, Gen Z accounts for 40% of the world’s consumers, and this signals the need to meet the different needs of a new generation of consumer (Rashid and Othman, 2019).

Tucker (2016) argues that the cyclic theory when applied in practice has caused conflicts between users of quantitative and qualitative methods, on the one hand, it is necessary to test the theory from a quantitative perspective, the other requires from a qualitative perspective. However, I think that practice itself has a life of its own. Therefore, the principles outlined below are for putting the results of cyclic research into practice, to educate and protect Gen Z consumer, rather than qualitatively or quantitatively.

The first, because time is cyclical, that now is about every 80 years for a time cycle by which society moves from one period to another, marked by major events in the society; therefore, when considering Gen Z it is necessary to place it in its own time cycle.

The second, Gen Z is a generation that plays a special role because it is at the end of the cycle, preparing to end the current cycle and move on to the next, featuring a combination of the transitions between the two cycles; therefore, it should be viewed from both time periods, but with emphasis on the end of the previous cycle and the beginning of the following period.

The third, and most importantly, Gen Z is in the early (childhood) and the second (adolescent) stages of the human life cycle, so Gen Z’s characteristics, such as digital consumer with diverse personalities, are somethings need to take into account, and as a starting point to educate and protect it as consumer.

The popularity of information technology is significantly changing the behavior of Gen Z. Tennakoon et al. (2018) say, Gen Z likes to search the Internet for four main reasons: security, feedback, quality, and convenience. Rashid and Othman (2019) call it “technological behaviour”. In this context, it is necessary to have a positive response to

young people who have grown up fully in the digital world (Valentine, 2018), the education of consumption knowledge and skills for Gen Z must be based on identity and share what it is interested in.

Gen Z has a great dependence on technology (Jenkins, 2019), so technology needs to be universally used for finding information, connecting with people and data, finding solutions to problems, experiencing virtual reality. For example, a chatbot (intelligent conversational agent) can be used to interact with Gen Z, and if integrated with a website, it will make querying information convenient (Chaudhari et al., 2020). Or Facebook, a social network that has a significant influence on Gen Z in terms of both reach and frequency of use, and in some ways, Facebook is a channel to market goods and services, as well as help Gen Z consumer to feedback to suppliers and to each other.

Fong et al. (2019) have shown that Gen Z is attracted to one piece of information for only 8-10 seconds around, then if there is nothing interesting, it will shift its focus to another piece of information. Therefore, when using technology to interact with Gen Z consumer, it must create attraction from the first seconds.

Due to their diverse personalities, in addition to using technology to educate and protect Gen Z consumer, it should be combined with practical activities, teaching how to apply in the real world, encouraging them to participate. Kakodkar (2018a, 2018b) proposes the method of “facilitating and building” when working with Gen Z, allowing it to find information on its own, learning to distinguish false and true information, thereby knowing how is smart consumption.

## 6. Conclusion

The study of cyclicity in general, including Gen Z in particular, has only appeared in the world within the past few decades, and has been concentrated in recent years; in Vietnam, it is still a relatively new direction.

Cyclic theory suggests Gen Z is in the fourth phase, at the end of the current time cycle; so they will assume both an end of the current cycle and a beginning of the future cycle.

With its remarkable characteristics, educating and protecting Gen Z as consumer not only contributes to the formation of a new generation in general, but also creates a new generation of smart consumer.

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# THE IMPACT OF FINANCIAL LITERACY ON STUDENTS' USE OF BLACK CREDIT IN HANOI CITY

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## **Abstract**

The study assessed the impact of financial literacy on the use of black credit by students of Universities in Hanoi by clarifying factors affecting students' black credit loan plans and needs as well as evaluating the black credit behavior of students in different disciplines. Data analyzed through a linear regression model showed that there were significant gender differences in black loan options, men tended to use black credit higher than women because female students had higher financial literacy scores, had better financial knowledge than male students. The study also pointed to the level of financial understanding associated with the academic sector and the ability to manage student spending. Since then, the research team has made a number of recommendations for education that combines families and schools, and the government should put in place stricter policies for interest-heavy lenders to prevent their access to students.

**Keywords:** Financial literacy, black credit/unofficial credit

## **1. Introduction**

Vietnam is an emerging and developing country; however, the level of financial literacy of Vietnamese people is still low, especially students - the young future generation of the country. Inexperienced in financial allocation, it is easy to get entangled in black credit, negatively affecting the study and life of individual students in particular and society in general. Therefore, Vietnam has begun to have financial education programs for a specific audience (Luong Minh Ha et al., 2019). The World Bank and its partners also selected Vietnam as one of the priority countries to focus on efforts to financial inclusion in the Universal Financial Access (UFA) initiative by 2020. However, the current PE programs in Vietnam are still limited, not synchronized, and follow a specific and unified roadmap nationwide to increase the community's financial literacy.

In the context of the imperfect financial market, such as information asymmetry and limited resources, university students face difficulties accessing loans. According to statistics in 2011 from the Ministry of Education and Training, 1,163 students (0.13%) dropped out of university due to financial constraints (Khanh Vu, 2012). Not only students who have difficulty with study costs but also students with high spending needs, who indulge in gambling, betting, etc., need loans. However, with strict and time-demanding conditions and limited access to official credit, access to black credit is inevitable. Therefore, students ask for help from black credit loans with early disbursement and quick procedures, which also results in considerable risk with high-interest rates. Black credit is a significant and hidden concern in the university environment and a popular method for students in Nha

Trang city (Ky Nam et al., 2018). Many studies show that bad credit surrounds students and impacts negatively on students' academic performance and their mind.

The study evaluates the impact of financial literacy on students' use of black credit at universities in Hanoi by clarifying the factors affecting the intention and need for black credit students as well as evaluating the behavior of using black credit by students of different disciplines through survey data by a questionnaire designed based on OECD and INFE. The main conclusions of this study are as follows. Firstly, the data analyzed through the linear regression model shows a significant difference in gender in the selection of black credit loans; the rate at which male students tend to use black credit is higher than that of female students. Female students have higher financial literacy scores and have better financial knowledge than male students. Secondly, the study also shows that financial literacy is related to the ability to manage student spending. Specifically, students who have a wide knowledge of economic fields are more aware of spending than students in other fields, therefore, they tend to use fewer black credit loans.

Besides the introduction, the study is divided into three parts. In the second part, the authors focus on researching domestic and foreign studies on black credit activities, the factors affecting black credit, and the impact of financial knowledge on black credit.

## **2. Research overview**

Hao's study (2018) mentioned black credit in China from a negative perspective when the impact of usury on organizations and individuals has indirectly affected China's micro-economy. This issue in China has become of great concern because of the lack of legality, freedom, and uncivilization affecting people and society in the country. Debt collection forms become illegal, creditors use force to collect debts, and debtors cannot do anything but run away or borrow more money to pay exorbitant debts, which causes disorder in social security. The above author has proposed to ban usury in China again because of its abuse.

For Kislak's (2015) study, which focuses on the non-traditional borrowing of poor households in Thailand, the author concludes that poor households will tend to borrow from friends so that they have quick money to meet their needs instead of choosing a bank loan because the procedure is complicated and time-consuming. This study argues that this is a positive action for poor households when the government does not have enough allowances for poor households. However, the above studies focus on households that need essential financial support, and students have not yet paid attention.

The study, conducted by the World Bank (WB), measures the financial literacy of students of universities in Hanoi on three dimensions: financial knowledge, financial skills, and behavioral finance, in which the part where financial attitudes affect decision making is included in the behavioral financial section. This study shows that the personal financial understanding of students in Hanoi is at average or even low level. This result is consistent with a survey of students at the University of Southern Mississippi in the study by Floyd (2015) or a study by Nidar & Sandi (2012) at the University of Padjadjaran in Indonesia. The above compilation is by Le Hoang Anh (2018). Author Nguyen Thi Hai Yen (2015), when applying an objective test to measure the financial literacy of university students

in Vietnam, it shows gender, place of residence, field of study, experience Academic experience, students' financial dependence on their families, and students' need for education have a significant effect on their financial literacy at all levels. Most students majoring in economics have learned the basics of finance in their first years, and even for non-economics students, their financial knowledge can also be improved in the learning process due to the increasing need to study finance to enter the financial market after graduation. Another critical factor that determines a student's financial literacy is the need for financial literacy. However, only 50% of the participating students have this need. Research by Le Hoang Anh (2018) focusing on factors affecting students' financial knowledge has an overview of student knowledge, but all domestic studies have not reached the concept of black credit.

Domestically, the research about informal borrowing by Cuong Viet Nguyen et al. (2014) only focuses on poor households borrowing from other organizations and individuals such as family, friends, and individual financial institution and focus on the equality of richness and poverty. This form supports poor households if the government subsidy is insufficient but has not mentioned the risks of non-traditional borrowing from financial institutions lending usury to the economy and society.

According to Nguyen Dang Tue (2017), the survey which researches the factors affecting the adults' financial knowledge, also shows the similarity between the spending and saving ways of people who live in Hanoi and Nghe An. These are the two big cities, so most of them have to bear the income and expenditure for their families. The financial knowledge of the respondents in the above study is not high, only 60% of people get 4-6 correct questions, more than 20% complete 3/10 questions, and the rest can do at least 8/10 questions. As a result, the study shows that the knowledge of financial management of the previous generation has not been focused on, so it needs to be improved for the next generation.

Researcher Trinh Thi Phan Lan (2018) - Financial education for children towards national financial universalization, discusses the issue of early childhood education for young generations because financial knowledge is constantly changing and should be updated early to help people universalize world knowledge. Parents should encourage their children to enter suitable educational environments as well as participate in many practical activities to consolidate their background knowledge and improve their skills financial knowledge.

Thus, it can be seen that, compared with previous studies, our study has the following specific differences. First, the study assesses the impact of financial literacy on the use of black credit among students of universities in Hanoi, an aspect that has not or has had very few research topics on this topic access. Second, the study uses both methods simultaneously. Quantitative scientific research runs a linear regression model based on primary data collected from a survey of 353 students from universities in Hanoi City. It also clarifies the impact of financial education on the use of black credit by students in Hanoi city. Third, the study compares the factors affecting the behavior of having and will use black credit among students of different universities in Hanoi.

### 3. Research Methods

#### 3.1. Evaluation model of factors affecting students' use of black credit

Based on a research paper by T.O. Sebopetji et al. (2009) on the factors affecting the decision to use credit of a small number of farmers in South Africa, the authors built the following research model:

$$\ln \left[ \frac{P(Y = 1)}{P(Y = 0)} \right] = \beta_0 + \beta_1 \text{FIELD} + \beta_2 \text{FLS} + \beta_3 \text{GENDER} + \beta_4 \text{INCOME} \\ + \beta_5 \text{YEAR} + u_i$$

The dependent variable on ever used black credit is defined as follows:

Y=1 if the student has taken out a black credit loan,

Y=0 if the student has not taken out a black credit yet

The independent variables include:

(i) FIELD: Field of Study

1: Student in the field of economics.

0: Students in other majors.

(ii) FLS: Financial Literacy Score

The financial literacy score is calculated according to a 10-question set of questions about all financial knowledge, from basic to advanced. The questions are in the form of multiple-choice questions, with 100 points. In the process of answering, students do not use supporting devices such as computers, phones, etc., to access the internet, except for computers that support calculating the data in the questionnaire. Respondents were all guided by the author group on how to do it, and they all answered the questions voluntarily and cooperatively.

(iii) GENDER: Gender

1: Male

0: Female

(iv) INCOME: Student Income

1: Income less than 1 million

2: Income 1-2 million.

3: Income 2-3 million.

4: Income 3-4 million.

5: Income 4-5 million.

6: Income greater than 5 million.

(v) YEAR: School year

1: The student is a freshman.

- 2: The student is a sophomore.
- 3: The student is a third-year student.
- 4: The student is a fourth-year student.
- 5: Students have graduated.

### **3.2. Evaluation model of factors affecting students' intention to use black credit**

$$\ln \left[ \frac{P(DECISION = 1)}{P(DECISION = 0)} \right] = \beta_0 + \beta_1 FIELD + \beta_2 FLS + \beta_3 GENDER + \beta_4 INCOME$$

Dependent variables include:

DECISION=1 if the student intends to use black credit

DECISION=0 if the student is not planning to use black credit

The independent variables include:

- (i) FIELD: Field of Study
- (ii) FLS: Financial Literacy Score
- (iii) GENDER: Gender
- (iv) INCOME: Student Income
- (v) YEAR: School year
- (vi) OVERPAYMENT: Spending exceeds the income
  - 1: Student spending exceeds income.
  - 0: Student spending has not exceeded income.

### **3.3. Description of data**

Table 1 summarizes the financial literacy scores of 348 students in Hanoi city after answering a set of survey questions (10 questions) about financial literacy. The group of students with good results accounted for the highest proportion (31.9%), followed by 29.6% of students with average results, and the number of excellent students who answered all questions correctly was 7 (2.01). %. In the group of weakly classified students (22.7%), only one student scored 0 points. Specifically, the number of students with 40 points accounted for the highest number (28 students). The number of students above the weak level is 77.3%, based on the survey 29.6% of students achieved the average score, and the student's understanding score was quite good at 31.9%. For the group of students with high scores from 85-100 points on financial literacy, accounting for 15.8%, 31 students scored 90 points out of 348 students surveyed.



**Table 1. Statistics of students' financial literacy scores**

	Score	Number (348)	Student Score Ratio	Classification
Financial literacy	0 points	1	22.7%	Weak
	10 points	6		
	15 points	1		
	20 points	11		
	25 points	7		
	30 points	15		
	35 points	4		
	40 points	28		
	45 points	6	29.6%	Average
	50 points	28		
	55 points	12		
	60 points	46		
	65 points	17	31.9%	Good
	70 points	39		
	75 points	20		
	80 points	52	13.79%	Excellent
	85 points	15		
	90 points	31		
95 points	2	2,01%	High Distinction	
100 points	7			

*Source: Survey data of the research team*

Table 2 shows students' monthly amount each month, and most students will receive 2-3 million VND/month (25%). 20.69% of students receive 1-2 million VND/month; similarly, it is more than 5 million VND/month, 12.36% of students receive 3-4 million VND/month, 12.07% students receive 4-5 million VND/month, the rest is 9.2% students receive less than 1 million VND/month. Most of their money comes from their families (49.16%) because they are still in school and from part-time jobs (41.12%). They also come from receiving university scholarships (8.79%). Students who have ever spent more than their income (78.45%) will often choose to apply from family (57.67%) or borrow from friends and acquaintances (49.14%). The rest use a card credit (6.32%) with black credit (6.9%). Out of the total number of surveyed students, the number of students who have used black credit (10.34%) chooses to borrow because of the easy and convenient way (75%) and need the money to respond immediately (72.2%) ). When borrowing black credit, students mortgage mainly with an ID card, student card, and driver's license (73.90%). In addition, they can use motorbikes (50%), laptop phones (50.9%) , jewellery (53.7%) and some other valuables as collateral. Borrowing purposes are mainly due to debt (68.1%), gambling (68.7%), loss (51.4%), and the rest want to buy favourite things (54.3%).

**Table 2. Statistics of responses to the black credit section of the survey**

Income	Less than 1 million	32	9,20%
	1-2 million	72	20,69%
	2-3 million	87	25,00%
	3-4 million	43	12,36%
	4-5 million	42	12,07%
	More than 5 million	72	20,69%
Funds	Family	263	49,16%
	Part-time jobs	220	41,12%
	Scholarship	47	8,79%
	Other	5	2,59%
Spending exceeds income	Already	273	78,45%
	Not yet	75	21,55%
Whom do you borrow money?	Family	201	57,67%
	Friends and Acquaintances	171	49,14%
	Use credit card	22	6,32%
	Black credit (mortgage, loan with high interest rate,...)	24	6,90%
	Other	9	3,90%
Are you planning to borrow black credit?	Yes	36	10,34%
	No	312	89,66%
Why decide to borrow black credit?	You are in dire need of money, and a black credit loan meets your needs right away	26	72,20%
	An easy and convenient way to borrow	27	75%
	Other	3	8,40%
Mortgage any objects?	Citizen ID, Student card, License	257	73,90%
	Motorcycle	174	50%
	Phones, laptops, ...	177	50,90%
	Jewelry	187	53,70%
	Other	17	4,80%
Purpose	Want to buy favourite things	189	54,30%
	Due to debt	237	68,10%
	Due to loss	179	51,40%
	Due to gambling	239	68,70%
	Other	9	2,70%

*Source: Survey data of the research team*

## 4. Research results

### 4.1. Assessing the impact of financial literacy on students' use of black credit in Hanoi city

Based on the model identified in part 3, the research team obtained the following results:

**Table 3. Impact of financial literacy on the use of black credit among students in Hanoi**

Variable	Use black credit
C	3.115883***
FIELD	-0.393059
GENDER	0.459819*
YEAR	-0.028859
FLS	-1.159354***
INCOME	-0.044361

Note: \*  $p < 0.1$ , \*\*  $p < 0,05$ , \*\*\*  $p < 0,01$

Source: Results obtained from the Eviews model

Firstly, gender positively affects the use of black credit by students at the 10% significantly. This factor shows that male students have used black credit more often than female students. The research also shows the results that 24 students have ever borrowed black credit when they need money immediately, of which 17 male friends have used pawnbroking and usury. Besides, the study also proves that women are more financially savvy than men. Firstly, as suggested by the authors, the level of interest in financial literacy has a better index for male students, with 131 male students interested while 217 female students are interested. When asked about financial knowledge, female subjects have more positive and enthusiastic attitudes when asking and carefully calculating questions about medium and difficult financial knowledge. Secondly, to reinforce the above point, female students with above-average scores (from 50 points or more) account for 85.26%, while male students have only 64.12%, and you have scores ranging from 50 to 100 points. More specifically, there are five girls with perfect scores and only two boys with perfect scores. In addition, women are more concerned about saving and personal spending, and they list more specific and total expenditures, and those items are calculated in detail. At the same time, the savings item is always positive compared to male friends. Through a survey on financial knowledge at universities in Hanoi, the authors have shown that the reason men borrow black credit more than women is because of weak financial knowledge and a caring attitude. The problem of using black credit is not severe compared for women.

Second, financial literacy scores harm students' black credit usage at a 1% significance level. The results obtained from the model show that the financial literacy variable has the right impact on the expected sign in theory and practice. Accordingly, this statistic shows that students who have ever borrowed black credit have scores below the average. With 24 borrowers, there are 21 of you with below-average financial scores, accounting for 87.5%

of the group that used to use pawnbrokers, usury. However, the remaining 12.5% have expenditures that exceed their incomes, so that must be the reason for the decision to borrow black credit. Those with poor financial knowledge will not be able to manage expenses such as saving and spending correctly every month, so 100% of the borrowers with black credit will exceed their research spending limit on the lack of financial management skills in student loan sharks or pawnbrokers. This group of subjects all need money quickly due to an urgent need to spend or pay expenses, but this is a high-risk action because, with high-interest rates, it will be difficult for students to pay. in the short term. The results demonstrate that a lack of financial knowledge will lead to a higher decision to borrow black credit than having good financial knowledge.

#### ***4.2. Assessing the impact of financial literacy on students' intention to use black credit in Hanoi city***

Based on the model identified in Chapter 2, the research team has obtained the following results:

**Table 4. Impact of financial literacy on intention to use black credit among students in Hanoi**

<b>Variable</b>	<b>Intended use of Black Credit</b>
C	2.373614***
FIELD	-0.813934***
GENDER	0.776766***
YEAR	0.008620
FLS	-1.130487***
INCOME	0.013374
OVERPAYMENT	0.624219*

*Note:* \*  $p < 0.1$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$

*Source:* Results obtained from the Eviews model

*Firstly*, the results obtained from the model show that the discipline has a statistical confidence level of 1%, so the FIELD variable has a high statistical significance. Moreover, the Coefficient between the FIELD variable and the DECISION variable is -0.813934, and a negative correlation coefficient shows a negative relationship. It means that students who are not in the economic sector intend to use black credit higher than those in the economic sector. It is pretty reasonable and supports the point of view of Le Hoang Anh et al. (2018) that students in the economic sector have sound financial knowledge compared to those in the non-economic sector. Because students in the economic sector are often equipped with financial knowledge and financial management skills, students in this group will make less risky decisions in consumer loans.

*Second*, the sex independent variable has a statistical confidence level of 1%, so the gender variable is statistically significant. The model shows that the Coefficient between GENDER and DECISION variables is 0.776766; a positive correlation coefficient indicates a positive relationship, meaning that male students are more likely to use black credit

than female students. . This result can be explained because female students have better financial understanding and management ability than male students (Le Hoang Anh et al., 2018), so female students will be less likely to use credit. Everyday use.

*Third*, the independent variable FLS also has a statistical confidence level of 1%, so the FLS variable is statistically significant. However, the statistical results from the model show that the Coefficient is -1.130487, showing a negative correlation. The lower the financial literacy score, the higher the student's intention to borrow black credit with the opposite case. This result is quite reasonable with reality and supports the view of Davtyan (2010) that the lack of financial knowledge leads to the lack of money management skills and thereby leads to the behavior of using black credit of the poor. Student.

Fourth, the independent variable expenditure exceeds income and has a statistical confidence level of 10%, so this variable is statistically significant. Statistical results from the model show that the Coefficient is 0.624219, which means that the variable spending exceeds income and the variable intending to use credit have a positive relationship. It means that if a student spends more than his or her income, there is a possibility of using black credit. Uncontrolled spending results from a lack of financial knowledge leading to a lack of money management skills, thereby leading to the possibility of students planning to use black credit. From lack of financial understanding can lead to many consequences for the future of borrowers students because they do not understand, do not understand the consequences associated with their behavior but only see the surface Popular as the easy and fast loan methods of black credit, the advertising of low-interest rates, but the fact is that the interest rates are incredibly high, the interest rate can make the borrower never pay off the debt. Not to mention there are black credit users who also risk affecting the safety of themselves and their families.

## **5. Conclusion and Policy Recommendations**

The study assesses the impact of financial literacy on the use of black credit and the intention to use black credit of university students in Hanoi based on the primary data set obtained by the survey. The study found empirical evidence that financial literacy positively affects the use of black credit among students in Hanoi city. This result shows that students with a good level of financial literacy are less likely to take out a bad credit loan. It implies that it is necessary to improve the financial understanding of the people in general and students in particular, to minimize the use of black credit. Therefore, the research team proposes the inclusion of finance subjects at all levels of education from primary school, junior high school, high school, and university with different levels to improve understanding. Know your finances.

However, because the length of subjects at universities is decided by the Science and Training Council and cannot be easily changed, it will often focus on the students' specialized subjects. Therefore, non-economic students in Vietnam will not have financial knowledge and behavior subjects in the regular curriculum. Therefore, non-economic students need extracurricular programs on personal financial management and financial

literacy. These extracurricular programs can be organized by the Student Union, the Youth Union of the school or the student clubs of economic schools. Extracurricular programs can be organized in activities with topics on money management skills, financial planning and basic investing skills for university students. It will create a premise to help students, even without studying economics, still have a certain level of understanding in managing their spending, avoiding bad management leading to spending excess income that uses black credit.

Financial literacy courses should focus on three main goals: money management skills, financial planning, and basic investment skills. This prevents students who have no financial management skills from overspending, which may lead to black credit. Teaching students basic investing skills will be the foundation for creating the experience for their future. Besides, it is necessary to supplement students with knowledge about the harmful effects of improper use of money to avoid unfortunate consequences.

In addition, the data analyzed through the linear regression model shows a significant gender difference in the selection of black credit loans; the rate that men tend to use black credit is higher than that of women because female students have higher financial literacy scores and have better financial literacy than male students. Since then, the research team has made some recommendations for schools and families on student education. Additionally, the government should issue stricter regulations and policies to prevent black loan lenders from accessing students.

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# DIGITAL FINANCE AND CONSUMER PROTECTION IN THE TIME OF COVID-19: INTERNATIONAL EXPERIENCES AND POLICY RECOMMENDATIONS TO THE GOVERNMENT OF VIETNAM

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## **Abstract**

Technological advances in recent years have been gradually changing the financial landscape and helping businesses and people overcome barriers to accessing financial services in many countries around the world. The COVID-19 pandemic that has occurred worldwide since the end of 2019 has made countries and territories more dependent on technology and products/services of technology. In the context of governments implementing social distancing measures to cope with the COVID-19 epidemic, digital financial services are given not only new opportunities to promote financial inclusion but also riskier than on consumers' protection in particular. In this Paper, we examine financial inclusion reacts to the digital finance, especially in Vietnam, during the time before and after the COVID-19 happened. Thus, a number of proposals are made to promote and supervise the digital finance in the future with the aim to protect the legal rights of the consumers, especially the ethnic minorities in rural areas. In that process, what should the Government of developing countries like Vietnam do to handle this area?

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**Keywords:** Digital finance, consumer protection, international experiences, COVID-19

## **1. Introduction**

Technological advances in recent years have been gradually changing the financial landscape and helping businesses and people overcome barriers to accessing financial services in many countries around the world. The COVID-19 pandemic that has occurred worldwide since the end of 2019 has made countries and territories more dependent on technology and products/services. Accordingly, the strong implementation of social distancing measures by governments to control the COVID-19 epidemic over the past two years has unseemly paved the way for technology to create new opportunities for products and services (Digital Finance - DF) to accelerate and promote financial inclusion (Financial Inclusion).

In the face of potential risks of digital finance, digital financial management aiming to both promote financial inclusion and at the same time ensure financial stability in the context



of epidemics or similar crises in the future has become a major concern of governments and financial supervisory authorities. In Vietnam, financial inclusion, with the important role is consumer protection is one of the priorities in socio-economic development. However, digital finance brings some challenges to the market in terms of legal framework, network and information security, consumer protection, environment and business culture. Despite possessing great potential, Vietnam has only explored digital finance at a low level with a rudimentary legal framework, mainly a number of macro projects and payment regulations. The incomplete legal corridor has created loopholes for some organizations and individuals to take advantage of DF such as peer-to-peer lending and crowd funding to operate “black credit”, money exchange... In the context of network security and information security in Vietnam, there are still many limitations, it is easy for customers to provide personal information to peer-to-peer lending platforms, online shopping websites...increase the risk of data loss, personal information, creating loopholes for hacker attacks or fake transactions. The trend of technology crime is gradually shifting from attacking the engine to learning to exploit technology and user vulnerabilities. In parallel, there remain a number of limitations to the protection of consumers’ legal rights in Vietnam. Therefore, studying the impact of digital finance on financial inclusion in the context of the current COVID-19 pandemic in order to propose digital financial management policies is very urgent in Vietnam.

In light of these premises, this working paper has two main objectives:

1. To provide a comprehensive overview of the impact of COVID-19 to the digital finance and how the governments of some selected countries to react to the Pandemic to both promote and supervise or handle the digital finance. This means that it also illustrates the advantages and risks associated with the surge in DF, a process of widespread digitization of financial services that was already partially ongoing in developing and emerging contexts; and

2. To discuss the real situation in Vietnam, thus, proposing some recommendations. Policymakers at the country can use this research to analyze the policy responses implemented by their counterparts in the context of the COVID-19 crisis, drawing inspiration for the design of their own bundle policy interventions in the digital finance arena.

## **2. Overview of digital finance (DF), financial inclusion and consumer protection. The risks from DF on consumer protection**

### ***2.1. Literature Review***

- Although there is no standard definition of digital finance, it is widely agreed that digital finance includes products, services, technology and/or infrastructure that enable individuals and businesses to have access to access to means of payment, savings and credit over the internet (online) without visiting a bank branch or dealing directly with a digital financial service provider. Digital financial services include financial products and services such as: Payment, credit, savings, money transfer and insurance through digital channels.

- Financial Inclusion: According to the World Bank, financial inclusion means that individuals and businesses have access to useful and affordable financial products and services that meet their needs – transactions, payments, savings, credit and insurance – delivered in a responsible and sustainable way. Access to a transaction account is a first step toward broader financial inclusion since it allows people to store money, and send and receive...

- Consumer Protection: The World Bank simplifies that financial consumer protection encompasses the laws, regulations, and institutional arrangements that safeguard consumers in the financial marketplace. Or a financial consumer protection regime should meet three objectives:

- Consumers should receive accurate, simple, comparable information of a financial service or product, before and after buying it.
- Consumers should have access to expedient, inexpensive and efficient mechanisms for dispute resolution with financial institutions.
- Consumers should be able to receive financial education when and how they want it.

In Vietnam, in Decision No. 149/QĐ-TTg dated January 22, 2020 of the Prime Minister approving the National Comprehensive Financial Strategy to 2025, with a vision to 2030, financial inclusion is the way that people and businesses can access and use financial products and services conveniently, in accordance with their needs, at a reasonable cost, provided in a responsible and sustainable manner, with emphasis on to the poor, low-income people, the disadvantaged, small and medium-sized enterprises, and micro enterprises.

Financial inclusion aims to have a general goal in which all people and businesses can safely and conveniently access and use financial products and services that are appropriate to their needs, at a reasonable cost. Some specific targets of this Strategy to 2025 are:

- At least 80% of adults have a transaction account at a bank or other authorized institution; towards the goal of every adult having at least one transaction account at a bank or other authorized institution by 2030;

- At least 20 branches and transaction offices of commercial banks per 100,000 adults;  
- At least 50% of the total communes have financial service points (branches, transaction offices of credit institutions and banking agents; except for the financial service point of the Bank for Social Policies);

- At least 25% - 30% of adults save money at credit institutions; - The number of non-cash payment transactions increased by 20%-25% annually;

- At least 250,000 small and medium enterprises have outstanding loans at credit institutions;

- Outstanding credit for agricultural and rural development out of total outstanding credit to the economy reached 25%; - GDP average premium revenue is 3.5%;

- At least 70% of adults have information about their credit history in the credit information system of the State Bank of Vietnam.

## *2.2. Risks from Digital Finance*

The COVID-19 crisis has also caused the digital finance to reveal a number of limitations and shortcomings, directly affecting the safety and stability of the banking and financial sectors. In the past, the subjects of formal and regular supervision by financial supervisors or central banks were usually commercial banks or financial companies specialized in providing traditional financial services, but today, with the rise of digital finance, these supervisors need to be focused on Fintech companies that provide digital financial products and services, so that the safety of banking activities are guaranteed due to the contagion and interaction between business entities in the banking and financial sectors.

One of the first and most direct risks are related to technical factors: data leakage and cyber-attacks. Due to easy and lax account opening conditions due to the promotion of financial inclusion, citizens and digital financial service providers may have to contend with money laundering/financial organizations for terrorism. Due to easy and lax account opening conditions due to the promotion of financial inclusion, citizens and digital financial service providers may have to contend with money laundering/financial organizations for terrorism.

In the Philippines, Circular 950 in 2017 allows low-risk customers to provide any identity document to replace their citizenship when opening a bank account, and establishes a threshold for transactions that are deemed acceptable. For microfinance loans, this is an effort to promote financial inclusion towards people in remote areas in the context that the Philippines do not have a national data system on citizen identification. Indonesia has also eased the conditions for opening a bank account to the extent that people living in remote areas can only need a confirmation letter or letter of recommendation from the head of the village. This can lead to holes in the supervision of the digital financial sector, decline in public trust, and to restore balance, requiring governments and central banks to adjust and change regulations on safety and supervision.

In addition, the risks of further widening the divide between those already capable of accessing digital financial services and those who might not be able to such as rural people, women, the elderly, the poor, minor and small enterprises... In the COVID-19, these groups cannot access the Government's electronic system to receive the allowances caused by COVID-19 if they are not equipped with internet connection facilities. The possibility of being left behind, thus, is higher and that the financial inclusion is badly deepened.

Another risk is that a number of Fintech companies are young, new comers to the market and have limited experience in responding to severe and wide-ranging economic crisis. COVID-19 is considered the first test that these Fintech companies face with, thereby assessing how they resist against the Pandemic, how large (scale) they are, how thick their buffers (capital) are. Preliminary surveys showed that investment in Fintech companies around the world dropped sharply in the first quarter of 2020, and marked the worst performing quarter since 2017. This has lead some consequences: acquisition/disappearances of small Fintech companies and sharp decrease in revenues of others. In some circumstances, Fintech companies who specialize in lending to small borrowers (individuals, households, small enterprises) who will be easily exposed to risks due to quality of the loans.

### 3. Governments' responses to the Pandemic

#### 3.1. Selected solutions to promote digital finance to minimize the impact of the COVID-19 pandemic

Over the past two years since the onset of the COVID-19, business of all sizes and in all sectors have been negatively impacted, due to various causes: social distancing, supply chains disruption, continuously incurred expenses (even for the storage). Additionally, profits of the businesses reduced remarkably due to longer-term safety measures to combat infection to protect the workers in some industrial zones. People spent less, which led to the scarcity in cash flows because they feared that the Pandemic would prolong. In such context, however, the financial inclusion affirmed the key role and reduced the hardness to the poor, women, small businesses, individuals, households, and to those who hardly access the banking services. Through digital finance, these people can receive money and other support from relatives, business owners and customers at a lower cost and more conveniently.

Evidently, both governments and private sectors had been separately acting with the aim at minimizing the exposes caused by the COVID-19. A survey by the International Labor Organization (May 2020) found that  $\frac{3}{4}$  out of 1000 businesses have a serious decrease in revenue in 2020, and 9/10 of them are short of payment. In reaction to that, Governments of Nigeria, Kenya, Bangladesh and China, a number of commercial banks affiliated with Fintech companies provided loans, small mortgages to corporate customers during social distancing through mobile phone applications. The Central Bank of Nigeria launched a credit support program worth USD 130 million (with preferential loan interest rates down to 5%, support for 36 months) to ease financial distress for small and medium businesses and households; The Government of the Republic of Togo also initiated an interest-free loan program for farming households whose crops had been affected by the pandemic, the loan amount was up to 172 USD/person and only need to provide an ID card, mobile phone number.

Groups of solutions to promote digital finance in some countries include:

- Loosening conditions for account opening: Pakistan and West Africa adjusted regulations related to CDD and e-KYC customer identification from direct identification to remote identification and application of biometric technology learn when customers want to do business with the bank.

- Increase transaction limit, remove/transaction fee in Egypt, Ghana, Kenya, Rwanda, Liberia, and Bangladesh.

- Encourage Fintech companies to participate in providing products and services through tax exemption and interest support: Columbia, India, Nigeria, and Zimbabwe.

- Supporting SMEs to access digital financial services: The Mexican Ministry of Economy had provided a support package worth US\$1 billion for microfinance businesses. Egypt, Columbia and South Africa had supported industries which mostly impacted by COVID-19 such as tourism, apparel, and hospitals.

- Rescheduling, restructuring loans of small and medium enterprises. Bangladesh launched a refinancing program for farmers and microfinance institutions, under which

the Central Bank of Bangladesh lowered the interest rate down to 1% for commercial banks to lend to microfinance institutions, whereby customers are also entitled to lower interest rates, and at the same time are granted a grace period for principal repayment from 1-2 years; The Central Bank also directed commercial banks to exempt interest for loans disbursed before April 1, 2020.

- No credit rating: The Central Bank of China does not require credit scoring for businesses that are late to repay due loans during the epidemic.

- Liquidity support for financial institutions (micro and non-banks) that are creditors of small and medium-sized enterprises, in some specific areas such as agriculture and rural areas, cooperative banks. Countries applied this policy are India, China.

- Loosening regulations on supervision for financial institutions (micro and non-banks), such as temporarily loosening regulations on minimum capital adequacy and provisioning ratio within 1 year: Nigeria and Myanmar.

Private sectors are also paving their way to overcome the crisis, however. COVID-19 has also made private sectors: commercial banks, microfinance institutions (MFI) and Fintech companies severely affected by customer defaults and late payments. In particular, microfinance institutions are most affected because their main customers suffered more from the disease and the digital transformation process is much lower than that of commercial banks. In response to the COVID-19, these MFIs are cutting their loans, decreasing their operating costs and preserving liquidity, whilst searching more customers.

### ***3.2. Selected solutions to supervise digital finance to minimize the impact of the COVID-19 pandemic***

There is no “one-size-fits-all” for all victim countries to cope with the COVID-19 crisis. Separate countries searched for their own solutions, which includes:

- Regulatory adjustments: The Governments reviewed regulatory adjustment before embarking a long-term program or strategy to completely renew the digital financial ecosystem to combat pandemics or similar crises in the future. The Republic of Kenya and the Republic of Ghana allowed free mobile money transfers and increase transaction limits to encourage people to use digital payment services. Pakistan relaxed the KYC regulations to facilitate customers in remote areas to use Mobile Money services; Zambia listed MMO (Make Money Online) a form of making money based on online platforms as “one of the essential business services” to ensure its availability during the nationwide lockdown.

- Ensuring a unique and fair competition for all digital financial enterprises: From a macro perspective, the rapid shift towards digitization caused by the pandemic should be done in a comprehensive and equitable manner. Accordingly, a standardized legal framework should be made public to all types of digital financial enterprises, regardless of whether they are commercial banks, or MMOs, Fintech. Unfair competition, however, still exists in countries which have higher digitalization of financial services. For example, in Uganda, telecom companies completely dominated the Mobile Money market, even though they have to work with a commercial bank to get an MMO license. Until recently, market competitiveness was affected by unclear regulatory frameworks and lacked of fair competition mechanisms, while both the Central Bank and the national telecommunications

authority shared responsibility in supervision. Not until May 2020, had a new bill been passed, which uniformly stipulated that the Central Bank would preside over the supervision of the entire market of mobile money. Or in Ethiopia, April 2020 the government announced an adjustment of regulations that would allow non-banking financial businesses (such as telecommunications companies) to provide basic Mobile Money services to people for the first time within the framework of systematizing licensing standards for all market participants. In doing so, the Ethiopian government hoped that this reform would bring about a positive impact on the Mobile Money in particular and the digital finance industry in general.

Apparently, the governments or regulatory and supervisory agencies should prioritize harmonization of regulations and ensure a fair competitive, promoting innovation for digital financial enterprises, targeting the most vulnerable and underserved populations, with the orientation of improving their resilience to the upcoming crisis similar to COVID-19.

- Strengthening consumer protection mechanism: Governments needed to further strengthen the mechanism to protect the rights and interests of financial consumers in all transactions such as payments, transfers, credit or savings. This protection mechanism is a fundamental condition in promoting public trust and acceptance of such services, while demonstrating the government's leadership role in protecting the interests of consumers whilst ensuring a fair competition for all financial services providers. Under which, the current measures are: Amending legal regulations to handle financial criminals on the internet (especially during the COVID-19 pandemic); establishing a unit to supervise the digital finance sector; establish a separate mechanism to resolve disputes arising in the digital financial environment; promulgating hard regulations requiring transparency in information disclosure, ensuring people have access to easy to understand and simple information sources, helping to reduce risks and minimize damage in case of fraud or disputes.

The COVID-19 pandemic has accelerated the digitization process due to the essential needs arising from the pandemic, leading to an increase in fraud, criminals due to fraudsters, who abuse the unfamiliar behaviors of customers. Therefore, the Government should quickly propose solutions to protect consumers to prevent these fraudulent acts.

- Using the framework of sandbox testing mechanism: The emergence and rapid development of Fintech and digital finance has caused financial supervision agencies to face many challenges and difficulties such as the risk of money laundering, terrorist financing, information leakage. These agencies are currently facing two contradictory tasks, that is: not only supporting and encouraging innovation, but also controlling and monitoring the innovation in order to maintain stability and safety in the banking and financial system. In response to the continual development of these potential risks, countries (mainly financial supervisors or central banks) are trying to find ways to effectively monitor these financial products.

To minimize the negative impacts caused by COVID-19, countries have chosen sandbox mechanism to promote innovation, limit the unfair competition, preventing illegal

acts. Accordingly, Sandbox is one of the most popular policy tools and approaches adopted by allowing the testing of products and services within a specifically defined space and time. To create an experimental legal environment for Fintech companies, thereby helping regulators to shape the nature, process as well as potential risks of various types of Fintech services. It is possible to issue an official regulatory framework for this sector. Countries applying this Sandbox It is also believed that the sandbox is a win-win methodology tool for all three parties, in which the supervisory body is updated with new financial products, Fintech companies are tested with a new regulatory framework, and the majority population tested for these financial products.

- Strengthen financial literacy for people: governments and central banks need to strengthen financial literacy for people, promote initiatives in this area and encourage people to actively use mobile wallets instead of having to deal directly at agents, while helping people have financial knowledge to avoid the risks of online fraud. When COVID-19 occurred, Zambia launched the campaign “Cashless, stay away from germs, use MoMo wallet”, along with a campaign to raise awareness, financial literacy for people.

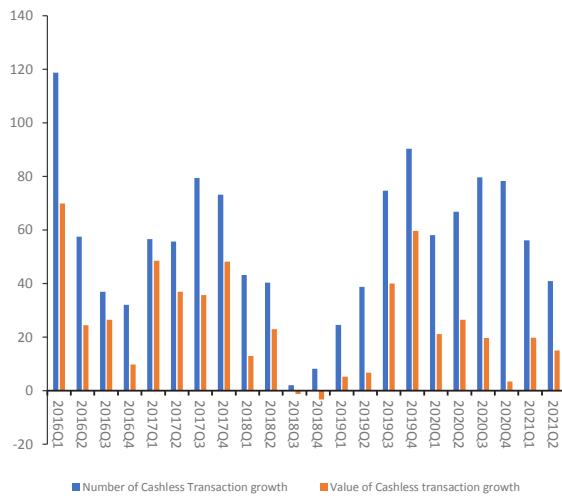
#### **4. Practical implementation of digital finance in Vietnam and some policy recommendations**

##### ***4.1. The promotion of digital payments to reduce dependency on cash exchange***

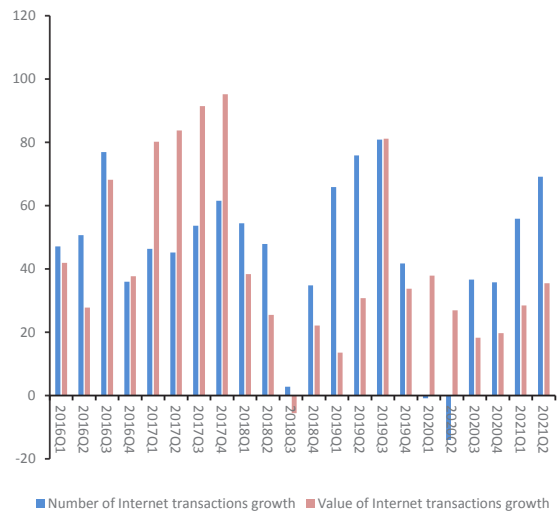
Vietnam is one of developing countries at low level of digitalization, in which non-cash payment has been promoting continually and constantly during the past 10 years and is being further promoted in the COVID-19 in order to discourage handling cash to avoid a possible risk of infection. At present, after 4 years of implementing Decision No. 2545/QĐ-TTg (approving the Scheme to develop non-cash payment in Vietnam for the period 2016-2020), there are 78 organizations providing payment services via the internet and 45 organizations providing mobile banking services, with the number of transactions up to several hundred million billion VND. There exists 9 main transaction systems, including Interbank Electronic Payment System (IBPS), internal payment system of each commercial bank, bilateral payment systems, VCB-money foreign currency payment system, BIDV-securities payment system, card payment system, internet and mobile payment system and SWIFT system. The opening and use of individual accounts continues to increase. Statistically, Vietnam has more than 40 million accessing banks' payment system every day, which leads to the growth rate of Mobile Banking at 200%.

Currently, telecommunications operators are also actively participating in the non-cash payment process through many forms, notably the Mobile Money service. This new service allows people to send money to the network operator even if they do not have an account at a commercial bank, or can use the money in their phone account to transfer or pay the bills at a small value. On November 18, 2021, MobiPhone Online Mobile Service Joint Stock Company was licensed by the State Bank of Vietnam to pilot using telecommunications accounts instead of bank account. Thus, MobiFone has become the first mobile operator to be allowed to pilot the provision of Mobile Money services nationwide and the deadline of piloting regime is November 18, 2023.

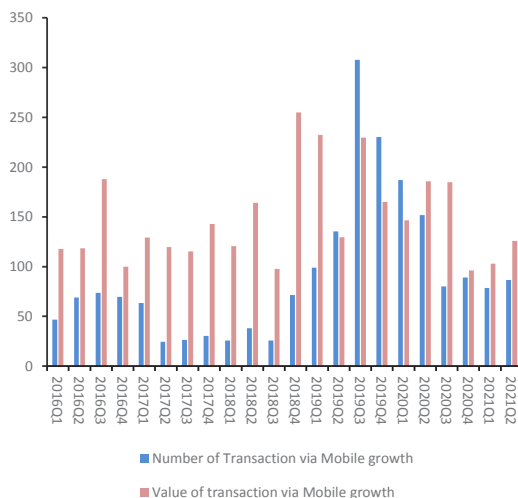
Cashless transaction growth  
(QoQ annually)



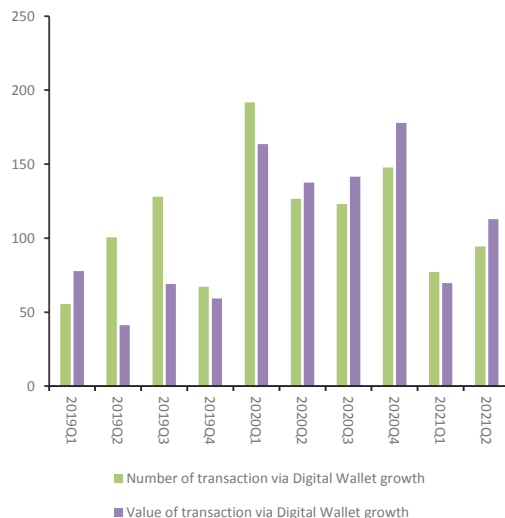
Transaction via Internet growth  
(QoQ annually)



Transaction via Mobile growth  
(QoQ annually)



Transaction via digital Wallet  
(QoQ annually)



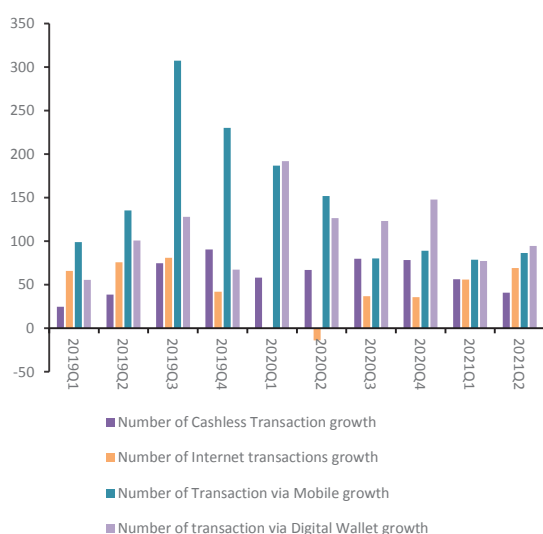
The graphs show that according to our estimation, all types of transactions have maintained a high growth rate since the end of 2018. The growth rate of transactions in the first two quarters of the year in some types of transactions such as Mobile banking and e-wallets was lower than in the same period last year, possibly due to the impact of the COVID-19 epidemic, but both types still have a low level of growth over the same period (average nearly 100%);

Second, the growth of transactions in non-cash payment tends to decrease in both quantity and volume, in which the growth of transactions via internet banking has a low growth rate, but this is the second largest type of transaction value after internet banking.

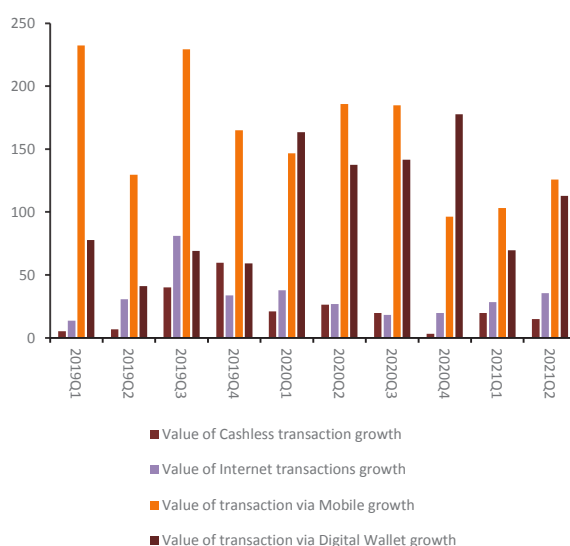
Although the type of payment via Mobile banking and E-wallet has low transaction value, the growth rate of both types of payment is much higher than that of the other two types.



Number of transaction growth for different payment type (QoQ annually)



Value of transaction for different payment type (QoQ annually)



Currently, Vietnam has more than 150 Fintech businesses operating in different fields, however, most of them focus on the payment segment (accounting for 21% of the market share of Fintech services provided in Vietnam). In addition, there are now more than 30 banks applying QR Code with more than 90,000 points accepting QR Code payments.

In response to the Pandemic of COVID-19, during the past two years, Vietnam’s credit institutions have been actively promoting distribution channels through digital banking products and mobile banking, aiming at ensuring information security, thereby improving the customers’ access to financial services. Under the encouragement of the State Bank of Vietnam, credit institutions have taken a number of specific measures to develop their transaction network, which includes restructuring their existing physical branches towards remote areas, and reallocating their ATMs more rationally.

P2P lending in Vietnam has not been developing rigorously, however, has started since 2016. Since P2P lending is not a conditional business in Vietnam, it is difficult to accurately calculate the number of businesses operating P2P lending; a preliminary survey shows that there are currently about 40 Fintech companies.

Similarly, Blockchain is a nascent field and being piloted in practice such as the Blockchain technology application and research project by Vietnam National Payments Joint Stock Company (NAPAS) and a number of credit institutions. In the domestic market, commercial banks which include VietinBank, VIB, TPBank, who are experimenting on the interbank money transfer model on the Blockchain platform.

#### 4.2. Risks from digital finance on financial inclusion and consumers’ protection

While a series of risk related to the digital finance in the time of COVID-19 have been illustrated in 1.2, the following are the specific risks that are arising in Vietnam’s financial market. The following are the main risks associated with financial digitalization process:

*Legal risk.* Currently, there still remain a number of shortcomings in the legal framework regulating digital finance; however, this field is mainly associated with financial and banking activities, which is conditional business. The absence of a regulatory framework can be

potentially risky not only for the market and regulators, but also for service providers and their customers. At present, the legal regulations for Fintech business (except for payment intermediaries) have not been issued in any documents from the Circular level.

It is noteworthy that even P2P lending has not been regulated by laws, there are also no regulations prohibiting that kind of business, which might lead to a worse situation in the economy such as unfair competition or the unexpected development of the “parallel market” (as in the recent case of China).

*Risk of management and supervision loopholes.* Digital finance covers many aspects in a number of industries, however, is neither managed and supervised by any State Agency nor regulated by any laws. There is still weak cooperation between State agencies, limiting the responsibility of the Government in preventing the exposures of digital finance.

*Macro-financial risks.* The rapidly growing digital lending business, as with other digital financial products and services, can pose risks to individuals and institutions, which is yet to be regulated by laws. In the macro perspective, failures of some institutions might spill over the system since digital finance - based lending might lead to the consumer credit misuse or late repayment and defaults.

*Risks of money laundering and terrorist financing.* Given the risks of money laundering and terrorist financing, banks and authorized Fintech providers must meet strict regulations and constant scrutiny by the regulator. However, unregulated Fintech businesses easily overlook these processes because they are not under strict control. At the same time, Fintech are likely to increase the difficulty in meeting compliance requirements and AML/CFT obligations, especially compliance risks related to privacy data and cyber risks.

*Cyber risks.* New technology and business models can increase cyber risk if controls fail to keep up with the pace of technology change. An increase in linkages between market participants can benefit banks and customers, but can also magnify security risks, increasing vulnerability to the financial system and banking, which requires more data to prevent potential breaches.

*Risks of privacy and surveillance creep.* The risk of non-compliance with privacy regulations may increase with the development and application of big data, mainly due to ties with Fintech companies and their competition for information.

*Risks to the traditional banking-financial system.* The surge of digital finance brings about not only the benefits but also potential risks by increasing the interaction/dependency of information and technology between market participants, directly affecting the traditional banking system.

In addition, the proliferation of new products and services can increase the complexity of financial service delivery, making it difficult to manage and control operational risk. Meanwhile, the legacy of IT systems in banks may not meet the requirements of change management, or even be inappropriate. In that context, some banks have increased the use of third parties or other Fintech partners, increasing the complexity and reducing the transparency of serial transactions. The tendency to use third parties or other Fintech partners can increase the risks of information leakage, personal information, money laundering, cyber security and customer protection.

## 4.2. Final considerations and recommendations

There are several layers of intervention that policymakers can enact to mitigate the above mentioned risks, including regulations, fair competition, consumer protection, belief in digital finance and digital literacy. In Vietnam, the State Bank of Vietnam both acts as a central bank – lender of last resort and supervises credit institutions in particular and the financial system as a whole. During the COVID-19 pandemic, digital finance holds considerable potential to become a key enabler, however, lacks of a full-fledged legal framework. Therefore, in the coming years, the State Bank of Vietnam needs to enhance the legal framework and policies and develop macro prudential tools in line with the development of technology and the financial market to create an appropriate balance enabling financial innovations and monitoring risks to financial inclusion, protecting consumers and ensuring financial stability.

*Legal regulations need to cover digital financial products and businesses providing digital financial products and services.* Allowing non-banks to offer crypto currencies, such as mobile network operators; also allows opening an account with just one ID and verifying the identity of the customer.

*Equal competition needs to be secured on the market.* Currently, traditional banks and financial institutions are controlling access to critical financial infrastructure, while Fintech companies have the advantage in access to services such as communications, data, e-commerce, social media platforms and search engines. Regulatory reforms therefore needs to establish new open infrastructure or review and change access criteria for critical financial infrastructure.

*Legal framework needs to be completed to address consumer protection.* Policymakers enact regulations and rules to ensure clear and timely disclosure by standardizing mobile total cost metrics for DFS products and claims and pricing information must be provided before trading. The setting concerns the supplier's responsibility for the dealer's conduct and the security of funds for crypto accounts.

*Promoting demand for digital finance and consumer confidence in digital finance.* Policies are needed to create demand for digital finance and encourage going cashless, to expand the availability of digital finance, so vendors need to design and market better products. Governments can also use subsidies and other tax incentives to encourage both businesses and consumers to accept digital financial products. The government allows the use of digital financial products in peer-to-peer payments, such as transfers of social benefits, from disbursements, as well as receipts or payments to the Government.

Strengthening financial literacy and propagating and disseminating knowledge about digital finance to all people, especially those in remote, mountainous, island and vulnerable areas, to the poor and low-income people. In Vietnam, on January 22, 2020, the Prime Minister signed Decision No. 149/QĐ-TTg approving the National Comprehensive Financial Strategy to 2025, with orientation to 2030 (Strategy). This is an important milestone for Vietnam's banking industry. This strategy has far-reaching effects on the socio-economic life of the country. The State Bank of Vietnam is the unit assigned by the Government to implement the overall coordination task of the National Comprehensive Financial Strategy to 2025, with a vision to 2030.

The Strategy is built around the following key pillars, including: (i) Developing a variety of supply organizations, distribution channels, products and financial services provided by licensed organizations; (ii) Promoting the application of digital technology, increase innovation in the design and distribution of financial products and services in the direction of simplicity, convenience, ease of use, and cost reduction; (iii) Building a legal corridor to promote fair competition and encourage innovation; (iv) Completing appropriate financial infrastructure to facilitate and secure transactions; (v) Developing a system of microfinance organizations, programs and projects operating safely, effectively and sustainably; (vi) Improving financial literacy for people and businesses, ensuring that people and businesses have appropriate knowledge, skills, attitudes and behaviors in choosing and using products and financial services.

In order to implement the National Strategy for Financial Inclusion, it is necessary to implement all these pillars at the same time. In which, financial literacy communication plays an important role to equip people and businesses with banking products and services. “Money is smart, money is smart” is the first game show program on financial education communication - produced by the State Bank of Vietnam in collaboration with Vietnam Television.

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# ĐÁNH GIÁ HIỆU QUẢ TIẾP CẬN TÍN DỤNG VI MÔ CỦA HỘ KINH DOANH TẠI VIỆT NAM

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## **Tóm tắt**

Tín dụng từ các tổ chức tài chính vi mô (TCVM) là một lựa chọn về kênh huy động vốn của các hộ kinh doanh tại Việt Nam. Bên cạnh cung cấp các khoản vay nhỏ, dịch vụ tiết kiệm, một số TCTCVM còn cung cấp dịch vụ phi tài chính như quản lý rủi ro, hướng dẫn khởi nghiệp, chia sẻ kinh nghiệm và kiến thức sản xuất. Rõ ràng, đây là cơ hội cho các hộ kinh doanh vừa được vay vốn, vừa được trau dồi thêm kiến thức, kỹ năng quản lý kinh doanh. Nghiên cứu của Nguyễn Kim Anh và cộng sự (2011) đã chỉ ra TCVM có đóng góp lớn trong công cuộc xóa đói giảm nghèo và có ảnh hưởng tích cực đến mức sống của người dân. Nghiên cứu của Mai Thị Hồng Đào (2016) cho thấy tín dụng vi mô có tác động tích cực đến thu nhập của hộ nghèo và hộ nghèo trung bình. Tuy nhiên, chưa có nghiên cứu đầy đủ và toàn diện về tác động của TCVM đến khu vực hộ kinh doanh. Trên cơ sở, đó nghiên cứu này sẽ tập trung đánh giá mối quan hệ giữa tác động của tiếp cận tín dụng vi mô tới sự phát triển của hộ kinh doanh từ các kết quả khảo sát khách hàng của các TCTCVM tại Việt Nam.

**Từ khóa:** Tín dụng vi mô, hộ kinh doanh, Việt Nam

## **Abstract**

*Credit from MFIs is an option for raising capital for business households in Vietnam. Besides providing small loans and savings services, some MFIs also provide non-financial services such as risk management, start-up guidance, sharing of production experience and knowledge. Obviously, this is an opportunity for business households to get loans as well as improve their knowledge and business management skills. Research by Nguyen Kim Anh et al (2011) has shown that microfinance makes a great contribution to poverty reduction and has a positive impact on people's living standards. Research by Mai Thi Hong Dao (2016) shows that microcredit has a positive impact on the income of poor households and moderately poor households. However, there has not been a complete and comprehensive study of the impact of microfinance on the household business sector. On that basis, this study will focus on assessing the relationship between the impact of microcredit access on the development of businesses household from the customer survey results of MFIs in Vietnam.*

**Keywords:** Microcredit, business household, Vietnam

## **1. Tác động của tín dụng từ tổ chức tài chính vi mô đến sự phát triển của hộ kinh doanh**

Nhiều nghiên cứu đã chỉ ra rằng việc thiếu vốn kinh doanh và khó khăn trong việc tiếp cận nguồn vốn là một trong những cản trở chính đối với sự phát triển của cơ sở kinh doanh siêu nhỏ, nhỏ và vừa (Owualah, 1999; Carpenter, 2001; Anyawwu, 2003; Lawson, 2007). Lý do là bởi việc tiếp cận được với các dịch vụ tài chính giúp các cơ sở kinh doanh này bổ sung nguồn lực để đầu tư nâng cao năng lực và năng suất sản xuất (Watson và Everett, 1999). Thêm vào đó, trong suốt quá trình hoạt động, các cơ sở siêu nhỏ cần duy trì được vốn lưu động. Tuy nhiên, thực tế cho thấy vốn lưu động của các cơ sở này chủ yếu huy động từ các nguồn không chính thức như gia đình, bạn bè, tín dụng đen, mà hầu hết những nguồn này không đáp ứng đủ nhu cầu của hoạt động kinh doanh (Bhasin và Alepaku, 2001). Việc tiếp cận vốn từ khu vực tài chính chính thức là khó khăn với các cơ sở kinh doanh quy mô nhỏ bởi họ không đáp ứng được điều kiện vay vốn của các ngân hàng, tổ chức tín dụng. Những khó khăn về huy động vốn có thể làm giảm doanh thu và lợi nhuận của các cơ sở kinh doanh (Khandker và cộng sự, 2013).

Tài chính vi mô ra đời với mục đích trợ giúp các đối tượng thu nhập thấp tiếp cận được dịch vụ tài chính (bao gồm tín dụng, tiết kiệm, bảo hiểm, kiều hối... và các dịch vụ phi tài chính khác), từ đó giúp họ cải thiện thu nhập và điều kiện sống. Hiệu quả của TCVM trong việc xóa đói giảm nghèo, nâng cao mức sống cho người dân đã được chứng minh cả trên thực tế và qua nhiều nghiên cứu thực nghiệm tại nhiều quốc gia đang phát triển. Cho tới nay, đối tượng thu nhập thấp vẫn là ưu tiên của các tổ chức TCVM, tuy nhiên, hướng tới phát triển bền vững, nhiều tổ chức đã mở rộng đối tượng khách hàng tới những người kinh doanh quy mô nhỏ và siêu nhỏ (Farhana Ferdousi, 2015). Những khách hàng này có thể là khách hàng lâu năm của tổ chức TCVM, đã thoát nghèo và mở rộng quy mô sản xuất kinh doanh; cũng có thể là những khách hàng mới có nhu cầu vốn để kinh doanh, với mức thu nhập cao hơn và ít rủi ro hơn. Theo Olugbenga và Mashigo (2017), TCVM có thể là nền tảng để các cơ sở quy mô nhỏ huy động vốn cho hoạt động sản xuất kinh doanh. Tài chính vi mô cũng có thể hỗ trợ các cơ sở thông qua cung cấp dịch vụ phi tài chính như tư vấn kinh doanh, đào tạo về kỹ năng quản lý tài chính, kỹ năng kinh doanh cho người chủ cơ sở.

Nghiên cứu thực nghiệm về tác động của TCVM đến các cơ sở kinh doanh nhỏ, siêu nhỏ đưa ra nhiều kết quả khác nhau. Cụ thể, sử dụng mô hình phân tích hiệp phương sai (ANCOVA) để xem xét mối liên hệ giữa vay vốn tài chính vi mô và hiệu quả hoạt động của cơ sở kinh doanh nhỏ và siêu nhỏ tại Indonesia trong giai đoạn 1999-2005, Rahmat và cộng sự (2006) chỉ ra rằng TCVM giúp các cơ sở này gia tăng doanh thu và quy mô hoạt động kinh doanh. Tuy nhiên, nghiên cứu này mới chỉ kiểm soát yếu tố vùng miền và ngành nghề kinh doanh khi xem xét các yếu tố ảnh hưởng đến hiệu quả hoạt động của cơ sở kinh doanh. Nghiên cứu của Xitian Wang (2013) tại Trung Quốc cũng cho thấy tín dụng TCVM đóng vai trò quan trọng trong việc tăng doanh thu và lợi nhuận cho các hộ kinh doanh. Karlan và Valdivia (2006) lại cho thấy sự kết hợp giữa tín dụng vi mô và đào tạo kiến thức kinh doanh cho chủ cơ sở có lợi cho cả tổ chức cho vay và người đi vay. Cụ thể, các chủ cơ sở được tham gia đào tạo của tổ chức TCVM ghi nhận sự gia tăng về doanh thu bán hàng, việc trả nợ cho tổ chức cũng nhanh chóng và đúng hạn hơn. Nghiên cứu sử dụng mô hình hồi quy Probit với biến giả đại diện cho việc chủ cơ sở kinh doanh được tham gia hoặc không được tham gia đào tạo. Tuy nhiên, sử dụng mô hình hồi quy Pooled OLS phân tích dữ liệu bảng

thu được từ điều tra 502 cơ sở kinh doanh quy mô nhỏ có vay vốn của tổ chức TCVM tại Nigeria, Babajide (2012) kết luận việc vay vốn TCVM không có tác động đến sự phát triển của khu vực kinh doanh nhỏ và siêu nhỏ; đồng thời, nghiên cứu này đề xuất các tổ chức TCVM nên gia tăng mức cho vay và thời hạn trả nợ đối với các cơ sở kinh doanh này. Kết quả tương tự cũng được đưa ra trong nghiên cứu của Olugbenga và Mashigo (2017) tại tỉnh Gauteng, Nam Phi. Trên thực tế, để thúc đẩy khu vực kinh doanh quy mô nhỏ, Chính phủ Ấn Độ đã tiến hành một chương trình vay vốn kết hợp giữa ngân hàng và tổ chức TCVM, trong đó các khoản tín dụng vi mô được cung cấp cho khu vực kinh doanh nhỏ (tuy nhiên mức vay cao hơn khoản tín dụng vi mô thông thường). Đo lường hiệu quả của dự án này, Ngân hàng Thế giới (WB) cho thấy việc vay vốn giúp các cơ sở cải thiện được năng suất lao động, gia tăng phương tiện sản xuất, duy trì tốt vốn lưu động, thuê được nhân viên tốt hơn, tạo ra doanh thu và lợi nhuận cao hơn, cũng như chủ cơ sở cảm thấy tự tin hơn trong kinh doanh.

Như vậy, có thể thấy tín dụng từ TCTCVM có thể ảnh hưởng đến sự phát triển của hộ kinh doanh thông qua việc tín dụng vi mô cung cấp vốn lưu động, vốn để đầu tư nâng cao năng lực sản xuất kinh doanh (ví dụ như đầu tư vào công nghệ, tài sản cố định...) cho hộ kinh doanh. Thêm vào đó, những dịch vụ đi kèm tín dụng vi mô như các khóa/lớp đào tạo về kỹ năng kinh doanh, kỹ năng quản lý cho chủ hộ kinh doanh có thể giúp hộ kinh doanh nâng cao nguồn lực về con người, từ đó dẫn đến kết quả hoạt động kinh doanh khả quan hơn.

## **2. Mô hình đánh giá tác động của tín dụng từ tổ chức tài chính vi mô đến sự phát triển của hộ kinh doanh tại Việt Nam**

### **2.1. Xây dựng mô hình**

#### *2.1.1. Dữ liệu nghiên cứu*

Nguồn số liệu sơ cấp sử dụng trong quá trình nghiên cứu thực nghiệm được thu thập từ việc phát phiếu điều tra khảo sát tại các tỉnh thành trải dài ba miền Bắc, Trung, Nam của Việt Nam gồm: Bắc Ninh, Vĩnh Phúc, Phú Yên, Đắk Nông, Bình Thuận, Ninh Thuận, Bình Dương và Tp. Hồ Chí Minh. Các tỉnh thành được lựa chọn trên cơ sở phản ánh được thực trạng tín dụng vi mô dành cho hộ kinh doanh cá thể tại các vùng, miền trên cả nước với đặc trưng, trình độ phát triển khu vực khác nhau. Giai đoạn khảo sát từ năm 2013 đến năm 2017. Bên cạnh việc phát phiếu điều tra, chúng tôi cũng tiến hành phỏng vấn sâu các hộ kinh doanh thuộc một số xã/phường điển hình về hoạt động tín dụng tài chính vi mô tại hai tỉnh miền Bắc nhằm thu thập các thông tin cơ bản, thông tin tín dụng vi mô của hộ cũng như lắng nghe ý kiến, nguyện vọng của các hộ kinh doanh về việc vay vốn vi mô.

Tổng số phiếu phát ra là 320 phiếu, bình quân mỗi tỉnh 40 phiếu, phát tại hai huyện khác nhau. Số phiếu thu về là 235 phiếu, trong đó có 171 phiếu hợp lệ được sử dụng và mô hình thực nghiệm. Phiếu điều tra được thiết kế gồm các chỉ tiêu bao hàm những nội dung chính sau:

- Thông tin cơ bản: Gồm các chỉ tiêu nhằm miêu tả đặc điểm của chủ hộ kinh doanh và hộ kinh doanh như giới tính, tuổi, trình độ học vấn của chủ hộ; ngành nghề kinh doanh, quy mô lao động của hộ; doanh thu, lợi nhuận, cơ sở vật chất của hộ.



- Thông tin tín dụng vi mô: Gồm các chỉ tiêu về mức độ duy trì của hộ kinh doanh với tài chính vi mô, quy mô vốn vay, thời hạn vay.

- Thăm dò ý kiến: Gồm các câu hỏi tiếp cận sâu hơn về mức độ của hộ kinh doanh về hoạt động tài chính vi mô, quy trình cấp tín dụng, mức vốn vay và lãi suất kỳ vọng...

**Bảng 1. Mô tả đặc điểm của mẫu điều tra**

Chỉ tiêu	Số lượng
<b>Giới tính chủ hộ</b>	
Nam	72
Nữ	99
<b>Trình độ học vấn chủ hộ</b>	
Biết đọc, viết; chưa tốt nghiệp cấp 1	15
Tốt nghiệp cấp 1	26
Tốt nghiệp cấp 2	57
Tốt nghiệp cấp 3	73
<b>Ngành nghề</b>	
Nông nghiệp	62
Phi nông nghiệp	109
<b>Vùng miền</b>	
Miền Bắc	50
Miền Trung	76
Miền Nam	45

*Nguồn: Tổng hợp của tác giả*

### 2.1.2. Biến số nghiên cứu

Việc kiểm định mô hình nhằm mục đích trả lời câu hỏi tài chính vi mô có tác động như thế nào đến sự phát triển của hộ kinh doanh cá thể. Sự phát triển của hộ kinh doanh được đặc trưng bởi lợi nhuận từ hoạt động kinh doanh và năng suất lao động của hộ (Williams và cộng sự, 2016; Babajide, 2012; Rahmat và cộng sự, 2006). Trong đó:

*Lợi nhuận (loinhuan) = Doanh thu – Chi phí kinh doanh*

*Năng suất lao động (nangsuat) = Doanh thu (theo năm)/số lao động chính thức của hộ trong năm*

Do vậy biến phụ thuộc ở đây là lợi nhuận và năng suất lao động của hộ kinh doanh.

Biến giải thích chính của mô hình là tín dụng vi mô, là biến liên tục thể hiện quy mô vay vốn của hộ kinh doanh theo đơn vị tính triệu đồng.

Để đo lường tác động của tài chính vi mô đến sự phát triển của hộ kinh doanh, mô hình cần kiểm soát các yếu tố khác có ảnh hưởng đến hiệu quả hoạt động của hộ, bao gồm: yếu tố về nguồn lực con người (tuổi, giới tính, trình độ học vấn của chủ hộ kinh doanh) (La Porte và Schleifer, 2014); yếu tố về ngành nghề, khu vực kinh doanh (quy mô lao động,

ngành nghề kinh doanh, cơ sở vật chất, khu vực kinh doanh) (Nabar và Yan, 2016). Bài viết cũng đưa thêm biến về đặc trưng vùng miền để đại diện cho tác động của điều kiện ngoại cảnh và biến về đào tạo kỹ năng kinh doanh cho chủ hộ thể hiện chủ hộ có được tham gia các chương trình đào tạo do tổ chức TCVM tổ chức hay không.

Căn cứ phân tích bên trên, bài viết triển khai hai mô hình như sau:

$$\text{loinhuan} = \beta_0 + \beta_1 * \text{tindungvimo} + \beta_2 * \text{daotao} + \beta_3 * \text{tuoi} + \beta_4 * \text{gioitinh} + \beta_5 * \text{hocvan} + \beta_6 * \text{quymo} + \beta_7 * \text{nganhnghe} + \beta_8 * \text{cosovatchat} + \beta_9 * \text{khuvuc} + (\beta_{10} * \text{mien\_bac} + \beta_{11} * \text{mien\_trung}) \quad (1)$$

$$\text{nangsuat} = \beta_0 + \beta_1 * \text{tindungvimo} + \beta_2 * \text{daotao} + \beta_3 * \text{tuoi} + \beta_4 * \text{gioitinh} + \beta_5 * \text{hocvan} + \beta_7 * \text{nganhnghe} + \beta_8 * \text{cosovatchat} + \beta_9 * \text{khuvuc} + (\beta_{10} * \text{mien\_bac} + \beta_{11} * \text{mien\_trung}) \quad (2)$$

**Bảng 2: Mô tả biến giải thích và biến kiểm soát sử dụng trong mô hình**

TT	Biến giải thích	Mô tả	Tương quan kỳ vọng
1	Tín dụng vi mô (tindungvimo)	Biến liên tục: Triệu đồng/năm	+
2	Đào tạo của TCTCVM (daotao)	Biến giả: 1=có được tham gia các lớp đào tạo về kỹ năng kinh doanh do TCTCVM tổ chức	+
3	Tuổi của chủ hộ kinh doanh (tuoi)	Biến liên tục	+
4	Giới tính chủ hộ kinh doanh (gioitinh)	Biến giả: 1 = Nam; 2 = Nữ	-
5	Học vấn của chủ hộ (hocvan)	1= Không biết đọc, viết 2= Biết đọc, viết, chưa tốt nghiệp cấp 1 3= Tốt nghiệp cấp 1 4= Tốt nghiệp cấp 2 5= Tốt nghiệp cấp 3	+
6	Quy mô lao động (quymo)	Biến liên tục: người	+
7	Ngành nghề chính (nganhnghe)	Biến giả: 1 = Nông nghiệp 0 = Phi nông nghiệp	-
8	Cơ sở vật chất (cosovatchat)	Biến giả: Tổng điểm của các yếu tố sau: - Tình trạng địa điểm sản xuất kinh doanh: + Nhà mái bằng/nhà tầng/nhà kiên cố: 1 + Nhà tạm: 2 - Điện: Điện lưới: 1; Điện máy nỏ: 2 - Máy tính, Internet: Có sử dụng 1; Không sử dụng: 2 - Máy móc, phương tiện sản xuất, tài sản cố định: + Sở hữu: 1 + Đi thuê: 2	-

TT	Biến giải thích	Mô tả	Tương quan kỳ vọng
9	Khu vực kinh doanh (khu vực)	Biến giả: 1 = Nông thôn 0 = Thành thị	-
10	Đặc trưng vùng miền	Sử dụng ba biến giả: mien_bac, mien_trung (mỗi biến lần lượt nhận giá trị 0 và 1, được kết hợp theo cặp để cho thấy sự hiện diện của từng vùng miền)	
	Mien_bac = 1 Mien_trung = 0	Bắc Bộ (Bắc Ninh, Vĩnh Phúc)	
	Mien_bac = 0 Mien_trung = 1	Trung Bộ (gồm: Phú Yên, Đắk Nông, Bình Thuận, Ninh Thuận)	
	Mien_bac = 0 Mien_trung = 0	Nam Bộ (gồm: Bình Dương, Thành phố Hồ Chí Minh)	

*Nguồn: Tổng hợp của tác giả*

## 2.2. Phương pháp hồi quy

Dữ liệu sử dụng trong nghiên cứu được khảo sát từ 171 khách hàng của tổ chức TCVM (các khách hàng là hộ kinh doanh), trong khoảng thời gian từ năm 2013 đến năm 2017, hình thành nên dạng dữ liệu bảng. Cấu trúc dữ liệu bảng là bảng cân bằng cho các khách hàng theo chuỗi thời gian (năm).

### 2.2.1. Các ước lượng cơ bản với dữ liệu bảng

Dữ liệu bảng là dạng tổ chức dữ liệu được sử dụng nhiều trong các nghiên cứu, cả về kinh tế vi mô (khi nghiên cứu về hộ gia đình, doanh nghiệp...) hay kinh tế vĩ mô (khi nghiên cứu về các quốc gia, thành phố, vùng địa lý...). Dữ liệu bảng kết hợp dữ liệu chéo theo không gian (cross sectional, tức là giá trị của các biến được thu thập cho một đơn vị mẫu tại cùng một thời điểm) và dữ liệu chuỗi thời gian (time series, tức là giá trị của các biến được quan sát theo thời gian). Việc kết hợp hai loại dữ liệu có nhiều thuận lợi trong phân tích các mối quan hệ kinh tế, đặc biệt khi muốn quan sát, phân tích sự biến động của các đối tượng nghiên cứu sau các biến cố hay theo thời gian, cũng như phân tích sự khác biệt giữa các nhóm đối tượng nghiên cứu. Có hai kiểu cấu trúc dữ liệu bảng: bảng cân bằng và bảng không cân bằng (thiếu thông tin) sẽ dẫn đến những hạn chế trong ước lượng. Trong các mô hình của đề tài, nhóm nghiên cứu sử dụng dữ liệu bảng cân bằng cho các khách hàng là hộ kinh doanh vay vốn TCVM theo chuỗi thời gian (năm). Việc nghiên cứu các mô hình với dữ liệu bảng có những ưu điểm: (i) Việc kết hợp dữ liệu chuỗi thời gian của các hộ kinh doanh khác nhau sẽ giúp dữ liệu chứa nhiều thông tin hơn, tính biến thiên nhiều hơn, giảm hiện tượng đa cộng tuyến giữa các biến, tăng số quan sát, từ đó tăng số bậc tự do và có thể đem lại ước lượng vững, hiệu quả và không chệch; (ii) Dữ liệu bảng có liên quan đến nhiều hộ kinh doanh theo thời gian, mỗi hộ kinh doanh lại có những đặc điểm khác nhau. Tuy nhiên, các kỹ thuật ước lượng dựa trên dữ liệu bảng có thể tính đến sự không đồng nhất này. Với những ưu điểm này, việc sử dụng dữ liệu bảng trong mô hình nghiên cứu của đề tài được kỳ vọng có thể đem lại hiệu quả cao hơn so với phân tích dữ liệu chéo hay dữ liệu chuỗi thời gian.

Giả sử mẫu quan sát bao gồm N hộ kinh doanh, trong T năm, như vậy dữ liệu bảng sẽ bao gồm NxT quan sát. Phương trình hồi quy tổng quát có dạng:

$$Y_{it} = X_{it}\beta + Z_i\alpha + \varepsilon_{it}$$

Trong đó:

Y: vector tập hợp các biến phụ thuộc

X: vector tập hợp các biến độc lập

Z: vector gồm các biến không thay đổi theo thời gian, đại diện cho những đặc điểm riêng của từng hộ kinh doanh

i: chỉ số thể hiện hộ kinh doanh thứ I (i=1,N)

t: chỉ số thể hiện năm quan sát (t=1,T)

: sai số

Những phương pháp ước lượng cơ bản khi hồi quy với dữ liệu bảng bao gồm: Pooled regression model, Fixed effect model (FEM) và Random effect model (REM).

*Pooled regression model* thực chất là ước lượng bình phương nhỏ nhất (OLS), khi sử dụng dữ liệu bảng như một tập hợp các quan sát bình thường, không phân biệt theo năm hay theo quốc gia. Theo mô hình này... chỉ là một hằng số, nghĩa là các hộ gia đình không có đặc điểm riêng khác nhau, nên phương trình tổng quát trở thành:

$$Y_{it} = X_{it}\beta + \alpha + \varepsilon_{it}$$

Tuy nhiên, các giả định mạnh của OLS thường khó được thỏa mãn trong thực tế.

*Fixed effect model*: Mô hình FEM xem xét ảnh hưởng của các nhân tố cố định. Việc sử dụng các nhân tố cố định để phân tích ảnh hưởng đến mô hình có thể được xem giống như một mô hình OLS sử dụng biến giả, các biến giả đóng vai trò là các nhân tố cố định. Có thể xét mô hình ảnh hưởng cố định theo hộ kinh doanh, hoặc theo thời gian, hoặc cố định cả hai nhân tố. Tuy nhiên, FEM làm giảm bậc tự do của mô hình, đặc biệt khi số biến giả lớn. Dạng phương trình của mô hình FEM như sau:

$$Y_{it} = X_{it}\beta + \alpha_i + \varepsilon_{it}$$

Trong đó,  $\alpha_i$  thể hiện sự khác nhau về tung độ gốc của mô hình hồi quy đối với mỗi năm hoặc mỗi hộ kinh doanh.

*Random effect model*: Mô hình REM được sử dụng khi chúng ta quan tâm đến sự khác biệt của mỗi hộ kinh doanh ảnh hưởng đến mô hình chung. Sự khác biệt về điều kiện đặc thù của các hộ kinh doanh được chứa đựng trong phần sai số ngẫu nhiên. Do đó, mô hình trở thành:

$$Y_{it} = X_{it}\beta + \alpha + u_i + \varepsilon_{it}$$

Trong đó,  $u_i$  là chênh lệch tung độ gốc,  $u_i$  và  $\varepsilon_{it}$  đều là các đại lượng ngẫu nhiên.

### 2.2.2. Kiểm định lựa chọn mô hình phù hợp

Việc lựa chọn mô hình nào trong ba mô hình trên phụ thuộc vào sự khác nhau về tung độ gốc của mô hình hồi quy đối với mỗi hộ kinh doanh, và sự khác biệt này có tương quan với biến độc lập trong mô hình hay không.

- Để so sánh giữa Pooled regression model và FEM: sau khi ước lượng với FEM, sử dụng kiểm định F để kiểm định giả thuyết:  $H_0: \alpha_1 = \alpha_2 = \alpha_3 = \dots = \alpha_N = \alpha$

Nếu kết quả bác bỏ  $H_0$ , nên chọn FEM

- Để so sánh giữa FEM và REM: sau khi ước lượng FEM và REM, sử dụng kiểm định Hausman (Hausman, 1978) dưới giả thuyết:  $H_0: \text{Cov}(X_{it}, u_i) = 0$

Nếu kết quả không bác bỏ  $H_0$  nghĩa là ước lượng REM và FEM đều vững, nhưng chỉ có REM là hiệu quả.

- Để so sánh giữa Pooled regression model và REM: sau khi ước lượng REM, kiểm định giả thuyết:  $H_0: = 0$

Nếu kết quả bác bỏ  $H_0$ , ước lượng REM sẽ hiệu quả hơn.

Sau khi lựa chọn mô hình phù hợp nhất trong ba mô hình trên, đề tài tiếp tục kiểm định các giả thiết về hiện tượng tự tương quan và phương sai thay đổi.

### 2.2.3. Kiểm định tự tương quan và phương sai thay đổi

Mặc dù có những lợi điểm quan trọng, nhưng dữ liệu bảng cũng đặt ra nhiều vấn đề trong quá trình ước lượng. Đó là vì dữ liệu gồm các quan sát ở nhiều hộ kinh doanh khác nhau nên có thể dẫn đến hiện tượng phương sai thay đổi. Đồng thời, dữ liệu bao gồm các chuỗi thời gian nên có thể gặp phải vấn đề tự tương quan. Để phát hiện những vấn đề này, đề tài dùng các kiểm định thích hợp cho panel data trên phần mềm Stata với các giả thuyết: Không có phương sai thay đổi; và Không có tự tương quan bậc nhất. Nếu các giả thuyết này bị bác bỏ, nghĩa là có hiện tượng phương sai thay đổi và tự tương quan trong mô hình. Khi đó, luận án sẽ sử dụng hồi quy FGLS trên panel data để khắc phục đồng thời hai hiện tượng trên. Cách làm này cũng tương tự phương pháp của Ai enman, Chinn và Ito (2010).

### 2.2.4. Phương pháp hồi quy GLS

Giả thiết quan trọng trong mô hình hồi quy tuyến tính cổ điển là các yếu tố sai số xuất hiện trong hàm hồi quy tổng thể có phương sai không thay đổi, tức là chúng có cùng phương sai; đồng thời không có quan hệ tương quan chuỗi giữa các sai số, tức là không có hiện tượng tự tương quan. Khi các giả thiết này bị vi phạm, hiện tượng phương sai thay đổi và tự tương quan sẽ khiến cho các hệ số hồi quy ước lượng được bằng phương pháp bình phương nhỏ nhất dù vẫn tuyến tính và không thiên lệch, nhưng không còn là ước lượng hiệu quả nhất.

Khắc phục những nhược điểm này, phương pháp GLS (generalized least squares) được đặt dưới giả định rằng mô hình là hoàn toàn xác định, có sự khác biệt về phương sai sai số ở mỗi nhóm đối tượng, nhưng là không đổi trong phạm vi từng đối tượng. Với những giả thiết này, GLS đem lại ước lượng tiệm cận hiệu quả và vững. Đồng thời, việc ước lượng cũng cho phép khắc phục hiện tượng tự tương quan và phương sai thay đổi trong mô hình hồi quy với dữ liệu bảng.

## 3. Kết quả nghiên cứu thực nghiệm

### 3.1. Thống kê mô tả số liệu

Phân tích thống kê mô tả các biến được thực hiện nhằm cung cấp những thông tin khái quát về dữ liệu nghiên cứu. Bảng 3 thống kê mô tả sẽ trình bày phạm vi, giá trị trung

biên, giá trị lớn nhất, nhỏ nhất và độ lệch chuẩn của các biến: quy mô khoản vay tín dụng vi mô, tuổi của chủ hộ kinh doanh, trình độ học vấn của chủ hộ kinh doanh, quy mô lao động của hộ.

**Bảng 3. Kết quả thống kê mô tả**

Biến số	Số quan sát	Mean	Std. Dev.	Min	Max
Loinhuan	774	147.87	88.404	30	680
Nangsuat	774	296.68	107.89	75	335.5
Tindungvimo	854	27.733	41.588	5	270
Daotao	791	0.3097	0.4626	0	1
Tuoi	855	44.27	9.527	22	67
Gioitinh	855	1.579	0.4940	1	2
Hocvan	855	4.0994	0.9597	2	5
Quymo	853	2.525	1.154	1	10

Nguồn: Tính toán của tác giả trên phần mềm StataSE 13

Biến *loinhuan* cho biết lợi nhuận hàng năm của các hộ kinh doanh, trong đó giá trị nhỏ nhất là 30 và lớn nhất là 680, cho thấy có sự khác biệt khá lớn về lợi nhuận hàng năm của các hộ kinh doanh. Biến *tindungvimo* cho biết giá trị khoản vay từ các TCTCVN của hộ kinh doanh. Bảng thống kê mô tả cho thấy, khoản vay nhỏ nhất có giá trị 5 triệu đồng và lớn nhất có giá trị lên đến 270 triệu đồng. Khoản vay lớn này đến từ quỹ tín dụng nhân dân, còn các TCTCVN thông thường thì giá trị khoản vay không được quá 50 triệu đồng. Biến *daotao* cho biết các chủ hộ kinh doanh có được tham gia các lớp đào tạo kỹ năng về quản trị tài chính, quản trị hoạt động, marketing hay không. Giá trị mean của biến này đạt xấp xỉ 0.31 cho thấy tỷ lệ các chủ hộ không tham gia các lớp đào tạo lớn hơn các chủ hộ được đào tạo. Mean của biến *gioitinh* đạt 1.579 cho thấy chủ hộ có giới tính nữ trong mẫu nghiên cứu lớn hơn chủ hộ có giới tính nam. Học vấn của chủ hộ thể hiện qua biến *hocvan* đạt giá trị trung bình xấp xỉ 4.1, cho thấy số lượng chủ hộ có trình độ cấp 2, cấp 3 trở lên chiếm phần lớn trong mẫu nghiên cứu. Và qua biến *quymo*, có thể thấy quy mô lao động của các hộ kinh doanh còn khá nhỏ, với giá trị trung bình của biến chỉ đạt 2.525.

### 3.2. Ma trận tương quan Pearson

Hệ số tương quan ( $r$ ) là một chỉ số thống kê đo lường mối liên hệ tương quan giữa hai biến số  $y$  và  $x$ . Hệ số tương quan có giá trị từ -1 đến 1. Hệ số tương quan bằng 0 (hay gần 0) có nghĩa là hai biến số không có liên hệ gì với nhau; ngược lại nếu hệ số bằng/gần bằng -1 hay 1 có nghĩa là hai biến số có một mối liên hệ tuyệt đối/chặt chẽ. Nếu giá trị của hệ số tương quan là âm ( $r < 0$ ) có nghĩa là khi  $x$  tăng cao thì  $y$  giảm (và ngược lại, khi  $x$  giảm thì  $y$  tăng); nếu giá trị hệ số tương quan là dương ( $r > 0$ ) có nghĩa là khi  $x$  tăng cao thì  $y$  cũng tăng, và khi  $x$  tăng cao thì  $y$  cũng giảm theo.

Nhóm nghiên cứu sử dụng hệ số tương quan Pearson để phản ánh mối quan hệ tuyến tính giữa các biến độc lập trong mô hình. Nếu các biến độc lập có tương quan chặt (thể hiện qua hệ số tương quan gần bằng 1 hoặc -1) thì phải lưu ý đến vấn đề đa cộng tuyến khi phân tích hồi quy. Tuy nhiên, kết quả phân tích ma trận tương quan cho thấy, giữa các biến độc lập không có cặp biến nào thể hiện mối tương quan chặt chẽ, hàm ý mô hình ít có khả năng xảy ra hiện tượng đa cộng tuyến do các biến độc lập có ảnh hưởng đến nhau.

**Bảng 4. Kết quả ma trận tương quan Pearson**

	Tindungvimo	Daotao	Tuoi	Gioitinh	Hocvan	Quymo	Nganhnghe	Cosovatchat	Khuvuc	Mienbac	Mientrung
Tindungvimo	1.0000										
Daotao	-0.1451	1.0000									
Tuoi	0.1047	0.0959	1.0000								
Gioitinh	-0.0188	0.1126	0.0259	1.0000							
Hocvan	0.0086	-0.0210	-0.3686	0.0019	1.0000						
Quymo	0.2115	0.0221	0.1045	-0.0527	-0.1126	1.0000					
Nganhnghe	-0.0440	-0.2348	0.2205	-0.0861	-0.0477	-0.1330	1.0000				
Cosovatchat	-0.0219	-0.0198	-0.0205	-0.0634	-0.1153	-0.0720	0.0256	1.0000			
Khuvuc	0.1665	0.1992	0.2224	-0.1997	-0.2896	-0.0183	0.0627	0.1448	1.0000		
Mienbac	-0.0267	0.2926	0.2128	0.0508	0.0644	0.0667	0.0679	-0.1234	0.3159	1.0000	
Mientrung	0.1736	-0.5208	-0.0809	-0.1319	0.0119	-0.1130	0.2568	0.0971	-0.1084	-0.5041	1.0000

*Nguồn: Tính toán của tác giả trên phần mềm StataSE 13*

### 3.3. Kiểm định lựa chọn mô hình phù hợp

Để lựa chọn mô hình phù hợp, đề tài sử dụng kiểm định Hausman với cả hai mô hình (1) với biến phụ thuộc là loinhuan và mô hình (2) với biến phụ thuộc là nangsuat để lựa chọn giữa phương pháp hồi quy FEM và REM.

**Bảng 5. Kết quả kiểm định Hausman với mô hình (1)**

	Coefficients		(b-B) Difference	sqrt(diag(V_b-V_B)) S.E.
	(b) fe	(B) re		
microcredit	.0353374	.2959238	-.2605863	.0327799
training	-3.329924	-4.053757	.7238326	.
age	9.451782	3.914544	5.537238	.4633179
quymold	31.68747	41.27154	-9.584069	.9431891
cosovatchat	2.369349	-.2853367	2.654686	.375158

b = consistent under Ho and Ha; obtained from xtreg  
 B = inconsistent under Ha, efficient under Ho; obtained from xtreg

Test: Ho: difference in coefficients not systematic

chi2(5) = (b-B)'[(V\_b-V\_B)^(-1)](b-B)  
 = 203.51  
 Prob>chi2 = 0.0000  
 (V\_b-V\_B is not positive definite)

Nguồn: Tính toán của tác giả trên phần mềm StataSE 13

**Bảng 6. Kết quả kiểm định Hausman với mô hình (2)**

	Coefficients		(b-B) Difference	sqrt(diag(V_b-V_B)) S.E.
	(b) fe	(B) re		
microcredit	.0339511	.4131653	-.3792142	.08034
training	-6.347919	-7.84394	1.496021	.
age	17.32944	6.314824	11.01461	1.02735
cosovatchat	4.774484	-1.862329	6.636813	1.1572

b = consistent under Ho and Ha; obtained from xtreg  
 B = inconsistent under Ha, efficient under Ho; obtained from xtreg

Test: Ho: difference in coefficients not systematic

chi2(4) = (b-B)'[(V\_b-V\_B)^(-1)](b-B)  
 = 120.90  
 Prob>chi2 = 0.0000  
 (V\_b-V\_B is not positive definite)

Nguồn: Tính toán của tác giả trên phần mềm StataSE 13

Kết quả kiểm định cho thấy p-value < 0.05, nghĩa là sử dụng mô hình FEM sẽ tốt hơn mô hình REM. Tiếp theo, đề tài sử dụng kiểm định Wald để kiểm định phương sai sai số thay đổi qua các thực thể trong REM.



## Bảng 7. Kết quả kiểm định phương sai sai số thay đổi

### Mô hình (1)

Modified Wald test for groupwise heteroskedasticity  
in fixed effect regression model

H0:  $\sigma(i)^2 = \sigma^2$  for all i

chi2 (168) = 8.7e+07

Prob>chi2 = 0.0000

### Mô hình (2)

Modified Wald test for groupwise heteroskedasticity  
in fixed effect regression model

H0:  $\sigma(i)^2 = \sigma^2$  for all i

chi2 (168) = 2.5e+29

Prob>chi2 = 0.0000

*Nguồn: Tính toán của tác giả trên phần mềm StataSE 13*

Tuy nhiên, kết quả của kiểm định Wald cho thấy p-value < 0.05 nên có phương sai sai số thay đổi trong mô hình FEM.

Đề tài tiếp tục sử dụng kiểm định Wooldridge để kiểm định tự tương quan trong mô hình với dữ liệu bảng. Khi giá trị Prob>F < 0.05, mô hình có hiện tượng tự tương quan. Do vậy, từ bảng 2.17 có thể thấy trong mô hình (1) có hiện tượng tự tương quan, còn mô hình (2) không có hiện tượng tự tương quan.

## Bảng 8. Kết quả kiểm định tự tương quan

### Mô hình (1)

Wooldridge test for autocorrelation in panel data

H0: no first-order autocorrelation

F( 1, 151) = 23.354

Prob > F = 0.0000

### Mô hình (2)

Wooldridge test for autocorrelation in panel data

H0: no first-order autocorrelation

F( 1, 151) = 0.421

Prob > F = 0.5172

*Nguồn: Tính toán của tác giả trên phần mềm StataSE 13*

Với kết quả kiểm định như trên, tác giả sử dụng phương pháp hồi quy GLS để đem lại ước lượng tiệm cận hiệu quả và vững; đồng thời khắc phục hiện tượng tự tương quan và phương sai thay đổi trong mô hình hồi quy với dữ liệu bảng.

### 3.4. Kết quả mô hình theo phương pháp hồi quy GLS

Trong số 11 biến giải thích đưa vào mô hình (1), nghiên cứu ghi nhận 9 biến có hệ số phù hợp ở mức ý nghĩa từ 1-10%. Tuy nhiên với mô hình (2), chỉ có 7 biến có hệ số phù hợp ở mức ý nghĩa trên.

Hệ số hồi quy của biến số tiền vay tài chính vi mô (*tindungvimo*) là 0.584, có ý nghĩa thống kê ở mức 1%, phù hợp với dấu kỳ vọng của nhóm tác giả. Theo đó, nếu số tiền vay tài chính vi mô tăng thêm 1 triệu đồng, lợi nhuận của hộ kinh doanh sẽ tăng thêm 0.58 triệu đồng/năm. Trong mô hình (2), với mỗi triệu đồng vay vốn vi mô, năng suất lao động của hộ sẽ tăng thêm 0.74 triệu đồng/năm. Kết quả này cho thấy việc vay vốn tài chính vi mô có tác động tích cực đến kết quả kinh doanh cũng như năng suất lao động của hộ kinh doanh. Tuy nhiên, từ giá trị của hệ số hồi quy có thể thấy mức độ tác động của tín dụng vi mô chưa cao, điều này có thể được giải thích bởi thực trạng các khoản tín dụng vi mô hiện nay có giá trị thấp, chủ yếu là các món vay nhỏ hơn 30 triệu đồng. Kết quả khảo sát cũng cho thấy tín dụng vi mô chủ yếu đóng góp cho việc tạo thêm vốn lưu động cho hộ kinh doanh, chứ chưa có vai trò lớn trong việc giúp các hộ kinh doanh mua sắm thêm tài sản cố định, máy móc phương tiện phục vụ sản xuất. Hầu hết các hộ kinh doanh trong mẫu khảo sát cho biết họ sử dụng nguồn vốn tự có hoặc huy động từ gia đình, bạn bè, người thân, hoặc thế chấp đất đai/nhà cửa để vay ngân hàng để đầu tư tài sản cố định ban đầu; và trong thời gian vay vốn tài chính vi mô, rất ít hộ có sự đầu tư thêm phương tiện sản xuất, kinh doanh nhờ vào nguồn vốn này.

Bài viết đưa thêm biến *daotao* để xem xét việc các tổ chức TCVM cung cấp các lớp đào tạo kỹ năng sản xuất, kinh doanh cho khách hàng có ảnh hưởng như thế nào đến kết quả hoạt động của khách hàng, tuy nhiên cả hai mô hình đều cho kết quả việc đào tạo không có ảnh hưởng có ý nghĩa thống kê đến lợi nhuận cũng như năng suất lao động của hộ kinh doanh.

**Bảng 9. Kết quả phân tích ảnh hưởng của tín dụng vi mô đến lợi nhuận của hộ kinh doanh**

Biến phụ thuộc: <i>loinhuan</i> Log likelihood = -4008.0255		Số quan sát = 736 Số nhóm = 168 Prob>chi <sup>2</sup> = 0.00 Wald chi <sup>2</sup> (11) = 1139.71	
Biến giải thích	Hệ số hồi quy	Độ lệch chuẩn	Thống kê z
<i>Tindungvimo</i>	0.584***	0.593	9.85
<i>Daotao</i>	-4.24	6.61	-0.64
<i>Tuoi</i>	0.88***	0.253	3.48
<i>Gioitinh</i>	-7.9*	4.424	-1.79

Hocvan	13.1***	2.56	5.11
Quymo	51.22***	2.232	22.95
Nganhnghe	-24.5***	4.962	-4.94
Cosovatchat	-0.432	1.325	-0.33
Khuvuc	-12.01**	5.8	-2.07
Mien_bac	-35.58**	7.29	-4.88
Mien_trung	-41.93**	7.69	-5.45
Hàng số	-17.627	22.197	-0.79

**Bảng 10. Kết quả phân tích ảnh hưởng của tín dụng vi mô đến năng suất lao động của hộ kinh doanh**

Biến phụ thuộc: nangsuat Log likelihood = -4008.0255		Số quan sát = 736 Số nhóm = 168 Prob>chi <sup>2</sup> = 0.00 Wald chi2 (11) = 1139.71	
Biến giải thích	Hệ số hồi quy	Độ lệch chuẩn	Thống kê z
Tindungvimo	1.12***	0.14	5.24
Daotao	-3.09	16.66	-0.19
Tuoi	0.59	0.637	0.93
Gioitinh	0.316	11.07	0.03
Hocvan	36.27***	6.38	5.68
Nganhnghe	-63.73**	12.5	-5.1
Cosovatchat	-5.46	3.335	-1.64
Khuvuc	0.967	14.18	0.07
Mien_bac	-91.63***	18.32	-5.00
Mien_trung	-63.74***	19.1	-3.34
Hàng số	241.55	52.4	4.61

\*\*\*, \*\*, \*: có ý nghĩa thống kê ở mức 1%, 5%, 10%

*Nguồn: Tính toán của tác giả trên phần mềm StataSE 13*

Đối với các biến liên quan đến chủ hộ kinh doanh, trong mô hình (1), hệ số hồi quy của biến tuổi là 0.88, có ý nghĩa thống kê ở mức 1%, phù hợp với dấu kỳ vọng của nhóm tác giả. Theo đó, nếu chủ hộ kinh doanh tăng thêm 1 tuổi thì lợi nhuận kinh doanh của hộ sẽ tăng thêm 0.88 triệu đồng/năm; tuy nhiên trong mô hình (2), biến tuổi của chủ hộ kinh doanh không có ảnh hưởng có ý nghĩa thống kê với năng suất lao động của hộ. Tương tự, biến giới tính của chủ hộ có ảnh hưởng mang ý nghĩa thống kê ở mức 10% tới lợi nhuận của hộ kinh doanh, nhưng không có ảnh hưởng có ý nghĩa thống kê đến năng suất lao động của hộ; theo đó, chủ hộ là nam thì lợi nhuận tạo ra sẽ cao hơn 7.9 triệu đồng/năm so với chủ hộ là nữ.

Hệ số hồi quy của biến ngành nghề lần lượt là -24.5 và -63.73 trong mô hình (1) và (2), đều có ý nghĩa thống kê và phù hợp với dấu kỳ vọng của tác giả. Theo đó, các hộ kinh doanh hoạt động trong khu vực phi nông nghiệp khi vay vốn tài chính vi mô sẽ có hiệu quả cao hơn các hộ nông nghiệp, cụ thể lợi nhuận hàng năm của hộ phi nông nghiệp lớn hơn 24.5 triệu đồng và năng suất lao động lớn hơn 63.73 triệu đồng/năm. Trong khi đó, biến cơ sở vật chất không thể hiện ảnh hưởng có ý nghĩa thống kê lên cả hai biến phụ thuộc.

Biến khu vực có ý nghĩa thống kê ở mức 5% trong mô hình (1) và có hệ số hồi quy là -12.01. Tuy nhiên biến này không có ý nghĩa thống kê trong mô hình (2). Như vậy, các hộ kinh doanh ở khu vực thành thị sẽ tạo ra lợi nhuận lớn hơn 12.01 triệu đồng/năm so với hộ nông thôn khi vay vốn tài chính vi mô. Tuy nhiên, không có sự khác biệt mang ý nghĩa thống kê giữa năng suất lao động của hộ kinh doanh ở hai khu vực.

Hệ số hồi quy của biến giả đặc trưng vùng miền: Trong mô hình (1) hệ số hồi quy của miền Bắc là -35.58 (mức ý nghĩa 5%), miền Trung là -41.93 (mức ý nghĩa 5%). Tính toán “hệ số chặn riêng” cho các miền được khảo sát trong mô hình hồi quy với biến phụ thuộc là “loinhuan”, ta thu được kết quả như sau:

$$\Delta C_i = -35.58 \times \text{mien\_bac} - 41.93 \text{ mien\_trung}$$

Vùng miền	Mien_bac	Mien_trung	$\Delta C_i$
Bắc Bộ	1	0	-35.58
Trung Bộ	0	1	-41.93
Nam Bộ	0	0	0

Từ tính toán trên, có thể xếp hạng mức độ hiệu quả của tín dụng vi mô đến kết quả hoạt động của hộ kinh doanh tại từng vùng miền như sau: Hộ kinh doanh tại Nam Bộ cho thấy hiệu quả tốt nhất, tiếp đó là hộ kinh doanh tại miền Bắc và cuối cùng là miền Trung. Về mặt định lượng bình quân, so với miền Nam, hộ kinh doanh ở miền Bắc vay vốn tài chính vi mô tạo ra hiệu quả về lợi nhuận thấp hơn 35.58 triệu đồng/năm; hộ kinh doanh ở miền Trung tạo ra hiệu quả về lợi nhuận thấp hơn 41.93 triệu đồng/năm. Có thể thấy, thực tế này tương đối phù hợp với trình độ phát triển kinh tế của các tỉnh, thành phố được lựa chọn khảo sát. Hai địa điểm khảo sát tại miền Nam là Tp. Hồ Chí Minh và Bình Dương, có mức độ phát triển cao hơn các tỉnh được khảo sát ở miền Bắc và miền Trung.

#### 4. Một số khuyến nghị và hàm ý chính sách

##### *Xây dựng mô hình cho vay phù hợp với đặc thù văn hóa - xã hội của địa phương*

Các TCTCVM tại Việt Nam thường học tập và triển khai hoạt động cho vay dựa trên những mô hình thành công về TCVM trên thế giới. Tuy nhiên như đã phân tích thì có nhiều TCTCVM tại Việt Nam đã đạt được những thành công nhưng cũng có không ít các TCTCVM đã gặp những khó khăn và thất bại nhất định. Do đó, bản thân mỗi TCTCVM cần làm tốt công tác khảo sát, nghiên cứu thị trường trong đó chú trọng đến sự am hiểu về các yếu tố văn hóa, xã hội của từng địa phương nơi TCTCVM có địa bàn hoạt động. Việc áp dụng mô hình cho vay nào sẽ phải căn cứ vào sự phù hợp với khách hàng ở mỗi địa bàn.

Thực tế cho thấy không tồn tại một mô hình cho vay nào thật sự tối ưu cho tất cả các địa bàn hoạt động của TCVM.

Đối với các TCTCVM có quy mô lớn, địa bàn hoạt động trải dài ở nhiều vùng miền, nhiều địa phương trong cả nước thì việc đạt được sự phù hợp của mô hình cho vay với văn hóa của các địa phương thật sự là một khó khăn. Bởi lẽ việc áp dụng quá nhiều mô hình cho vay sẽ gây áp lực và khó khăn về mặt quản lý và hoạt động của toàn hệ thống. Do đó, cần nghiên cứu để có thể triển khai mô hình cho vay theo hướng xây dựng các quy trình, chuẩn mực cốt lõi cho mô hình. Việc triển khai khai và cụ thể hóa mô hình vào thực tế của từng địa phương sẽ căn cứ vào đặc thù văn hóa - xã hội của địa phương đó.

*Tăng cường các biện pháp khuyến khích động viên để nâng cao thiện chí trả nợ của khách hàng vay*

Bản chất của các khoản cho vay vi mô là cho vay không có tài sản đảm bảo, vì vậy việc tạo ra cơ chế để nâng cao ý thức trả nợ của khách hàng trong cho vay của TCTCVM là vô cùng quan trọng. Thực tế cho thấy các TCTCVM tại Việt Nam trong thời gian qua đã triển khai nhiều biện pháp khuyến khích việc khách hàng trả nợ như: cho vay theo nhóm, số tiền cho vay tăng dần... Tuy nhiên do những áp lực từ thị trường, đặc biệt là sự phát triển của các TCTCD, công ty tài chính... nên khách hàng vay có nhiều điều kiện để tiếp cận nguồn vốn, cho dù lãi suất cho vay có thể rất cao. Những tác nhân đó đã phần nào làm cho ý thức sử dụng vốn và trả nợ của khách hàng có dấu hiệu giảm sút. Vì vậy để đảm bảo an toàn và nâng cao hiệu quả cho vay, các TCTCVM cần có thêm các biện pháp khuyến khích động có ý nghĩa hơn nữa để nâng cao thiện chí và động cơ trả nợ của khách hàng, cụ thể là: giảm lãi suất vay, tăng quy mô món vay đối với các khách hàng có lịch sử tín dụng tốt. Các biện pháp khuyến khích động này được thiết kế như thế nào là tùy thuộc vào thị trường nhưng phải thực sự đủ hấp dẫn để thu hút sự quan tâm của khách hàng vay.

*Nâng cao vai trò của tiết kiệm trong mối tương quan với hoạt động cho vay của TCTCVM*

Hoạt động tiết kiệm luôn đóng vai trò là tài sản đảm bảo, nâng cao ý thức trả nợ của khách hàng vay. Trong thời gian qua các TCTCVN tại Việt Nam đã có triển khai đa dạng nhiều hình thức tiết kiệm dưới dạng: tiết kiệm tự nguyện và tiết kiệm bắt buộc. Tuy nhiên số tiền tiết kiệm bình quân của mỗi khách hàng còn rất hạn chế, chưa thật sự trở thành một loại tài sản đảm bảo có giá trị cho khoản vay của khách hàng. Vì vậy việc nâng cao chất lượng và hiệu quả hoạt động tiết kiệm bên cạnh hoạt động cho vay là vô cùng cần thiết và không thể tách rời. Cần đa dạng hóa và thiết kế các loại hình tiết kiệm phù hợp với từng loại khách hàng theo từng địa phương, ngành nghề, lĩnh vực và dòng tiền của khách hàng. Sản phẩm tiết kiệm phải thật sự hấp dẫn để bản thân khách hàng thấy tham gia tiết kiệm là quyền lợi chứ không chỉ là điều kiện bắt buộc để tiếp cận các khoản vay của TCTCVM.

*Xây dựng thủ tục, quy trình cho vay phù hợp với đối tượng hộ kinh doanh*

Theo quy định của Bộ Luật Dân sự 2015, và Thông tư 39/2016/TT-NHNN thì hộ gia đình không được xem là chủ thể vay vốn. Vì vậy việc cho vay phải có những điều chỉnh

nhất định về tính pháp lý, nhất là về mặt chủ thể để ký các hợp đồng liên quan đến khoản vay. Vấn đề này đã gây ra không ít khó khăn cho các TCTCD và khách hàng trong quá trình triển khai. Đối với hoạt động của các TCTCVM thì các áp lực này còn lớn hơn bởi lẽ số tiền cho vay thường nhỏ nên khách hàng sẽ phản ứng hoặc phàn nàn nếu thủ tục cho vay rườm rà hơn. Do đó việc thiết kế các quy trình, thủ tục, hồ sơ vay vốn vừa đảm bảo tính thuận tiện, vừa đảm bảo tính pháp lý là một giải pháp rất cần được thực hiện của mỗi TCTCVM.

*Xây dựng cơ chế hỗ trợ vốn nhằm giải quyết vấn đề về vốn cho các TCTCVM nhằm hỗ trợ vốn cho các hoạt động tín dụng, tăng cường khả năng tiếp cận của các TCTCVM tại Việt Nam.* Các TCTCVM bán chính thức cũng như các tổ chức chính thức phải đối mặt với khó khăn thách thức về nguồn vốn. TCVM trên thế giới đã tăng trưởng vốn chủ sở hữu và tài sản nợ dựa trên các nguồn vốn xã hội và thương mại. Ngoài ra, ngân hàng trung ương nhiều quốc gia đã xây dựng nhiều quy định đặc biệt và thiết lập kênh chuyên dụng để các TCTCVM có thể tiếp cận nguồn vốn.

Xây dựng cơ chế một Quỹ hỗ trợ vốn cho các TCTCVM bán chính thức chưa được cấp phép. Đối với các TCTCVM hoạt động với quy mô nhỏ và rất nhỏ thì nguồn vốn cho ý nghĩa quan trọng đối với sự duy trì hoạt động và sự tồn tại. Do đó, một Quỹ hỗ trợ vốn cho các tổ chức này sẽ có ý nghĩa trong việc thúc đẩy hoạt động của các tổ chức này.

Xây dựng cơ chế khuyến khích các Ngân hàng thương mại trích một phần nguồn vốn cho vay ưu đãi các TCTCVM được cấp phép vay lại. Việc cấp vốn cho vay lại các TCTCVM sẽ được coi như là một phần thực hiện trách nhiệm xã hội của các tổ chức này. Hiện nay, mặc dù đã có cơ chế vay vốn giữa các TCTD, tuy nhiên nếu không có một cơ chế ưu đãi đặc thù sẽ rất khó để các TCTCVM chính thức tiếp cận được nguồn vốn đó. Điều đó là cơ sở để tác giả kiến nghị giải pháp này.

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# KHUÔN KHỔ PHÁP LÝ BẢO VỆ NGƯỜI TIÊU DÙNG TÀI CHÍNH - KINH NGHIỆM QUỐC TẾ VÀ GỢI Ý CHÍNH SÁCH CHO VIỆT NAM

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## **Tóm tắt**

Bảo vệ người tiêu dùng tài chính là một nhiệm vụ cấp thiết và quan trọng của các quốc gia trong bối cảnh hệ thống tài chính đang phát triển ngày càng nhanh nhờ những tiến bộ vượt bậc về khoa học và công nghệ trong những năm gần đây. Bên cạnh đó, bảo vệ người tiêu dùng tài chính còn là tiền đề để xây dựng một thị trường tài chính lành mạnh, trật tự và công bằng, thúc đẩy sự tăng trưởng bền vững của thị trường về lâu dài. Tầm quan trọng của vấn đề này cũng được nhiều tổ chức quốc tế khẳng định cũng như xây dựng khung pháp lý và khung giám sát thúc đẩy các quốc gia xây dựng những quy định và cơ chế riêng để bảo vệ người tiêu dùng dịch vụ tài chính. Theo đó, một khung pháp lý bảo vệ người tiêu dùng tài chính toàn diện được xem như điều kiện tiên quyết hướng tới mở rộng tiếp cận dịch vụ tài chính cũng mang lại lợi ích cho người tiêu dùng trong việc ra quyết định sử dụng dịch vụ tài chính. Bài viết sử dụng phương pháp nghiên cứu tình huống và nguồn dữ liệu thứ cấp nhằm phân tích thực tiễn quốc tế trong việc xây dựng khuôn khổ pháp lý của một số quốc gia như Malaysia, Indonesia và Canada. Trên cơ sở đó, bài viết đề xuất khuyến nghị cho Việt Nam trong hoàn thiện khuôn khổ pháp lý bảo vệ người tiêu dùng tài chính.

**Từ khóa:** Bảo vệ người tiêu dùng tài chính, khuôn khổ pháp lý

## **Abstract**

*Financial consumer protection is an urgent and important task for many countries in the context of a rapidly developing financial system thanks to great advances in science and technology in recent years. Besides, financial consumer protection is also a prerequisite for building a healthy, orderly and fair financial market, as well as promoting the sustainable growth of the market in the long run. The importance of this issue has also been confirmed by many international organizations, as well as the development of a legal and monitoring framework that encourages countries to develop their regulations and mechanisms to protect consumers of financial services. Accordingly, a comprehensive legislative system for financial consumer protection is deemed a prerequisite for improving access to financial services and benefiting consumers in making use of financial services. This study employs the case study approach and secondary data source to examine international practices linked with financial consumer protection, including good practices proposed by the World Bank and OECD/G20 and the experience in establishing the related legislative framework of countries such as Malaysia, Indonesia and Canada. On that basis, recommendations*

to Vietnam for completing the legislative system for financial consumer protection are put forward.

**Keywords:** *Financial consumer protection, legislative framework*

## **1. Cơ sở lý thuyết**

### **1.1. Khái niệm người tiêu dùng tài chính**

Thuật ngữ người tiêu dùng dịch vụ tài chính (hay còn gọi là người tiêu dùng tài chính - Financial consumer) trên thế giới được hiểu theo nhiều cách khác nhau. Mỗi quốc gia đều đưa ra những định nghĩa riêng; một số nước còn luật hóa khái niệm người tiêu dùng tài chính.

Đạo luật số 1/POJK.07/2013 của Indonesia về Bảo vệ người tiêu dùng trong lĩnh vực dịch vụ tài chính định nghĩa: Người tiêu dùng tài chính là bên bỏ vốn và/hoặc sử dụng các dịch vụ có sẵn tại các tổ chức dịch vụ tài chính. Người tiêu dùng tài chính bao gồm khách hàng của ngân hàng, nhà đầu tư thị trường vốn, chủ hợp đồng bảo hiểm và người tham gia Quỹ hưu trí, dựa trên luật và quy định trong lĩnh vực dịch vụ tài chính. Trong khi đó, điều 121 Đạo luật Dịch vụ tài chính 2013 (Financial Services Act 2013) của Malaysia định nghĩa người tiêu dùng tài chính là (i) Bất kỳ người nào đã, đang hoặc có ý định sử dụng các dịch vụ tài chính hoặc sản phẩm tài chính cho mục đích cá nhân hoặc hộ gia đình; (ii) Bất kỳ người nào sử dụng, đã sử dụng hoặc có thể có ý định sử dụng các dịch vụ tài chính hoặc sản phẩm tài chính cho việc kinh doanh nhỏ; (iii) Bất kỳ người nào sử dụng, đã sử dụng hoặc có thể có ý định sử dụng những dịch vụ tài chính hoặc sản phẩm tài chính và giá trị của các dịch vụ hoặc sản phẩm tài chính không vượt quá số tiền mà Ngân hàng quy định cho dù có chúng là cho mục đích cá nhân, trong nước hoặc hộ gia đình; (iv) Bất kể mục đích sử dụng là gì, bất kỳ người nào sử dụng, đã sử dụng hoặc có thể có ý định sử dụng các dịch vụ tài chính hoặc sản phẩm tài chính và nằm trong một nhóm, danh mục hoặc những nhà cung cấp dịch vụ được Ngân hàng Trung ương quy định.

Tại Hàn Quốc, theo Đạo luật về Bảo vệ người tiêu dùng trong lĩnh vực dịch vụ tài chính, người tiêu dùng tài chính được coi là (i) đối tác của một tổ chức tài chính bán hoặc môi giới sản phẩm dịch vụ tài chính hoặc (ii) đối tác của dịch vụ tư vấn trong một thỏa thuận môi giới hoặc bán sản phẩm dịch vụ tài chính. Người tiêu dùng tài chính được phân thành 2 loại: (i) “người tiêu dùng tài chính chuyên nghiệp” là cá nhân hoặc tổ chức có hiểu biết chuyên sâu về tài chính, khả năng chấp nhận rủi ro cao và sở hữu tài sản có giá trị lớn (tức là chính phủ Hàn Quốc, Ngân hàng Hàn Quốc, các công ty tài chính đã niêm yết và những cá nhân hoặc tổ chức khác được đề cập rõ hơn ở các quy định khác) và (ii) “người tiêu dùng tài chính không chuyên nghiệp” là những người không thuộc nhóm “người tiêu dùng tài chính chuyên nghiệp”. Còn tại Canada, theo cấu phần bảo vệ người tiêu dùng tài chính trong Luật Ngân sách năm 2016 (Luật C-29), người tiêu dùng tài chính là các cá nhân hoặc tổ chức mua hoặc sử dụng các sản phẩm và dịch vụ tài chính với mục đích cải thiện lợi ích của mình.

Mặc dù có nhiều định nghĩa khác nhau nhưng tựu trung người tiêu dùng tài chính có thể được hiểu là những cá nhân, hộ gia đình, tổ chức đã, đang hoặc dự định sử dụng dịch vụ hoặc sản phẩm tài chính cho mục đích tiêu dùng của cá nhân, hộ gia đình hoặc cho mục

đích kinh doanh nhỏ lẻ; không bao gồm các nhà đầu tư tài chính lớn/chuyên nghiệp trên thị trường tài chính.

### ***1.2. Khái niệm bảo vệ người tiêu dùng tài chính***

Bảo vệ người tiêu dùng tài chính là thuật ngữ được dùng để mô tả hành động (nhóm hành động) nhằm tránh cho người tiêu dùng khỏi các giao dịch phi đạo đức, không công bằng, các sản phẩm thiếu an toàn hoặc lợi ích bị xâm phạm. Theo World Bank (2012), bảo vệ người tiêu dùng tài chính là việc chính phủ thiết lập hệ thống luật pháp và tổ chức vận hành để đảm bảo quyền lợi hợp pháp của người tiêu dùng tài chính. Theo Tổ chức Tài chính Quốc tế- IFC (2015), bảo vệ người tiêu dùng tài chính được hiểu là bất kỳ hoạt động, hành động hoặc bộ quy tắc nào tìm cách giảm thiểu các rủi ro và tác hại cho người tiêu dùng liên quan đến việc sử dụng bất kỳ sản phẩm hoặc dịch vụ tài chính nào. Theo các cách tiếp cận này, khung pháp lý về bảo vệ người tiêu dùng tài chính bao gồm các luật, quy định và các chính sách để bảo vệ những người tiêu dùng trên thị trường tài chính. Nói cách khác, xây dựng và hoàn thiện chính sách để bảo vệ người tiêu dùng tài chính là việc thiết lập một hệ thống luật pháp và xác định cơ chế (bao gồm cả chủ thể giám sát việc thực hiện) để đảm bảo quyền lợi hợp pháp của người tiêu dùng tài chính, đảm bảo giao dịch và cạnh tranh công bằng, thông tin sản phẩm/dịch vụ tài chính minh bạch; ngăn chặn các tổ chức tài chính thực hiện các hành vi gian lận, trái pháp luật hoặc hưởng lợi bất hợp pháp từ các giao dịch với cá nhân hoặc tổ chức tài chính khác.

### ***1.3. Sự cần thiết phải xây dựng, hoàn thiện khuôn khổ pháp lý về bảo vệ người tiêu dùng dịch vụ tài chính***

Việc xây dựng, hoàn thiện khuôn khổ pháp lý bảo vệ người tiêu dùng tài chính có ý nghĩa quan trọng góp phần thúc đẩy tài chính toàn diện. Mục tiêu về tài chính toàn diện chỉ có thể đạt được khi người tiêu dùng tài chính được bảo vệ bằng một khung khổ pháp lý và thể chế toàn diện, vững chắc.

#### ***1.3.1. Về khía cạnh cơ quan quản lý***

Trong nền kinh tế hiện đại, nhu cầu tăng cường khả năng tiếp cận các dịch vụ tài chính cho người dân, đặc biệt là tiếp cận các dịch vụ ngân hàng cơ bản như thanh toán, tiết kiệm và tín dụng (bao gồm tín dụng tiêu dùng) ngày càng trở nên quan trọng. Cùng với sự phát triển của khoa học công nghệ, đặc biệt là cuộc Cách mạng công nghiệp lần thứ tư (CMCN 4.0), nhiều sản phẩm dịch vụ tài chính ngân hàng hiện đại, tiện ích đã ra đời giúp mọi thành phần người dân trong xã hội tiếp cận dễ dàng, hiệu quả với chi phí thấp hơn. Tuy nhiên, một số tổ chức cung ứng dịch vụ tài chính có xu hướng chạy theo lợi nhuận; trong nhiều trường hợp còn thiếu minh bạch về những điều khoản, điều kiện sử dụng dịch vụ; giao dịch thiếu trách nhiệm cũng vì thế mà gia tăng. Các sản phẩm, dịch vụ tiềm ẩn những rủi ro nhất định, đặc biệt là rủi ro công nghệ.

Cuộc khủng hoảng tài chính 2008-2009 tại Hoa Kỳ với chính sách “cho vay dưới chuẩn” và cuộc khủng hoảng tín dụng tại Italia làm hàng nghìn doanh nghiệp lâm vào tình cảnh phá sản... là một trong những dẫn chứng cho thấy người tiêu dùng sản phẩm, dịch

vụ ngân hàng luôn tiềm ẩn nguy cơ trở thành nạn nhân của việc thiếu kiểm soát trong phát triển các sản phẩm, dịch vụ ngân hàng.

### *1.3.2. Về khía cạnh nhà cung ứng dịch vụ tài chính*

Khuôn khổ pháp lý sẽ tạo ra sự đồng bộ, đảm bảo sự công bằng giữa các tổ chức tài chính trong việc áp dụng các biện pháp bảo vệ người tiêu dùng tài chính; định hướng cho các tổ chức tài chính phát triển bền vững, tạo lòng tin với khách hàng.

### *1.3.3. Về khía cạnh người tiêu dùng tài chính*

Người tiêu dùng tài chính là đối tượng dễ bị tổn thương nhất do phải đối mặt với những thay đổi nhanh chóng trên thị trường dịch vụ tài chính (sự gia tăng về số lượng và phong phú về loại hình các nhà cung cấp dịch vụ mới, sự ra đời các sản phẩm, dịch vụ mới, dựa trên ứng dụng công nghệ hiện đại...). Tuy nhiên, đa phần người tiêu dùng dịch vụ tài chính thường thiếu kinh nghiệm và hiểu biết về các sản phẩm tài chính. Việc có đầy đủ thông tin để đưa ra các quyết định chính xác là thách thức đối với phần đông người tiêu dùng tài chính, ảnh hưởng không nhỏ tới nhu cầu và khả năng tiếp cận các dịch vụ tài chính chính thức.

## **2. Thực tiễn quốc tế về khuôn khổ pháp lý bảo vệ người tiêu dùng tài chính**

### **2.1. Thông lệ chung từ các tổ chức quốc tế**

Về mặt thông lệ, các tổ chức quốc tế đều phát triển một bộ nguyên tắc hoặc đưa ra các khuyến nghị làm cơ sở tham chiếu để thực hành việc bảo vệ người tiêu dùng tài chính. Tuy không mang tính chất bắt buộc, các nguyên tắc này được xem là căn cứ quan trọng để các quốc gia tham khảo cho việc xây dựng, hoàn thiện khung khổ pháp lý và thể chế của mình. Sau đây là hai thông lệ quốc tế phổ biến nhất để thực hành việc bảo vệ người tiêu dùng tài chính.

#### *2.1.1. Thực tiễn tốt về bảo vệ người tiêu dùng tài chính của World Bank*

Dựa trên các điều tra nghiên cứu kinh nghiệm của 35 quốc gia triển khai thực thi bảo vệ người tiêu dùng tài chính hiệu quả từ năm 2006, lần lượt vào các năm 2012 và 2017, World Bank đã công bố ấn bản Các thực tiễn tốt về bảo vệ người tiêu dùng tài chính (Good Practices for Financial Consumer Protection). Các ấn bản bao gồm các vấn đề chính nảy sinh trong bảo vệ người tiêu dùng với các chương riêng cho các lĩnh vực như ngân hàng, chứng khoán và bảo hiểm. Ấn bản bao gồm ba phần: Phần 1 đề xuất 39 thực tiễn tốt phổ biến về bảo vệ người tiêu dùng; Phần 2 tập hợp thực tiễn tốt liên quan đến các lĩnh vực tài chính chủ đạo như ngân hàng, chứng khoán, bảo hiểm và tín dụng phi ngân hàng; Phần 3 trình bày thực tiễn tốt về quỹ hưu trí và báo cáo thông tin tín dụng (vẫn trong giai đoạn phát triển ban đầu).

Các ấn bản cũng giải quyết các vấn đề mới phát sinh, chủ yếu liên quan đến kênh kỹ thuật số, sản phẩm sáng tạo và mô hình kinh doanh và các loại nhà cung cấp dịch vụ tài chính mới. Cho đến nay, 39 thực tiễn tốt phổ biến mà World Bank đề ra đối với một cơ chế bảo vệ người tiêu dùng tài chính hiệu quả vẫn được nhiều nước tham chiếu để so sánh, đánh giá nhằm hoàn thiện khuôn khổ bảo vệ người tiêu dùng tài chính của nước mình. Các

thực tiễn tốt trên được phân loại vào 8 nhóm chủ điểm chính: (i) Cơ quan bảo vệ người tiêu dùng; (ii) Minh bạch thông tin và thực tiễn bán hàng; (iii) Quản lý tài khoản khách hàng; (iv) Bảo mật dữ liệu và quyền riêng tư; (v) Giải quyết tranh chấp; (vi) Bảo hiểm tiền gửi và bồi thường; (vii) Hiểu biết tài chính và trao quyền cho người tiêu dùng; (viii) Cơ chế cạnh tranh.

### *2.1.2. Nguyên tắc bảo vệ người tiêu dùng tài chính của G20/OECD*

Để đảm bảo chính sách và quy định nhằm bảo vệ người tiêu dùng tài chính được xây dựng phù hợp với mức độ phát triển vũ bão của thị trường tài chính, Tổ chức Hợp tác và Phát triển Kinh tế - OECD phối hợp với nhóm nền kinh tế lớn G20 cùng xây dựng các nguyên tắc bảo vệ người tiêu dùng tài chính vào năm 2011. Đây là những nguyên tắc có tính tự nguyện. G20 yêu cầu các nước thành viên cũng như các nước quan tâm nên lấy nguyên tắc này làm cơ sở để đánh giá khuôn khổ bảo vệ người tiêu dùng tài chính hiện có của quốc gia mình và bổ sung những hành động, quy định cần thiết dựa trên các nguyên tắc này. 10 nguyên tắc của G20/OECD đề cập toàn diện các nội dung, từ khuôn khổ pháp lý, quản lý, giám sát, vai trò của cơ quan giám sát đến các vấn đề liên quan đến đối xử công bằng, minh bạch, cạnh tranh... (OECD, 2011). Nhìn chung, các nguyên tắc này tới nay vẫn được nhiều quốc gia trên thế giới tham chiếu, áp dụng.

## ***2.2. Kinh nghiệm xây dựng khuôn khổ pháp lý bảo vệ người tiêu dùng tại một số quốc gia***

Kinh nghiệm các quốc gia cho thấy việc xây dựng một khuôn khổ pháp lý bảo vệ người tiêu dùng tài chính là thực sự cần thiết. Một khuôn khổ bảo vệ người tiêu dùng tài chính hiệu quả giúp người tiêu dùng tài chính giảm thiểu rủi ro trong giao dịch tài chính; mở rộng tiếp cận và sử dụng các sản phẩm, dịch vụ tài chính; giúp người tiêu dùng tài chính có đầy đủ thông tin để đưa ra quyết định một cách tốt nhất. Bên cạnh đó, bảo vệ người tiêu dùng tài chính thúc đẩy các tổ chức tài chính hoạt động có trách nhiệm, sản phẩm dịch vụ tài chính đa dạng, phong phú, tin cậy với chi phí thấp. Đây là một trong những phương thức giúp củng cố niềm tin của người tiêu dùng tài chính vào khu vực tài chính chính thức, đóng góp vào sự phát triển lành mạnh, bền vững của thị trường tài chính. Vì vậy, các quốc gia ngày càng nỗ lực xây dựng và củng cố khung pháp lý, đồng thời thiết lập các bộ phận giám sát chuyên biệt để bảo vệ người tiêu dùng dịch vụ tài chính hiệu quả hơn.

### *2.2.1. Kinh nghiệm của Malaysia*

Khuôn khổ pháp lý cho Bảo vệ người tiêu dùng tài chính của Malaysia áp dụng kết hợp cả phương pháp xây dựng Luật Bảo vệ người tiêu dùng không có các quy định, hướng dẫn riêng đối với ngành dịch vụ tài chính và phương pháp thiết lập các quy định về bảo vệ người tiêu dùng tài chính bên trong các luật tài chính. Theo đó:

- Về phương pháp xây dựng Luật Bảo vệ người tiêu dùng không có các quy định, hướng dẫn riêng đối với ngành dịch vụ tài chính, Malaysia đã ban hành Đạo luật Bảo vệ người tiêu dùng 1999 do Bộ Nội thương, Hợp tác xã và Quyền lợi người tiêu dùng (Ministry of Domestic Trade, Cooperatives, and Consumerism) soạn thảo. Đạo luật này quy định các

biện pháp bảo vệ người tiêu dùng chung áp dụng cho tất cả các loại hình sản phẩm và dịch vụ mà không có các quy định riêng về sản phẩm, dịch vụ tài chính.

Ngoài Đạo luật bảo vệ người tiêu dùng 1999, Chính phủ đã ban hành và công nhận Đạo luật Dịch vụ tài chính 2013. Đây là các luật cao nhất về bảo vệ người tiêu dùng tài chính và có giá trị hiệu lực ở mọi bang cũng như liên bang của quốc gia này. Cả hai luật đều có tính bắt buộc và áp đặt trách nhiệm hình sự nếu không tuân thủ luật định. Mặc dù Đạo luật Bảo vệ người tiêu dùng 1999 không đề cập cụ thể đến bảo vệ người tiêu dùng tài chính nhưng Đạo luật Dịch vụ tài chính 2013 dành toàn bộ Phần VIII cho bảo vệ người tiêu dùng với tiêu đề “Quản lý kinh doanh và bảo vệ người tiêu dùng” (Business Conduct and Consumer Protection). Phần VIII gồm 5 chương, 19 điều tập trung vào các quy định về bảo vệ người tiêu dùng tài chính, công nhận tầm quan trọng của bảo vệ người tiêu dùng tài chính tại Malaysia. Thêm vào đó, Ngân hàng Trung ương (NHTW) Malaysia (BNM) cung cấp các hướng dẫn chi tiết hơn về các điều khoản trong Phần VIII này.

- Về phương pháp thiết lập các quy định về bảo vệ người tiêu dùng tài chính bên trong các luật tài chính, Malaysia đã ban hành Đạo luật NHTW Malaysia 2009 và Đạo luật Dịch vụ tài chính năm 2013 (Financial Services Agency Act 2013). Về Đạo luật NHTW Malaysia 2009, Đạo luật quy định rõ NHTW Malaysia có nhiệm vụ bảo vệ quyền và lợi ích hợp pháp của người tiêu dùng tài chính và có thể ban hành các văn bản quy định và hướng dẫn chi tiết về bảo vệ người tiêu dùng tài chính trong phạm vi quyền hạn của mình. Về Đạo luật Dịch vụ tài chính năm 2013, Đạo luật có hiệu lực vào ngày 30/6/2013, thay thế cho Đạo luật Ngân hàng và tổ chức tài chính 1989 (Banking and Financial Institutions Act 1989), Đạo luật Bảo hiểm năm 1996 (Insurance Act 1996), Đạo luật Hệ thống thanh toán 2003 và Đạo luật Kiểm soát ngoại hối 1953 nhằm hợp nhất các quy định tại các đạo luật này thành một đạo luật duy nhất, cho phép giám sát thị trường tài chính chặt chẽ hơn và có hệ thống để thúc đẩy ổn định tài chính, đảm bảo các tổ chức tài chính hoạt động kinh doanh bình đẳng, công bằng, chuyên nghiệp và có trách nhiệm trước khách hàng; đồng thời, bảo vệ quyền và lợi ích chính đáng của người tiêu dùng dịch vụ và sản phẩm tài chính. Có thể thấy, Đạo luật NHTW Malaysia 2009 và Đạo luật Dịch vụ tài chính năm 2013 đều có nhiều nội dung quan trọng trong việc tăng cường bảo vệ người tiêu dùng tài chính tại Malaysia.

Nhiều nghiên cứu cho thấy nội dung khuôn khổ pháp lý về bảo vệ người tiêu dùng tài chính của Malaysia bám sát nhiều nội dung của Nguyên tắc Bảo vệ người tiêu dùng tài chính của OECD/G20 năm 2011 và các Thực tiễn tốt cho Bảo vệ người tiêu dùng tài chính của World Bank năm 2012. Điều này đã giúp Malaysia triển khai và thực thi hiệu quả bảo vệ người tiêu dùng tài chính. Theo tổng hợp của các nghiên cứu này, 11 nội dung cơ bản cần thiết về bảo vệ người tiêu dùng tài chính thuộc năm chủ đề chủ đạo của Nguyên tắc Bảo vệ người tiêu dùng tài chính của OECD/G20 năm 2011 và các Thực tiễn tốt cho Bảo vệ người tiêu dùng tài chính của World Bank năm 2012 đã được Malaysia tuân thủ chặt chẽ trong khuôn khổ pháp lý (Bảng 1).

**Bảng 1. So sánh khuôn khổ pháp lý về bảo vệ người tiêu dùng tài chính tại Malaysia và thông lệ quốc tế**

Nội dung	Thế giới		Malaysia				
	World Bank (2012)	OECD và G20 (2011)	Đạo luật Bảo vệ người tiêu dùng 1999	Đạo luật Dịch vụ tài chính 2013	Tổng của 2 đạo luật	NHTW Malaysia (BNM)	Các VBQPPL hướng dẫn
<b>1. Khuôn khổ pháp lý và giám sát</b>							
1.1. Pháp luật công nhận	✓	✓		✓	✓		✓
1.2. Cơ quan giám sát	✓	✓	✓		✓	✓	✓
<b>2. Công bố và bảo mật thông tin</b>							
2.1. Thông tin sản phẩm	✓	✓	✓	✓	✓	✓	✓
2.2. Xung đột lợi ích	✓	✓		✓	✓	✓	✓
2.3. Bảo mật thông tin	✓	✓	✓	✓	✓		✓
2.4. Xác thực khách hàng	✓	✓				✓	✓
<b>3. Đối xử công bằng với khách hàng</b>							
3.1. Nghiêm cấm lừa đảo	✓	✓	✓	✓	✓	✓	✓
3.2. Kinh doanh có trách nhiệm	✓	✓		✓	✓	✓	✓
<b>4. Khiếu nại, khắc phục</b>							
4.1. Cơ chế nội bộ	✓	✓				✓	✓
4.2. Cơ chế bên ngoài	✓	✓	✓	✓	✓	✓	✓
<b>5. Nhận thức và hiểu biết tài chính</b>							
Nhận thức và hiểu biết tài chính	✓	✓				✓	✓
<b>Tổng</b>	<b>11</b>	<b>11</b>	<b>5</b>	<b>7</b>	<b>8</b>	<b>9</b>	<b>11</b>

*Nguồn: Nguyễn Thị Thanh Hằng và cộng sự (2021)*

### 2.2.2. Kinh nghiệm của Indonesia

Indonesia bám sát nhiều nội dung của các Thực tiễn tốt cho Bảo vệ người tiêu dùng tài chính của World Bank năm 2012 khi xây dựng khuôn khổ pháp lý bảo vệ người tiêu dùng tài chính. Tổng hợp nhiều văn bản pháp luật cho thấy khuôn khổ pháp lý bảo vệ người tiêu dùng tài chính ở Indonesia tuân thủ đúng Thực tiễn tốt của World Bank.

Tại Indonesia, Luật Bảo vệ người tiêu dùng 1999 (Luật số 8/1999) và Luật Cơ quan dịch vụ tài chính 2011 (Luật số 21/2011) là luật cao nhất về bảo vệ người tiêu dùng tài chính. Đạo luật Bảo vệ người tiêu dùng 1999 không có quy định cụ thể đến lĩnh vực tài chính. Tuy nhiên, Điều 31 của Luật Cơ quan dịch vụ tài chính 2011 đã yêu cầu Cơ quan quản lý dịch vụ tài chính (Otoritas Jasa Keuangan - OJK) phải thiết lập các quy định chi tiết về bảo vệ quyền lợi người tiêu dùng tài chính. Theo đó, vào ngày 6 tháng 8 năm 2013, OJK đã ban hành Quy định số 1/POJK.07/2013 liên quan đến Bảo vệ người tiêu dùng trong lĩnh vực dịch vụ tài chính. Quy định này áp dụng cho tất cả tổ chức tham gia kinh doanh tại thị trường tài chính như các ngân hàng thương mại, công ty chứng khoán, công ty bảo hiểm và các tổ chức tài chính khác. Quy định mô tả định nghĩa, nghĩa vụ và quyền hạn của tổ chức tài chính này trong việc bảo vệ người tiêu dùng tài chính, cách thức tham gia xử lý khiếu nại và cơ chế giải quyết, cũng như vai trò giám sát của OJK trong bảo vệ người tiêu dùng tài chính.

Bên cạnh đó, Ngân hàng Trung ương Indonesia (Central Bank of Indonesia - BI) cũng đã ban hành quy định về bảo vệ người tiêu dùng tài chính trong hệ thống thanh toán, cụ thể là Quy định số 16/1/PBI /2014 của Thống đốc Ngân hàng Trung ương Indonesia.

Luật Chống độc quyền và cạnh tranh kinh doanh không lành mạnh (Luật số 5/1999) cũng được ban hành vào tháng 3 năm 1999 nhằm điều chỉnh các hành vi lạm dụng độc quyền trong các tập đoàn có quyền kiểm soát thuộc gia đình tư nhân. Theo đó, điều 5 của Luật số 5/1999 định nghĩa một số thỏa thuận bị cấm và một trong số đó là thỏa thuận ấn định giá và các thông lệ định giá khác giữa các công ty kinh doanh cạnh tranh. Luật số 5/1999 được Quốc hội đề xuất sửa đổi vào tháng 6 năm 2016 nhằm bổ sung các quy định về các giao dịch lớn và các hoạt động cartel trong nước.

### 2.2.3. Kinh nghiệm của Canada

Năm 2011 Chính phủ Canada đã cam kết phát triển một hệ thống quy tắc bảo vệ người tiêu dùng tài chính toàn diện với mục tiêu hướng tới là:

- Bảo vệ tốt hơn cho người tiêu dùng tài chính trước các sản phẩm tài chính, đảm bảo họ tiếp cận các kiến thức và thông tin cần thiết để đưa ra quyết định tài chính một cách có trách nhiệm.

- Có khả năng đáp ứng nhu cầu ngày càng đa dạng của người tiêu dùng trong một thị trường tài chính phát triển nhanh chóng và sáng tạo.

- Thích ứng trước môi trường ngân hàng số, tự động và từ xa cũng như nhu cầu ngày càng đa dạng của người dân Canada.

- Cung cấp chế độ bảo vệ người tiêu dùng tài chính toàn diện, áp dụng cho các sản phẩm và dịch vụ tài chính mà tổ chức tài chính cung cấp ở bất cứ đâu tại Canada.

- Đảm bảo tổ chức tài chính hoạt động có trách nhiệm với khách hàng.



- Đảm bảo các quy tắc này sẽ được thực thi và có những tiêu chuẩn đánh giá.

Vào tháng 12 năm 2013, Chính phủ Canada đã kêu gọi ý kiến góp ý của mọi người dân để hình thành khuôn khổ bảo vệ người tiêu dùng tài chính. Vào tháng 11 năm 2016, Chính phủ đã ban hành một khuôn khổ bảo vệ người tiêu dùng tài chính như một phần trong Luật Ngân sách năm 2016 (Luật C-29). Khuôn khổ bảo vệ tập trung vào 6 nội dung chính: (1) Khuôn khổ pháp lý và cam kết tự nguyện; (2) Cơ quan thực thi, giám sát bảo vệ người tiêu dùng tài chính; (3) Cơ chế tiếp nhận và xử lý khiếu nại; (4) Cơ chế bồi thường; (5) Giáo dục và nâng cao hiểu biết tài chính của người dân; (6) Hợp tác và tham gia.

### **3. Thực trạng triển khai và khuyến nghị hoàn thiện khuôn khổ pháp lý bảo vệ người tiêu dùng tài chính tại Việt Nam**

#### ***3.1. Thực trạng khung pháp lý bảo vệ người tiêu dùng tài chính tại Việt Nam***

So với nhiều quốc gia trên thế giới chưa có khung pháp lý bảo vệ người tiêu dùng tài chính hoặc mới ban hành luật bảo vệ quyền lợi người tiêu dùng nói chung, Việt Nam đã có Luật Bảo vệ người tiêu dùng và quy định chi tiết về bảo vệ người tiêu dùng tài chính trong các luật chuyên ngành tài chính. Cụ thể, Luật và quy định về bảo vệ người tiêu dùng tài chính tại Việt Nam bao gồm khung pháp lý bảo vệ người tiêu dùng dịch vụ trong lĩnh vực ngân hàng (Luật Các tổ chức tín dụng ban hành vào các năm 1997, 2004 và 2010), chứng khoán (Luật Chứng khoán năm 2019) và bảo hiểm (Luật Kinh doanh bảo hiểm năm 2000). Trên thực tế, nếu so sánh với thông lệ của World Bank và OECD/G20, khung pháp lý chung (Luật Bảo vệ quyền lợi người tiêu dùng) và khung pháp lý riêng (luật chuyên ngành và văn bản dưới luật) đều đề cập khá đầy đủ về nội dung bảo vệ người tiêu dùng tài chính theo thông lệ quốc tế, như: (i) Quy định về công khai và minh bạch thông tin sản phẩm, dịch vụ tài chính; (ii) Quy định về thu thập, phân tích dữ liệu khách hàng để cung ứng sản phẩm, dịch vụ tài chính phù hợp; (iii) Quy định về đối xử bình đẳng, công bằng với khách hàng tài chính; (iv) Quy định về bảo mật dữ liệu và thông tin cá nhân khách hàng; (v) Quy định về cơ chế xử lý khiếu nại, tranh chấp của người tiêu dùng tài chính; và (vi) Quy định về xử phạt vi phạm quy định về bảo vệ người tiêu dùng tài chính.

Tuy nhiên, theo đánh giá của Nguyễn Thị Thanh Hằng (2021), trong lĩnh vực ngân hàng, khung pháp lý bảo vệ người tiêu dùng tài chính ngân hàng còn một số hạn chế sau: (i) Chưa có cơ chế phối hợp giữa các cơ quan trong giải quyết tranh chấp, khiếu nại, bảo vệ quyền lợi của người tiêu dùng dịch vụ tài chính ngân hàng khi xung đột xảy ra; (ii) Chưa có một đơn vị đầu mối theo dõi, giám sát, xử lý việc thực thi bảo vệ người tiêu dùng dịch vụ tài chính ngân hàng; (iii) Một số quy định chưa theo kịp sự phát triển nhanh chóng của khoa học công nghệ cũng như quá trình số hóa nên ảnh hưởng nhất định đến quyền lợi của người tiêu dùng tài chính (khi sử dụng các sản phẩm, dịch vụ tài chính ngân hàng số). Bên cạnh đó, hoạt động bảo vệ người tiêu dùng tài chính ở Việt Nam hiện nay được đánh giá là khá sơ sài (Thạch Bình, 2018). Cụ thể, trong 10 tiêu chí dựa trên các nguyên tắc để đánh giá hoạt động bảo vệ người tiêu dùng tài chính được OECD công bố vào năm 2011, Việt Nam hiện chỉ đáp ứng được 2 yếu tố là: có cơ quan quản lý khiếu nại và có hỗ trợ khách hàng bằng đường dây nóng. Các tiêu chí khác (ví dụ như: phổ cập các chương trình về rủi ro tiêu dùng; xử lý trực tiếp khiếu nại; nhận báo cáo khiếu nại từ các tổ chức tài chính và kiểm soát chất lượng phục vụ...) đều đã được nhiều nước như Hàn Quốc, Indonesia, Thái

Lan và Philippines áp dụng, song chưa được áp dụng tại Việt Nam (Hoàng Thị Thu Hiền và cộng sự, 2020).

Việt Nam hiện có 5 cơ quan liên quan đến việc bảo vệ quyền lợi người tiêu dùng tài chính, bao gồm: Ngân hàng Nhà nước (NHNN) Việt Nam quản lý trong lĩnh vực ngân hàng, Bộ Tài chính quản lý lĩnh vực chứng khoán và bảo hiểm, Bộ Công Thương, Bộ Thông tin - Truyền thông và Hiệp hội Bảo vệ người tiêu dùng chịu trách nhiệm bảo vệ người tiêu dùng nói chung. Cả 5 cơ quan này đều có khả năng tham gia vào quá trình bảo vệ người tiêu dùng, nhưng các cơ quan này đều chưa có bộ phận chuyên trách cũng như quy trình quản lý cụ thể để thực hiện nhiệm vụ bảo vệ người tiêu dùng, chưa có cơ chế phối hợp để xử lý các xung đột lợi ích xảy ra khi sử dụng sản phẩm, dịch vụ tài chính.

Tóm lại, tại Việt Nam, bảo vệ người tiêu dùng tài chính chủ yếu dựa trên căn cứ pháp lý là Luật Bảo vệ quyền lợi người tiêu dùng chứ chưa có quy định riêng về bảo vệ người tiêu dùng dịch vụ tài chính. Trong khi đó, các luật hiện hành theo các lĩnh vực tài chính như Luật Các tổ chức tín dụng, Luật Chứng khoán, Luật Kinh doanh bảo hiểm có quy định về việc bảo vệ quyền lợi của khách hàng nhưng chưa đầy đủ và thiếu những hướng dẫn cụ thể xử lý kịp thời, hiệu quả các khiếu nại của người tiêu dùng tài chính. Bên cạnh đó, Việt Nam cũng chưa có các tổ chức chuyên trách quản lý tập trung đối với việc bảo vệ người tiêu dùng tài chính.

### ***3.2. Khuyến nghị hoàn thiện khung pháp lý bảo vệ người tiêu dùng tài chính tại Việt Nam***

*Thứ nhất*, cơ quan có thẩm quyền cần lồng ghép các nội dung quy định về bảo vệ người tiêu dùng tài chính trong từng luật, văn bản dưới luật chuyên ngành tài chính. Theo đó, Bộ Tài chính và Ngân hàng Nhà nước (NHNN) cần chủ động đề xuất sửa đổi, bổ sung các luật hiện hành (Luật Các tổ chức tín dụng, Luật Chứng khoán, Luật Kinh doanh bảo hiểm) nhằm lồng ghép các nội dung bảo vệ người tiêu dùng tài chính. Đối với NHNN, có thể đề xuất sửa đổi, bổ sung nội dung bảo vệ người tiêu dùng tài chính vào Luật Các tổ chức tín dụng như: (i) Bổ sung quy định về cơ chế tiếp nhận, xử lý khiếu nại của khách hàng đối với các tổ chức tín dụng, chi nhánh ngân hàng nước ngoài; (ii) Bổ sung quy định về cơ chế bồi thường, xử lý hậu quả cho khách hàng đối với các tổ chức tín dụng, chi nhánh ngân hàng nước ngoài; (iii) Sửa đổi, bổ sung các quy định liên quan đến các mô hình kinh doanh và sản phẩm dịch vụ mới trên nền tảng công nghệ số.

*Thứ hai*, các tổ chức cung ứng dịch vụ tài chính cần phải xây dựng các cơ chế xử lý khiếu nại và công khai với khách hàng nhằm bảo vệ khách hàng cũng như tạo lòng tin cho khách hàng vào tổ chức tài chính mà họ đang giao dịch. Các tổ chức cung ứng dịch vụ tài chính cũng cần xây dựng quy trình, quy chế nội bộ, trong đó quy định cụ thể và có cách thức hỗ trợ khách hàng kịp thời, nhanh chóng và đầy đủ bên cạnh việc thông báo công khai tới khách hàng thông qua việc niêm yết, hướng dẫn cụ thể trên trang thông tin điện tử của các tổ chức tài chính. Đồng thời, các đơn vị cung ứng dịch vụ cần thiết lập các kênh tiếp nhận khiếu nại hiệu quả thông qua trang thông tin điện tử, đường dây nóng, email để có thể tiếp nhận, phân loại, giải quyết kịp thời các khiếu nại của người tiêu dùng. Việc có cơ chế xử lý khiếu nại hiệu quả ngoài bảo vệ quyền và lợi ích hợp pháp của khách hàng cũng là tiền đề để tổ chức tài chính tạo uy tín, lòng tin với khách hàng, giúp tổ chức tài chính tăng trưởng và phát triển bền vững.

*Thứ ba*, các cơ quan có thẩm quyền cần xây dựng nên Luật Bảo vệ quyền lợi người tiêu dùng tài chính. Theo đó, luật sẽ quy định những nội dung tối thiểu cần có để bảo vệ quyền lợi người tiêu dùng tài chính bao gồm: (i) Quy định chung; (ii) Trách nhiệm của tổ chức tài chính cung ứng sản phẩm, dịch vụ tài chính đối với người tiêu dùng tài chính; (iii) Trách nhiệm của tổ chức xã hội trong việc tham gia bảo vệ quyền lợi người tiêu dùng tài chính; (iv) Giải quyết tranh chấp giữa người tiêu dùng tài chính và tổ chức tài chính qua một bên thứ ba; (v) Trách nhiệm quản lý nhà nước về bảo vệ quyền lợi người tiêu dùng tài chính.

*Thứ tư*, có thể xem xét thành lập một cơ quan chuyên trách bảo vệ người tiêu dùng tài chính duy nhất tại Việt Nam: Để việc bảo vệ người tiêu dùng tài chính đạt hiệu quả cao nhất, trong dài hạn, cần thiết lập một cơ quan chuyên trách về bảo vệ người tiêu dùng tài chính. Theo đó, cơ quan này sẽ hoạt động độc lập và có trách nhiệm giám sát việc triển khai bảo vệ người tiêu dùng tài chính ở tất cả các loại hình tổ chức tài chính.

*Thứ năm*, Bộ Giáo dục và Đào tạo cần phối hợp chặt chẽ với NHNN và Bộ Tài chính để tăng cường giáo dục tài chính cho tầng lớp trẻ em, thanh, thiếu niên - lực lượng lao động quan trọng trong tương lai của Việt Nam, thông qua việc trình Chính phủ sửa đổi Luật Giáo dục theo hướng lồng ghép môn học giáo dục tài chính hoặc lồng ghép các kiến thức tài chính cần thiết vào các môn học cơ bản (Toán, Văn, Ngoại ngữ, Giáo dục công dân...). Đồng thời, Bộ Tài chính và NHNN cần hỗ trợ Bộ Giáo dục và Đào tạo trong xây dựng các kiến thức tài chính cơ bản trong chương trình giáo dục tài chính như kiến thức về tiền tệ, về ngân hàng, về cho vay, về quản lý ngân sách thu - chi, về quản lý nợ; kiến thức về bảo hiểm nói chung, bảo hiểm nhân thọ, về chứng khoán và kế hoạch hưu trí và các quỹ hưu trí tự nguyện hiện có.

*Thứ sáu*, Bộ Thông tin và Truyền thông có thể phối hợp với NHNN và Bộ Tài chính đẩy mạnh phổ biến, tuyên truyền, giáo dục pháp luật về bảo vệ người tiêu dùng tài chính nhằm nâng cao hiểu biết để tự bảo vệ bản thân, đưa ra các quyết định sáng suốt về sản phẩm, dịch vụ tài chính và có ý thức tôn trọng pháp luật, đảm bảo hiệu quả thực thi pháp luật về bảo vệ người tiêu dùng tài chính. Trong đó, đối tượng tuyên truyền, phổ biến sẽ tập trung vào lực lượng lao động đang có việc làm, phụ nữ, người già, nông dân và dân vùng sâu, vùng xa. Bên cạnh các kênh tuyên truyền, giáo dục truyền thống, cần khai thác mở rộng sang các kênh mạng xã hội phổ biến như Facebook, You Tube, Zalo... để truyền tải thông tin, kiến thức một cách sâu rộng và có hiệu quả tới mọi đối tượng tiêu dùng tài chính.

#### **4. Kết luận**

Tại Việt Nam, vấn đề bảo vệ người tiêu dùng tài chính chưa được quy định một cách toàn diện, chặt chẽ và cụ thể theo một khung pháp lý riêng biệt nào. Căn cứ điều chỉnh vấn đề này chỉ có thể tìm thấy một phần tại Luật Bảo vệ quyền lợi người tiêu dùng và luật chuyên ngành, như: Luật Các tổ chức tín dụng, Luật Chứng khoán và Luật Kinh doanh bảo hiểm, trong đó các hướng dẫn xử lý cụ thể còn khá thiếu vắng. Bên cạnh đó, dù hiện nay có nhiều cơ quan cùng tham gia bảo vệ người tiêu dùng tài chính, song các cơ quan này chưa có bộ phận chuyên trách và quy trình quản lý cụ thể, cộng với cơ chế phối hợp giữa các cơ quan cũng chưa rõ ràng khiến việc xử lý các xung đột lợi ích xảy ra khi sử dụng sản phẩm dịch vụ tài chính còn hạn chế. Do đó, trên cơ sở phân tích nghiên cứu kinh nghiệm quốc tế và thực trạng tại Việt Nam, bài viết đã cung cấp các khuyến nghị nhằm hoàn thiện khung pháp lý bảo vệ người tiêu dùng tại Việt Nam.

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# NHÂN TỐ ẢNH HƯỞNG ĐẾN NĂNG LỰC SỐ CỦA CÔNG DÂN VIỆT NAM: NGHIÊN CỨU BAN ĐẦU

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## **Tóm tắt**

Nghiên cứu này nhằm khám phá các yếu tố ảnh hưởng đến năng lực số của người lao động trong khu vực tài chính và ngoài khu vực khác ở Việt Nam. Dữ liệu cho phân tích thu được từ 979 người trả lời (272 người thuộc ngành tài chính và 707 người thuộc ngành phi tài chính). Kết quả phân tích nhân tố khám phá (EFA) cho thấy có 7 nhân tố tác động có ý nghĩa thống kê đến năng lực số. Ngoài ra, phân tích khác biệt (ANOVA) cho thấy có sự khác biệt về năng lực số giữa nhóm lao động trong lĩnh vực tài chính và nhóm người lao động trong khu vực khác. Nghiên cứu cũng phát hiện rằng có sự khác biệt về năng lực số giữa các nhóm học vấn (trong đó, năng lực số giảm dần theo các nhóm học vấn, tương ứng: tiến sĩ, thạc sĩ, trình độ đại học, cao đẳng và nhóm trung học phổ thông); trong khi, nghiên cứu không phát hiện có sự khác biệt về năng lực số trong các nhóm tuổi, hoặc giữa học sinh và các đối tượng khác. Khuyến nghị chính sách về đào tạo năng lực số toàn diện theo định hướng chiến dịch quốc gia cũng được bài viết thảo luận.

**Từ khóa:** Năng lực số, chuyển đổi số, công dân số

## **Abstract**

*This study aims to explore the determinants of employees' digital literacy in the financial and non-financial sectors in Vietnam. Data for analysis were obtained from 979 respondents (272 from financial sector and 707 from non-financial sector). The results of exploratory factor analysis (EFA) show that there are 7 factors that have a statistically significant impact on digital literacy. In addition, ANOVA's analysis shows that there is a difference in digital literacy between employees in the financial sector and those in other sectors. The study also found that there is a difference in digital literacy between groups of education levels (within educational groups, respectively digital literacy decreases: doctorate, master, university, colleges and high school); Meanwhile, the study did not detect any difference in digital competence by age groups, or between students and other categories. Policy recommendations on comprehensive digital literacy training in the direction of a national campaign are also discussed.*

**Keywords:** Digital literacy, digital transformation, digital citizen

## 1. Đặt vấn đề

Sự thâm nhập của công nghệ số vào các mặt của đời sống kinh tế xã hội hay còn gọi là chuyển đổi số đang diễn ra trên toàn thế giới. Quá trình này đã và đang đòi hỏi mọi cá nhân phải (i) biết cách sử dụng công nghệ mới (ii) biết cách tương tác với nhau trên môi trường công nghệ số. Sự tích hợp những năng lực cơ bản này được gọi là “năng lực số” (digital literacy) (Medlock Paul, Spires, & Kerkhoff, 2017). Trong thời đại số (digital age) ngày nay, “năng lực số” được coi là gồm một loạt các năng lực cơ bản mới, cần thiết và phổ cập đối với mỗi “công dân số” (digital citizen) (eLD, 2015; Jenkins, 2006; WB, 2020). Đó là lý do năng lực số cũng được hiểu là “trình độ dân trí số”.

Các nghiên cứu học thuật đã chỉ ra khá nhiều bằng chứng và lý do về tầm quan trọng của “năng lực số” trên rất nhiều phương diện (Hamilton, 2015; PwC, 2021; Tran et al., 2020; Vidosavljevic & Vidosavljevic, 2019). Đặc biệt vấn đề nâng cao năng lực số cho mỗi công dân đã và đang là mối quan tâm chung ở mọi cấp độ của xã hội (Hamilton, 2015) cũng như phạm vi toàn cầu (WB, 2020). Vì tầm quan trọng của nó, tại một số quốc gia và vùng lãnh thổ trên thế giới, nhiều nghiên cứu (Lankshear & Knobel, 2015; Tejedor, Cervi, Pérez-Escoda, & Jumbo, 2020; UNICEF, 2019) đã nỗ lực khám phá các yếu tố tác động đến năng lực số và qua đó đề có các khuyến nghị về đào tạo nâng cao năng lực số cho các công dân.

Tại Việt Nam đã có một số nghiên cứu về năng lực số (Nguyen Tan & Marquet, 2019; PwC, 2021; Santos & Serpa, 2017; Tran et al., 2020; Vinh, Quang, & Lan, 2020); (Nguyen Tan & Marquet, 2018). Tuy nhiên số lượng và phạm vi nghiên cứu còn khá khiêm tốn so với định hướng chuyển đổi số của Chính phủ (Chính phủ, 2020; ĐCSVN, 2019; MIC, 2020; Thủ tướng, 2020a, 2020c, 2021, 2022a).

Trong bối cảnh còn nhiều khoảng trống như trên, nghiên cứu này nhằm khám phá các nhân tố ảnh hưởng đến năng lực số của người lao động trong khu vực tài chính/ ngân hàng và lĩnh vực khác để có một số gợi ý chính sách liên quan.

## 2. Khái quát về tình hình nghiên cứu

Tổng quan nghiên cứu học thuật về “năng lực số” (digital literacy) có thể khái quát về tình hình và kết quả nghiên cứu theo một nội dung liên quan như sau:

### 2.1. Về khái niệm và nội hàm “năng lực số”

- Khái niệm năng lực số: Đến nay các nhà nghiên cứu đều có quan điểm khá chung là sự phát triển của khái niệm “biết đọc, biết viết” (“digital literacy”) đã và đang phát triển khá xa so với nghĩa ban đầu của nó. Cụm từ này đã và đang được áp dụng vào nhiều lĩnh vực cụ thể. Trong đó có lĩnh vực số (digital) và được hiểu chung hay có hàm ý chung là năng lực cơ bản về số gắn với đời sống kinh tế - xã hội của mỗi cá nhân: Đó là khả năng hiểu và sử dụng thông tin ở nhiều định dạng từ nhiều nguồn khác nhau khi được trình bày thông qua máy tính (Gee, 2006; Gilster, 1997; Jenkins, 2011; Powell, 2017; Spires & Bartlett, 2012).

Giới nghiên cứu cũng cho rằng năng lực số là năng lực mới cho mỗi cá nhân hay công dân trong kỷ nguyên số, thời đại bùng nổ của khoa học và công nghệ (Lankshear & Knobel, 2015; Medlock Paul et al., 2017), eLD; Jenkins (eLD, 2015; Jenkins, 2006). Người ta cho rằng công dân của mỗi quốc gia cần phải được phổ cập (i) biết cách sử dụng công nghệ mới (ii)

biết cách tương tác với nhau trên môi trường công nghệ số; năng lực số là khái niệm đa phương diện và liên tục phát triển theo kịp thời đại (Lankshear & Knobel, 2015)...

- Nội dung năng lực số: Đa số các nghiên cứu liên quan (eLD, 2015; Hobbs, 2010; Jenkins, 2006) (eLD, 2015; Ferrari, 2012; Hague & Payton, 2010; Jenkins, 2006; Medlock Paul et al., 2017; Spires & Bartlett, 2012), UNICEF (UNICEF, 2019) có quan điểm chung về nội dung năng lực số gồm một nhóm kỹ năng sống cơ bản cần thiết để một cá nhân tham gia đầy đủ vào một xã hội giàu thông tin, bảo hòa về truyền thông; và các năng lực thành phần có sự đan xen đa chiều, đa lĩnh vực. Hay nói chung, nội dung “năng lực số” đã vượt ra ngoài phạm vi các kỹ năng công nghệ thông tin như trước đây mà năng lực này về cơ bản là một tập hợp các thực hành về chuyên môn và học thuật được hỗ trợ bởi các công nghệ vừa đa dạng lại vừa thay đổi liên tục (Jisc, 2014).

Đặc biệt Janssen và cộng sự (Janssen et al., 2013a) cho rằng năng lực số gồm 11 cấu phần chính hay vùng năng lực số (domain of knowledge). Theo quan điểm này, năng lực số được bao hàm rộng và có tính đa chiều/đa diện (Bravo, Chalezquer, & Serrano-Puche, 2021) và phù hợp với quan điểm về năng lực số hiện đại; Trong khi có quan điểm khác (Vodă, Cautisanu, Grădinaru, Tănăsescu, & Moraes, 2022) thu hẹp hơn, cho rằng năng lực số gồm 6 vùng cơ bản. Ngoài ra, Bravo và cộng sự (Bravo et al., 2021) đã kế thừa các nghiên cứu trước đó và xây dựng một khung tổng hợp với 9 vùng năng lực với dụng ý rút gọn các nội dung cơ bản của Janssen và cộng sự (Janssen et al., 2013a).

## **2.2. Về tầm quan trọng của “năng lực số”**

Như đã nêu, các nghiên cứu (Barlow-Jones & Van der Westhuizen, 2011; Becker, Koger, Sinclair, & Thacker, 2009; Hamilton, 2015; Ozdamar-Keskin, Ozata, Banar, & Royle, 2015; PwC, 2021; Tang & Chaw, 2016; Tran et al., 2020; Vidosavljevic & Vidosavljević, 2019) đã chỉ ra rằng “năng lực số” được coi là một trong những năng lực cần thiết của một công dân hiện đại; năng lực số hỗ trợ việc học tập đạt kết quả tốt hơn, hỗ trợ cá nhân có quản lý thông tin và tư duy phản biện phù hợp, cũng như các hành vi trực tuyến phù hợp; năng lực số là yêu cầu về chất lượng nguồn nhân lực và chất lượng công dân của xã hội hiện đại (WB, 2020)...

Điểm nổi bật là đến nay “năng lực số” được định vị như một quyền con người để công dân tham gia đầy đủ vào một xã hội mà trong đó đời sống kinh tế, văn hóa, xã hội, chính trị và các vấn đề tài chính ngày càng được gắn với, thông qua, trung gian hóa bởi các công nghệ kỹ thuật số. Theo quan điểm này, Ngân hàng Thế giới (WB) đã tổng kết rằng công dân có năng lực số sẽ tiếp cận được nhiều thông tin hơn; tiếp cận các thông tin, các sản phẩm, dịch vụ điện tử tốt hơn, an toàn hơn... đồng thời họ có thể tham gia vào cộng đồng rộng lớn hơn. Trái lại, những công dân thiếu năng lực dễ hấp thụ và tiếp nhận các thông tin số ngày một phức tạp và cạnh tranh hơn sẽ không có khả năng phán đoán phù hợp trước nhiều cám dỗ của nền kinh tế số như gian lận tài chính, các hình thức gian lận khác hay lạm dụng trên không gian số; năng lực số theo nghĩa này là đặc biệt quan trọng đối với thanh niên và trẻ em trong kỷ nguyên số (WB, 2020).

## **2.3. Về các yếu tố ảnh hưởng đến “năng lực số”**

Nhìn chung các nghiên cứu (Ala-Mutka, 2011; Dewi, Fahrurrozi, Hasanah, & Dj, 2021; Hatlevik, Guðmundsdóttir, & Lo, 2015; Ryder & Machajewski, 2017; Tang & Chaw, 2016) đều khá thống nhất rằng năng lực số của mỗi cá nhân được hình thành và tích lũy từ các

quá trình xã hội hóa của mỗi cá nhân (học tập, lao động, quan hệ xã hội hay tham gia các diễn đàn...) và năng lực nhận thức gắn với môi trường công nghệ số. Và như vậy năng lực số được coi là được quyết định bởi các yếu tố cơ bản ảnh hưởng đến năng lực tổng hợp của mỗi cá nhân là: (K) Kiến thức và kỹ năng cụ thể về việc sử dụng công cụ và phương tiện kỹ thuật số; (S) Các kỹ năng và kiến thức nâng cao về giao tiếp và hợp tác, quản lý thông tin, học tập và giải quyết vấn đề, và sự tham gia có ý nghĩa; (A) Thái độ đối với việc sử dụng các kỹ năng chiến lược theo các cách liên văn hóa, phản biện, sáng tạo, có trách nhiệm và tự chủ và cũng có khác biệt về năng lực số giữa các nhóm nhân khẩu học...

Vodă và cộng sự (Vodă et al., 2022) đã đề xuất khung lý thuyết về năng lực số gồm 06 yếu tố hay 6 vùng kỹ năng. Tuy nhiên nếu căn cứ vào định nghĩa đa chiều của năng lực số, 6 vùng năng lực này có phần thiếu đi tính đa diện so với 11 nhân tố (11 miền) của năng lực số do Janssen và cộng sự (Janssen et al., 2013a) đã khái quát các quan điểm chuyên gia và đề xuất.

Rà soát nghiên cứu trước đây về các yếu tố quyết định đến năng lực số (Deursen & Van Dijk, 2009; Martin & Grudziecki, 2006; Pérez & Murray, 2010) (Bawden, 2008) (Janssen et al., 2013a; Jisc, 2014) cho thấy, về cơ bản năng lực số được gắn với nguyên lý về quá trình tích lũy năng lực của cá nhân (hay lý luận về học tập) liên quan đến công nghệ mới. Các mô hình nghiên cứu thể hiện bản chất của quá trình học tập qua nhiều kênh để tích lũy kiến thức, kỹ năng và hình thành thái độ hành vi. Các nghiên cứu đều sử dụng các mô hình gồm các nhân tố cơ bản là: kiến thức (K), kỹ năng (S) và thái độ (A) của cá nhân gắn mở rộng cho lĩnh vực công nghệ mới và trên quan điểm đa phương diện phù hợp với khái niệm đa phương diện của “năng lực số”. Như đã nêu, đó là những năng lực đa nhiệm bao gồm nhiều lĩnh vực; vượt ra ngoài ý nghĩa về các kỹ năng công nghệ thông tin (CNTT) mang tính chức năng; Và đặc biệt năng lực số hàm ý một loạt các hành vi, thực hành và nhận dạng kỹ thuật số phong phú hay đa dạng hơn rất nhiều. Thuật ngữ, hay nội hàm của “năng lực số” đã thay đổi liên tục theo thời gian, trong các bối cảnh rất đa dạng nhưng vẫn nhất quán là quá trình tích lũy năng lực theo thời gian qua quá trình học hỏi của cá nhân (Kaba & Ramaiah, 2020; Niyigena, Jiang, Ziou, Shaw, & Hasan, 2020).

Do đó Jisc (Jisc, 2014) đã khái “năng lực số” về cơ bản là một tập hợp các thực hành về chuyên môn và học thuật được hỗ trợ bởi các công nghệ vừa đa dạng và vừa thay đổi liên tục. Quan điểm này nhất quán với Janssen và cộng sự (Janssen et al., 2013a) đã coi năng lực số gồm 11 câu phần để xác lập mô hình nghiên cứu về năng lực số; Các nghiên cứu gần đây về năng lực số (Vodă et al., 2022) tuy có giảm bớt các nhân tố năng lực số nhưng về bản chất là không thay đổi.

Ngoài ra nghiên cứu (Prete, 2021) cho rằng độ dân trí tài chính (financial literacy) cần được xem xét cùng nhau khi đánh giá tác động của số hóa đối với những người tiếp cận trực tiếp các sản phẩm và thị trường tài chính số.

#### **2.4. Nghiên cứu về “năng lực số” ở Việt Nam**

Các nghiên cứu trên, nghiên cứu về “năng lực số” riêng cho Việt Nam đến nay là khá khiêm tốn về số lượng. Đã có một số nghiên cứu (Kusumastuti & Nuryani, 2020; Nguyen Tan & Marquet, 2019; PwC, 2021; Santos & Serpa, 2017; Tran et al., 2020; Vinh et al., 2020) về năng lực số ở Việt Nam. Tuy nhiên, có thể nhận thấy, các nghiên cứu này định nghĩa năng lực số còn giới hạn trong khả năng làm chủ các phương tiện CNTT-TT; mô



hình nghiên cứu đánh giá năng lực số cho Việt Nam mới là mô hình sơ khởi, cần được nâng cấp đồng bộ theo cách tiếp cận quốc tế... Sự hạn chế trong phạm vi năng lực thông tin, vốn được xem là thành phần cốt lõi của năng lực công nghệ số nói chung. Năng lực số theo đúng nghĩa và cần được liên tục cập nhật và mở rộng trên nguyên tắc học tập suốt đời sẽ đảm bảo yêu cầu về chuyển đổi số ở Việt Nam và đáp ứng yêu cầu phát triển đất nước thời kỳ mới cũng như chủ trương về xã hội số và công dân số (Chinh\_phủ, 2020; ĐCSVN, 2019; MIC, 2020; Thủ\_tướng, 2020a, 2020c, 2021 2022a).

## 2. Cơ sở lý thuyết và mô nghiên cứu và các đại lượng

Từ tổng quan nghiên cứu, tác giả sử dụng lý thuyết và đề xuất mô hình định lượng cho nghiên cứu theo Hình 1. Cụ thể:

### 2.1. Cơ sở lý thuyết

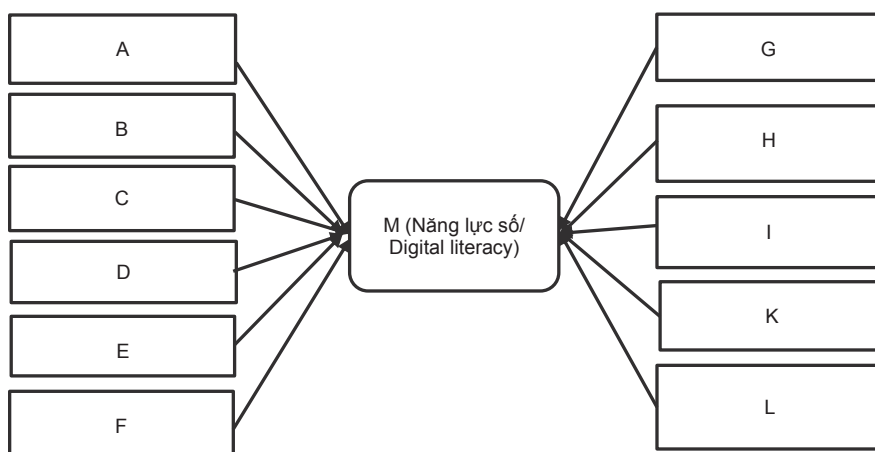
- Lý thuyết về quá trình học tập và tích lũy kiến thức/kỹ năng để cá nhân có năng lực nói chung và một số năng lực cụ thể là nguyên lý/cơ sở lý thuyết đã được nhiều nghiên cứu trước đây (Deursen & Van Dijk, 2009; Janssen et al., 2013a; Kaba & Ramaiah, 2020; Martin & Grudziecki, 2006; Murray & Perez, 2014; Vodă et al., 2022) áp dụng cho nghiên cứu “năng lực số” (digital literacy hay digital competence).

- Khung phân tích được dựa trên cơ sở các quan điểm và kết quả nghiên cứu của Janssen và cộng sự (Janssen et al., 2013a; Jisc, 2014; Murray & Perez, 2014; Pérez & Murray, 2010). Tác giả cũng có một vài điều chỉnh cho phù hợp với điều kiện Việt Nam (Hình 1). Sơ đồ cụ thể (Hình 1) cũng được dựa theo sơ đồ (Janssen et al., 2013b) đảm bảo phản ánh 11 cấu phần năng lực số phù hợp với định nghĩa đa phương diện của “năng lực số” thay vì mô hình 6 nhân tố của Vodă và cộng sự (Vodă et al., 2022) đã đưa ra gần đây (thiên về công nghệ thông tin).

### 2.2. Mô nghiên cứu và đại lượng

Trong Hình 1 là mô hình nghiên cứu, các thang đo là các đại lượng tương ứng với các vùng hay phương diện năng lực số. Các (11) phương diện cấu phần phản ánh năng lực số được sử dụng để thiết kế bảng hỏi thu thập thông tin. Cụ thể:

**Hình 1: Mô hình nghiên cứu đề xuất cho nghiên cứu “năng lực số”**



[Sửa đổi từ “Digital building blocks of digital competence) (Janssen et al., 2013b; Vodă et al., 2022)]

*Ghi chú:* Hình 1, ký hiệu các chữ cái: (A) Kiến thức và các kỹ năng chức năng tổng quát; (B) Sử dụng trong cuộc sống hàng ngày; (C) Năng lực chuyên sâu và nâng cao để làm việc và thể hiện sự sáng tạo; (D) Giao tiếp và hợp tác qua các phương tiện công nghệ; (E) Xử lý và quản lý thông tin; (F) Quyền riêng tư và bảo mật; (G) Góc độ pháp lý và đạo đức; (H) Có thái độ cân bằng đối với công nghệ; (I) Hiểu biết và nhận thức về vai trò của CNTT-TT trong xã hội; (K) Học hỏi về và với các công nghệ kỹ thuật số; (L) Khả năng phân tích quyết định về các công nghệ kỹ thuật số thích hợp; (M) Sử dụng liền mạch, có hệ thống chứng tỏ khả năng tự tin của bản thân.

- *Thang đo (M):* thang đo này là đại lượng đo lường mức độ về “Sử dụng liền mạch, có hệ thống chứng tỏ khả năng tự tin của bản thân. Đại lượng này phản ánh sự thành thạo hay năng lực số của một cá nhân. Nguyên lý dựa trên nguyên tắc năng lực là kết quả của quá trình hấp thụ kiến thức, kỹ năng theo các cấp độ trưởng thành trong công việc (Kaba & Ramaiah, 2020). Mô hình của Kaba và cộng sự (Kaba & Ramaiah, 2020) cũng khẳng định năng lực số là quá trình tích lũy theo các cấp độ của mỗi cá nhân, từ cấp độ người học việc đến cấp độ chuyên gia.

- *Các thang đo về các năng lực thành phần.* Các thang đo hay các đại lượng này được mã hóa (coding) dưới các chữ cái (A, B, C, D, E, F, G, H, I, K, L). Đại lượng này đo lường các năng lực thành phần (hay các vùng (domain) trên các phương diện theo quan điểm của Janssen và cộng sự (Janssen et al., 2013a).

Theo lý thuyết (Deursen & Van Dijk, 2009; Janssen et al., 2013a; Kaba & Ramaiah, 2020; Martin & Grudziecki, 2006; Murray & Perez, 2014; Vodă et al., 2022) các năng lực thành phần là các yếu tố quyết định đến “năng lực số” (digital literacy hay digital competence).

### **3. Phương pháp nghiên cứu**

#### **3.1. Thu thập thông tin và xử lý dữ liệu**

Thông tin thu được qua bảng hỏi điều tra xã hội học; các câu hỏi được thiết kế theo thang đo Likert 5 mức độ. Các câu hỏi được chuyển thể từ nội dung tương ứng với 11 vùng năng lực số do Janssen và cộng sự (Janssen et al., 2013a) tổng hợp từ các quan điểm chuyên gia trước đó; người ra các câu hỏi được thể hiện dưới dạng thang đo hành vi (Behaviorally Anchored Rating Scale - BARS) (Debnath, Lee, & Tandon, 2015; Joboko, 2020; Kaba & Ramaiah, 2020; Klieger et al., 2018; McCoy, 2020) về mỗi câu phần năng lực để đảm bảo tính khách quan hơn (hạn chế các câu hỏi có thể đoán trước được câu trả lời).

Bảng hỏi thu thập thông tin được phỏng vấn trực tiếp và gửi email (dạng google form) đến khoảng 1000 người. Kết quả thông tin thu được từ 979 người lao động làm (trong ngành tài chính/ngân hàng và ngành khác); phần mềm SPSS được sử dụng để xử lý và kiểm định các giả thuyết nghiên cứu với các dữ liệu thu được.

#### **3.2. Mô hình kinh tế lượng và các biến của mô hình**

##### **3.2.1. Mô hình kinh tế lượng**

Tác giả sử dụng: (.) Phân tích nhân tố khám phá (EFA). Các thủ tục gồm: thống kê mô tả; Đánh giá độ tin cậy của thang theo chỉ số Cronbach's Alpha; Phân tích nhân tố khám phá (EFA); Phân tích hồi quy đa biến...(.) Kiểm định khác biệt trung bình theo đặc điểm

cá nhân: phân tích phương sai một yếu tố (One-way ANOVA), kiểm định ANOVA chuyên sâu (Post Hoc)...

Trong đó các biến đo lường các năng lực thành phần (vùng năng lực) và biến “*năng lực số*” được đo lường bằng thang đo hành vi (BARS, như đã nêu) trên cơ sở dựa dạng thang đo theo 5 cấp độ (Likert Scale); Các biến nhân khẩu học cũng được đưa vào mô hình kiểm định một cách phù hợp theo yêu cầu của nghiên cứu và kế thừa các nghiên cứu trước đây.

Các biến trong mô hình kinh tế lượng, như đã nêu, nghiên cứu dự kiến ước lượng tác động của các nhân tố “là các vùng năng lực cụ thể” (các năng lực thành phần) theo các biến độc lập (A, B, C, D, E, F, G, H, I, K, L) đến “*năng lực số*” theo biến phụ thuộc là “*Biến M*”. Giả thuyết được đưa ra là các biến nhân khẩu học có mối quan hệ có ý nghĩa thống kê với với năng lực số:

$$f(M_i) = \beta_0 + \epsilon \quad (1)$$

Trong đó:  $\beta_i$  là các hệ số; tương ứng với các biến A, B, C, D, E, F, G, H, I, K, L (biến độc lập)

### 3.2.2. Các biến của mô hình

- *Biến phụ thuộc (M)*: Như đã nêu trên thể hiện “*Sử dụng liền mạch, có hệ thống chứng tỏ khả năng tự tin của bản thân*”. Đại lượng này phản ánh sự thành thạo hay năng lực số của một cá nhân.

- *Biến độc lập*. Như đã nêu trên (A, B, C, D, E, F, G, H, I, K, L), phản ánh các năng lực thành phần (hay các vùng (domains) trên các phương diện theo quan điểm của Janssen và cộng sự (Janssen et al., 2013a) và cũng phản ánh về tính đa phương diện của khái niệm “*năng lực số*”.

Trong đó các biến về năng lực thành phần (vùng năng lực) và biến “*năng lực số*” được đo lường bằng thang đo hành vi (Behaviorly Anchored Rating Scale, viết tắt là BARS) trên cơ sở dựa dạng thang đo theo 5 cấp độ (kike-Likert Scale); các biến nhân khẩu học được cũng sẽ được đưa vào mô hình kiểm định một cách phù hợp theo yêu cầu của nghiên cứu và kế thừa các nghiên cứu trước đây.

- Các nhân tố thuộc về nhân khẩu học (giới tính, tuổi đời, thu nhập, học vấn, nghề nghiệp...) được coi là biến kiểm soát có ảnh hưởng đến trình độ dân trí số do các đặc tính khác nhau của mỗi cá nhân. Phân tích ANOVA để đánh giá sự khác biệt về năng lực số giữa các nhóm hay trong các nhóm nhân tố này.

### 3.3. Giả thuyết nghiên cứu

Dựa trên tổng quan nghiên cứu, tác giả đưa ra các giả thuyết cho kiểm định mô hình như sau:

(i) Các năng lực thành phần đại diện bởi các nhân tố A, B, C, D, E, F, G, H, I, K, L (theo mô tả tại Hình 1) tác động có ý nghĩa thống kê đến năng lực số (M) (+)

(ii) Có sự khác biệt có ý nghĩa thống kê về năng lực số trong các nhóm theo nhân khẩu học (+/-). Hay cụ thể hơn:

- Có sự khác biệt có ý nghĩa thống kê về năng lực số giữa nhóm người làm trong ngành ngân hàng và không phải ngân hàng;

- Có sự khác biệt có ý nghĩa thống kê về năng lực số giữa nhóm người có chuyên ngành đào tạo tin học/CNTT và nhóm khác;
- Có sự khác biệt có ý nghĩa thống kê về năng lực số bên trong nhóm trình độ học vấn.

#### 4. Kết quả nghiên cứu

##### 4.1. Sơ lược về mẫu nghiên cứu

Như đã nêu, tác giả gửi phiếu hỏi đến 1000 người và thu được 979 phiếu trả lời người làm việc trong các đơn vị cơ quan (tỷ lệ phản hồi 98 %). Quy mô mẫu 979 quan sát trong đó 51.5% không phải là người trong ngành ngân hàng và 48.5 % người làm trong ngành tài chính ngân hàng. Khảo sát được thu thập từ một số tỉnh thành phố phía bắc (Hà Nội, Vĩnh Phúc, Hải Phòng) và phía Nam (Tp. Hồ Chí Minh, Bình Dương, Đồng Nai, Ninh Thuận...)

##### 4.2. Kết quả đánh giá, kiểm định độ tin cậy của thang đo

Kết quả đánh giá, kiểm định độ tin cậy của thang đo bằng Cronbach's Alpha. Theo mô hình nghiên cứu năng lực số được thực hiện bằng 12 thang đo (trong đó 11 cho biến độc lập, 1 cho biến phụ thuộc).

Kết quả kiểm định, đánh giá độ tin cậy thang đo bằng hệ số Cronbach's Alpha thuộc các nhóm 32 biến quan sát thuộc các nhóm nhân tố (biến độc lập), và 4 biến đánh giá động lực làm việc (biến phụ thuộc/ M) đều đạt yêu cầu: Hệ số Cronbach's Alpha đạt từ 0.634 đến 0.922 và hệ số tương quan biến tổng của tất cả các biến độc lập và biến phụ thuộc đều phù hợp thấp nhất đạt từ 0.323 (yêu cầu lớn hơn 0,3); các hệ số Cronbach's Alpha tại cột nêu loại biến đều nhỏ hơn hệ số Cronbach's Alpha. Do đó, tất cả các biến quan sát nêu trên đều được giữ lại cho phân tích nhân tố khám phá (cụ thể tại Bảng 1).

**Bảng 1. Ý nghĩa của thang đo và chất lượng thang đo**

Ký hiệu	Ý nghĩa thang đo	Số biến quan sát	Hệ số Cronbach's Alpha (yêu cầu >0.6)
A	Kiến thức và các kỹ năng chức năng tổng quát	4	0.715
B	Sử dụng trong cuộc sống hàng ngày	4	0.770
C	Năng lực chuyên sâu và nâng cao để làm việc và thể hiện sự sáng tạo	4	0.837
D	Giao tiếp và hợp tác qua các phương tiện công nghệ	4	0.860
E	Xử lý và quản lý thông tin	4	0.798
F	Quyền riêng tư và bảo mật	4	0.661
G	Góc độ pháp lý và đạo đức	4	0.634
H	Có thái độ cân bằng đối với công nghệ	4	0.734
I	Hiểu biết và nhận thức về vai trò của CNTT-TT trong xã hội	4	0.922
K	Học hỏi với các công nghệ kỹ thuật số	4	0.774
L	Khả năng phân tích quyết định về các công nghệ kỹ thuật số thích hợp	4	0.769
M	Sử dụng liền mạch, có hệ thống chứng tỏ khả năng tự tin của bản thân	4	0.823

*Nguồn: Tác giả, kết quả kiểm định chất lượng thang đo (Cronbach's Alpha)*

### 4.3. Phân tích nhân tố khám phá - EFA

#### 4.3.1. Phân tích nhân tố - Thang đo các nhân tố ảnh hưởng đến năng lực số

Kiểm định KMO và Bartlett's cho thấy: Sig.= 0.000 (sig.<0.05, mức ý nghĩa 5%); Hệ số KMO là 0.956 (giữa 0.5 và 1). Kết quả này cho thấy các biến quan sát trong tổng thể có mối tương quan với nhau và phân tích nhân tố (EFA) là thích hợp.

Với phương pháp trích nhân tố (principal component), phương pháp xoay nhân tố (Varimax) cho phép trích được 7 nhân tố từ 36 biến quan sát đạt yêu cầu hệ số tải >0,50 và phương sai trích tích lũy là 62.916 (đạt yêu cầu >50%), tức là 7 nhân tố này giải thích được 62,916% biến thiên của dữ liệu và tương ứng với Initial Eigenvalues từ 1.014 đến 16.960 (đạt yêu cầu >1). Kết quả EFA được mô tả tại Bảng 2.

**Bảng 2. Kết quả phân tích EFA: Các nhân tố ảnh hưởng đến năng lực số**

Mã biến quan sát	Các nhân tố						
	1	2	3	4	5	6	7
I1	.833						
I3	.814						
H1	.800						
I4	.754						
K1	.731						
I2	.719						
G1	.685						
G2	.672						
K2	.620						
E1	.547						
G3		.740					
L4		.732					
G4		.705					
L3		.650					
H2		.566					
K4		.560					
H4		.510					
A4			.736				
A3			.710				
C4			.577				
B4			.561				
B3			.544				
C3			.528				
A1			.519				
D1				.739			
D3				.690			
D4				.625			
D2				.599			
H3					.629		

Mã biến quan sát	Các nhân tố						
	1	2	3	4	5	6	7
L1					.530		
A2					.528		
L2					.503		
B2						.665	
B1						.557	
F2							.672
E4							.542
Eigenvalues	16.960	3.203	2.427	1.729	1.229	1.121	1.014
-Phương sai trích tích lũy / Initial Eigenvalues (%): 62.916							
-KMO and Bartlett's Test: 0.956; Sig =0.000							

Nguồn: Kết quả chạy kiểm định của tác giả

#### 4.3.2. Phân tích tương quan

Do đó việc gom biến và đặt tên nhóm biến tương đương với tên nhân tố 07 mới tương ứng theo thứ tự là:

**Bảng 3. Tương quan giữa các nhân tố ảnh hưởng đến năng lực số (rút gọn)**

		Digital_Com	X1	X2	X3	X4	X5	X6	X7
Digital_Com	Pearson Correlation	1	.093**	.424**	.299**	.242**	.340**	.133**	.199**
	Sig. (2-tailed)		.003	.000	.000	.000	.000	.000	.000
	N	979	979	979	979	979	979	979	979

\*\* . Correlation is significant at the 0.01 level (2-tailed).

Theo giả thuyết ***các biến độc lập***  $x_1, x_2, x_3, x_4, x_5, x_6, x_7$  được kỳ vọng có mối tương quan với biến phụ thuộc (M); Kiểm định Speaman (Bảng 3) cho thấy trị sig < 0.05 ứng cho ta kết luận rằng các biến độc lập ( $x_1, x_2, x_3, x_4, x_5, x_6, x_7$ ) có tương quan tuyến tính với biến phụ thuộc “*năng lực số*” (Digital\_Com). Do đó có thể đưa các biến  $x_1, x_2, x_3, x_4, x_5, x_6, x_7$  vào mô hình hồi quy đa biến để giải thích cho biến “*năng lực số*” (Digital\_Com).

#### 4.3.3. Phân tích hồi quy đa biến

Để nhận diện các nhân tố ảnh hưởng đến năng lực số hay mức độ độ thành thạo số (Digital\_Com) và để kiểm định sự phù hợp giữa các nhân tố (biến độc lập) và biến phụ thuộc là năng lực số, tác giả sử dụng hàm hồi quy tuyến tính bội (hồi quy đa biến), để kiểm định tác động của nhiều biến độc lập định lượng vào một biến phụ thuộc định lượng trong mô hình nghiên cứu:

$$\text{Digital\_Com} = \beta_0 + \sum_{i=1}^n \beta_i x_i + \varepsilon$$

Trong đó Digital\_Com là biến phụ thuộc; và các biến độc lập gồm có các biến:  $x_1, x_2, x_3, x_4, x_5, x_6, x_7$ . Việc xem xét trong các yếu tố từ  $x_1, x_2, x_3, x_4, x_5, x_6, x_7$  yếu tố nào thực

sự tác động đến mức độ thành thạo về số trong đời sống của họ hay mức độ “*Sử dụng liên mạch, có hệ thống chứng tỏ khả năng tự tin của bản thân liên quan đến số*” (Digital\_Com) một cách trực tiếp sẽ được thực hiện bằng phương trình hồi quy tuyến tính:

$$\text{Digital\_Com} = \beta_0 + \sum_1^7 \beta_i x_i + \varepsilon$$

**Bảng 4. Kết quả phân tích hồi quy đa biến**

<b>Biến độc lập</b>	<b>Hệ số Beta</b>	<b>VIF</b>
Hệ số chặn	1.128E-15	
X <sub>1</sub>	.093***	1.000
X <sub>2</sub>	.424***	1.000
X <sub>3</sub>	.299***	1.000
X <sub>4</sub>	.242***	1.000
X <sub>5</sub>	.340***	1.000
X <sub>6</sub>	.133***	1.000
X <sub>7</sub>	.199***	1.000
R <sup>2</sup>	51,0%	
R <sup>2</sup> hiệu chỉnh	50,6%	
Hệ số Sig F	0.000	
Hệ số Durbin - Watson	2.017	

Ghi chú: \*: ý nghĩa thống kê 10%, \*\*: ý nghĩa thống kê 5%, \*\*\*: ý nghĩa thống kê 1%

Nguồn: Kết quả hồi quy đa biến, tác giả thực hiện

#### 4.3.4. Kiểm định sự phù hợp của mô hình

- *Mức độ giải thích của mô hình*: Từ bảng tóm tắt mô hình “Model Summary”, R<sup>2</sup> hiệu chỉnh là 0.506 như vậy, 51% sự thay đổi về năng lực số (Digital\_Com) được giải thích bởi các biến độc lập của mô hình.

- *Mức độ phù hợp của mô hình*: nhận thấy, trong bảng ANOVA với Sig = 0.000 < 0.05 có thể kết luận rằng mô hình đưa ra phù hợp với dữ liệu thực tế. Hay nói cách khác các biến độc lập có tương quan tuyến tính với biến phụ thuộc và mức độ tin cậy thống kê là 99.9%.

#### 4.3.5. Kiểm định đa cộng tuyến

Hệ số phóng đại phương sai VIF (Variance Inflation factor - VIF) có giá trị lớn nhất là 1.000 (nhỏ hơn 10) cho thấy các biến độc lập không có quan hệ chặt chẽ với nhau nên không có hiện tượng đa cộng tuyến xảy ra. Do đó, mối quan hệ giữa các biến độc lập không ảnh hưởng đến kết quả giải thích của mô hình hồi quy.

Theo kiểm định Durbin - Watson, hệ số Durbin - Watson có giá trị 2.017. Giá trị này thỏa mãn nằm giữa 1.5 - 2.5, và do đó được coi là không có hiện tượng tự tương quan chuỗi bậc nhất xảy ra (Trọng & Ngọc, 2008) đối với mô hình, gồm các biến độc lập: (Bảng 4).

#### 4.3.6. Kiểm định các giả thuyết nghiên cứu

Các giả thuyết nghiên cứu là có 11 nhân tố được kỳ vọng là tác động có ý nghĩa thống kê đến năng lực số. Tuy nhiên, phân tích EFA có thể gộp các nhân tố lại và khó có thể như kỳ vọng theo giả thuyết.

Từ kết quả EFA và bảng thống kê phân tích các hệ số hồi quy đa biến (Bảng 4) cho thấy có 07 biến độc lập là các biến có tác động cùng chiều vào biến phụ thuộc “năng lực số” () vì hệ số hồi quy chuẩn hóa của các biến này đều dương và có ý nghĩa thống kê (Sig.<0.05). Như vậy các giả thuyết đều được chấp nhận ở độ tin cậy 95%.

Gắn với sự mô tả theo các biến đặc trưng (quan sát) ta có thể mô tả tính chất của các biến trong mô hình dưới dạng có tính giao thoa với nhau như định nghĩa của năng lực số (Bảng 5).

**Bảng 5. Tên biến theo khu vực năng lực hay thành phần năng lực số**

Tên biến theo khu vực năng lực hay thành phần năng lực số	Biến trong mô hình	Dạng biến
Năng lực/khả năng cơ bản và nâng cao về kỹ thuật số nói chung và các giao dịch kinh tế số trong cuộc sống		<b>Độc lập</b>
Năng lực học hỏi về và với công nghệ; lựa chọn công nghệ phù hợp		<b>Độc lập</b>
Năng lực/khả năng cơ bản về xử lý, quản lý thông tin hiệu quả, riêng tư, bảo mật với thái độ cân bằng với công nghệ ...		<b>Độc lập</b>
Năng lực xử lý và quản lý thông tin về kinh tế số, tài chính ngân hàng số (cho các hoạt động kinh tế số)		<b>Độc lập</b>
Năng lực giao tiếp và hợp tác về kinh tế số, tài chính ngân hàng số		<b>Độc lập</b>
Năng lực về pháp lý và đạo đức về công nghệ số, các hoạt động kinh tế số		<b>Độc lập</b>
Năng lực sử dụng các công cụ số để quản lý phân tích đánh giá thông tin, dữ liệu trong công việc và trong đời sống...		<b>Độc lập</b>
Sử dụng liền mạch, có hệ thống và tự tin (mức độ thành thạo hay năng lực số: Digital_Com)	Digital_Com	<b>Phụ thuộc</b>

Như vậy, qua các kiểm định mô hình hồi quy, các biến có ý nghĩa thống kê bao gồm  $x_1$ ,  $x_2$ ,  $x_3$ ,  $x_4$ ,  $x_5$ ,  $x_6$ ,  $x_7$ . và các biến này có tác động tới năng lực số (Digital\_Com), được mô tả theo mô hình hồi quy sau:

$$\text{Digital\_Com} = -1,062e^{-15} + 0,093x_1 + 0,424x_2 + 0,299x_3 + 0,242x_4 + 0,340x_5 + 0,133x_6 + 0,199x_7 (*)$$

#### 4.4. Thảo luận kết quả hồi quy đa biến

(i) Hệ số hồi quy chưa chuẩn hóa: Theo các biến, ta có thể thảo luận như sau:

Biến  $x_1$ : có hệ số hồi quy + 0.093, quan hệ cùng chiều với năng lực số (). Hay có thể nói khi  $x_1$  tăng thêm 1 điểm thì năng lực số của cá nhân tăng thêm 0.093 điểm (tương ứng hệ số tương quan chưa được chuẩn hóa là 0,093);



Biến  $x_2$ : có hệ số hồi quy + 0.424, quan hệ cùng chiều với (Digital\_Com). Hay có thể nói khi yếu tố  $x_2$  tăng 1 điểm thì năng lực số tăng 0.424 (tương ứng hệ số tương quan chưa được chuẩn hóa là 0,424);

Biến  $x_3$ : có hệ số hồi quy + 0.299, quan hệ cùng chiều với (Digital\_Com). Hay có thể nói khi yếu tố  $x_3$  tăng 1 điểm thì năng lực số tăng lên 0.299 điểm (tương ứng hệ số tương quan chưa được chuẩn hóa là 0,299);

Biến  $x_4$ : có hệ số hồi quy + 0.242 quan hệ cùng chiều với (Digital\_Com). Hay có thể nói khi yếu tố  $x_4$  tăng 1 điểm thì năng lực số tăng lên 0.242 điểm (tương ứng hệ số tương quan chưa được chuẩn hóa là 0.242);

Biến  $x_5$ : có hệ số hồi quy + 0.340, quan hệ cùng chiều với (Digital\_Com). Hay có thể nói khi yếu tố  $x_5$  tăng 1 điểm thì năng lực số tăng lên 0.340 điểm (tương ứng hệ số tương quan chưa được chuẩn hóa là 0.340);

Biến  $x_6$ : có hệ số hồi quy + 0.133 quan hệ cùng chiều với (Digital\_Com). Hay có thể nói khi yếu tố  $x_6$  tăng 1 điểm thì năng lực số tăng lên 0.133 điểm (tương ứng hệ số tương quan chưa được chuẩn hóa là 0.245)

Biến  $x_7$ : có hệ số hồi quy + 0.199, quan hệ cùng chiều với (Digital\_Com). Hay có thể nói khi yếu tố  $x_7$  tăng 1 điểm thì năng lực số tăng lên 0.199 điểm (tương ứng hệ số tương quan chưa được chuẩn hóa là 0.199).

**(ii) Hệ số hồi quy chuẩn hóa:** Hệ số này phản ánh vị trí ảnh hưởng của biến độc lập đến năng lực số (Digital\_Com). Các hệ số hồi quy chuẩn hóa có thể hiện dưới dạng phần trăm phản ánh sự đóng góp của các biến độc lập hay nhân tố đối với năng lực số (Bảng 6):

Biến  $x_2$  đóng góp 24.50%, sau đó là biến  $x_5$  (19.65%) tiếp đó là biến  $x_3$  (17.28%); tiếp theo là  $x_4$  (13.99%); tiếp theo là  $x_7$  (11.69%); tiếp  $x_6$  (7.69%) và cuối cùng là biến  $x_1$  (6.38%), theo thứ tự tác động từ mạnh đến yếu hơn đến năng lực số là Digital\_Com.

Kết luận thông qua các kiểm định có thể kết luận rằng: các yếu tố ảnh hưởng đến năng lực số của người dân theo thứ tự có tầm quan trọng là;  $x_2, x_5, x_4, x_3, x_7, x_6, x_1$ . Với các biến là các lĩnh vực liên quan được mô tả cụ thể theo Bảng 6.

**Bảng 6. Đóng góp của các biến tác động đến năng lực số**

Tên biến	Ký hiệu biến độc lập trong mô hình	Giá trị tuyệt đối	Đóng góp (%)
Năng lực/khả năng cơ bản và nâng cao về kỹ thuật số nói chung và các giao dịch kinh tế số trong cuộc sống	$x_1$	0.093	5.38
Năng lực học hỏi về và với công nghệ; lựa chọn công nghệ phù hợp	$x_2$	0.424	24.51
Năng lực/khả năng cơ bản về xử lý, quản lý thông tin hiệu quả, riêng tư, bảo mật với thái độ cân bằng với công nghệ ...	$x_3$	0.299	17.28
Năng lực xử lý và quản lý thông tin về kinh tế số, tài chính ngân hàng số (cho các hoạt động kinh kinh tế số)	$x_4$	0.242	13.99

Tên biến	Ký hiệu biến độc lập trong mô hình	Giá trị tuyệt đối	Đóng góp (%)
Năng lực giao tiếp và hợp tác về kinh tế số, tài chính ngân hàng số	$x_5$	0.340	19.65
Năng lực về pháp lý và đạo đức về công nghệ số, các hoạt động kinh tế số	$x_6$	0.133	7.69
Năng lực sử dụng các công cụ số để quản lý phân tích đánh giá thông tin, dữ liệu trong công việc và trong đời sống...	$x_7$	0.199	11.50
	Tổng	1.73	100

#### 4.5. Kiểm định sự khác biệt trung bình về năng lực số theo các biến kiểm soát

Kiểm định các giả thuyết trong mục này được thực hiện theo kinh nghiệm của các nghiên cứu trước đây (Vodă et al., 2022). Kết quả phân tích như sau:

Phân tích ANOVA hai yếu tố (one way anova với SPSS) với các biến kiểm soát (Gend, Age, Org, Edu, Digit\_ECO\_train, Digit\_BK\_train, Age, Job\_ex, Major, Job\_Pos, IT\_Train):

- Đồ thị Histogram của biến Digital\_Com cho thấy đây gần tương tự phân phối chuẩn và cho phép ta tiến hành phân tích ANOVA.

- Sử dụng kiểm định Levene's Test (điều kiện sig >5% ; phân tích ANOVA (điều kiện sig <5%) cho thấy:

+ Digital\_Com và Org (banker và non\_banker): Kiểm định Levene's Test có sig = .806 > 5%; phân tích ANOVA có sig = .000 < 5% cho thấy: có sự khác biệt về năng lực số (Digital\_Com) giữa người làm trong ngành ngân hàng và người lao động ngoài khu vực tài chính/ngân hàng. Hay nói cách khác nhân viên ngân hàng có năng lực số cao hơn đối tượng không phải nhân viên ngân hàng (trong mẫu);

+ Digital\_Com và Edu: Kiểm định Levene's Test có sig = .377 > 5%; phân tích ANOVA có sig = .000 < 5% cho thấy có sự khác biệt về năng lực số giữa các đối tượng bên trong nhóm trình độ học vấn (Edu). Cụ thể hơn trong nhóm trình độ học vấn, kết quả Post Hoc Tests cho thấy: người có trình độ tiến sĩ (TS) có năng lực số cao hơn nhóm thạc sĩ (Ths); sau đó là đến nhóm cao đẳng, nhóm đại học và nhóm khác.

Trong khi kiểm định không tìm thấy sự khác biệt về năng lực số theo các biến kiểm soát (nhân khẩu học) khác; kể cả các đối tượng học tin học hay học về số theo các hình thức khác nhau. Không có bằng chứng về sự khác biệt năng lực số (Digital\_Com) giữa các nhóm, như: giới tính, làm việc trong ngành ngân hàng hay ngoài ngành ngân hàng, đào tạo/bồi dưỡng kinh tế số, đào tạo/bồi dưỡng ngân hàng số theo khóa học và khác; tuổi đời, năm công tác; các hình thức đào tạo công nghệ/tin học (các giá trị sig > 5%).

## 5. Kết luận và hàm ý chính sách

### 5.1. Kết luận

Với thông tin khảo sát thu được từ 979 người (272 là nhân viên ngân hàng và 707 người không phải nhân viên ngân hàng, sử dụng phân tích nhân tố khám phá (EFA) nghiên cứu

phát hiện 7 nhân tố tác động có ý nghĩa thống kê đến năng lực số cá nhân. Ngoài ra phân tích ANOVA cho thấy năng lực số của người lao động trong ngân hàng có khác biệt so với người lao động ngoài ngành ngân hàng. Trong nhóm học vấn, năng lực số giảm dần từ người có học vị tiến sĩ đến thạc sĩ, đại học, cao đẳng, cũng cùng là nhóm có trình độ học vấn thấp hơn. Trong khi không phát hiện sự khác biệt về năng lực số theo các nhóm tuổi, hay giữa nhóm sinh viên và đối tượng khác. Ngoài ra, sự không hội tụ về nhân tố trong kiểm định EFA cũng cho thấy các nhân tố tác động đến năng lực số có tính giao thoa, kết hợp (cross cutting structures) theo đúng tính chất đa phương diện của năng lực số.

## 5.2. Hàm ý chính sách

Từ kết quả nghiên cứu định lượng nêu trên gắn với định hướng phát triển hay chuyển đổi số và chủ trương về nâng cao nhận thức, phổ cập kỹ năng và phát triển nguồn nhân lực chuyển đổi số quốc gia của Việt Nam đến 2025 và tầm nhìn đến năm 2030 (Thủ tướng, 2022a), tác giả có một số hàm ý chính sách liên quan như sau:

- Các cơ quan chức năng liên quan cần đẩy nhanh thực hiện chủ trương của Chính phủ (Thủ tướng, 2022a) về nâng cao năng lực số quốc gia để sớm có chương trình đào tạo nâng cao năng lực số cơ bản cho toàn dân trên quy mô toàn quốc theo cách thức đưa vào tất cả các chương trình ở các bậc học cho học sinh/sinh viên và cho người lao động/người quản lý ở các tổ chức/cơ quan và doanh nghiệp. Như kết quả phân tích định lượng trên cho thấy năng lực số của dân chúng (ngay ở đối tượng đang làm cho các tổ chức và doanh nghiệp) cũng là khá thấp và phụ thuộc vào các kiến thức, kỹ năng cơ bản thuộc về năng lực kỹ thuật (về máy tính, công nghệ thông tin) hơn là các phần mở rộng của năng lực số. Nghiên cứu không thấy ảnh hưởng có ý nghĩa thống kê của các vùng “năng lực nâng cao” tác động đến năng lực số như kỳ vọng cũng có thể khẳng định nhận định này.

- Cần có chương trình đào tạo về năng lực số gắn với năng lực tài chính số cho mọi công dân trong kỷ nguyên số; đảm bảo không có sự khác biệt về năng lực số cơ bản giữa các nhóm người lao động. Như một số nghiên cứu đã chỉ ra rằng cần gắn năng lực số với năng lực quản lý tài chính cá nhân (hay dân trí tài chính) (Prete, 2021) để đảm bảo năng lực cho mọi công dân trong kỷ nguyên số, đó chính là năng lực tài chính số (FinEQUITY, 2021; Morgan, Huang, & Trinh, 2019; WEF, 2015). Phân tích định lượng cũng không tìm thấy một số vùng kiến thức, kỹ năng quan trọng khác (như kỳ vọng ở 11 nhân tố) tác động có ý nghĩa thống kê đến năng lực số. Xét vấn đề này trên phương diện phát triển năng lực số đa phương diện có thể hiểu rằng sự học hỏi và tiếp cận các khu vực năng lực mới mẻ này chưa được phát triển một cách có hệ thống trong dân chúng. Thực tế cũng cho thấy, hầu hết người lao động trong các tổ chức chưa được cập nhật về số và chuyển đổi số. Do đó, Việt Nam cần thực hiện chương trình quốc gia nâng cao nhận thức, phổ cập kỹ năng và phát triển nguồn nhân lực số một cách toàn diện, có hệ thống theo chủ trương của Chính phủ (Thủ tướng, 2022a, 2022b).

Sự khác biệt về năng lực số giữa người làm trong khu vực tài chính và ngoài khu vực tài chính, như nghiên cứu đã cho thấy năng lực số cơ bản còn khác biệt giữa các khu vực kinh tế. Và đây sẽ là cản trở liên quan đến định hướng giao dịch thanh toán số (Prete, 2021) cũng như định hướng tăng cường tài chính toàn diện theo chủ trương của Chính phủ (Thủ tướng, 2020b). Do đó nâng cao mặt bằng về năng lực số cơ bản thực hiện được cả mục tiêu chuyển đổi số và mục tiêu tài chính toàn diện Chính phủ (Thủ tướng, 2020b,

2022a) và đồng thời thúc đẩy thị trường tài chính phát triển kèm theo gia tăng phúc lợi của các thành viên trong nền kinh tế.

- Tăng cường đào tạo cho đối tượng cấp lãnh đạo tổ chức và doanh nghiệp nhằm cải thiện sự tiếp nhận công nghệ mới, hỗ trợ cho quá trình chuyển đổi số ở Việt Nam. Phân tích ANOVA cho thấy, không có sự khác biệt về năng lực số giữa cấp giám đốc với phần còn lại mà chỉ thấy có sự khác biệt của nhóm cấp phòng. Điều này gợi ý rằng, cần có các chương trình cấp tốc đào tạo nâng cao năng lực số cho đối tượng thuộc cấp giám đốc, phó giám đốc của các doanh nghiệp và tổ chức để đảm bảo cấp này tiếp thu công nghệ mới và cải thiện hành vi chấp nhận công nghệ mới và qua đó hỗ trợ quá trình chuyển đổi số trong các tổ chức và doanh nghiệp.

- Tăng cường đào tạo toàn dân về ứng dụng số cho cuộc sống, nhất là kinh tế số, tài chính/ngân hàng số. Thực tế cho thấy, các khái niệm về số (digital) còn khá xa lạ đối với người dân Việt Nam, ngay tại trong các tổ chức và doanh nghiệp Việt Nam. Phân tích ANOVA như đã nêu, cho thấy có sự khác biệt giữa nhóm được đào tạo về IT với phần còn lại; tuy nhiên không tìm thấy có sự khác biệt có ý nghĩa thống kê giữa nhóm chuyên ngành học kinh tế với phần còn lại. Gắn với thực tế, điều này cũng cho thấy còn nhiều khoảng trống năng lực số trong người lao động so với xu hướng và định hướng chuyển đổi số nói chung và trong lĩnh vực kinh tế ở Việt Nam hiện nay.

- Cần quan tâm đặc biệt đến đội ngũ tri thức trong chuyển đổi số và coi đây là yếu tố thúc đẩy, lan tỏa công nghệ vào xã hội trong xã hội số. Phân tích ANOVA như đã nêu cho thấy trong nhóm học vấn, năng lực số giảm dần từ người có học vị tiến sĩ đến thạc sĩ, đại học, cao đẳng, cũng cùng là nhóm có trình độ học vấn thấp hơn. Điều đó chỉ ra rằng, nhóm có học vấn cao là nhóm hấp thụ được công nghệ số tốt hơn. Do đó cần coi nâng cao học vấn và coi đối tượng có học vấn cao là động cơ thúc đẩy chuyển đổi số đối với người lao động; và trong đó một cách cụ thể nhất là sử dụng họ là các giảng viên, các giáo viên về chuyển đổi số theo các chương trình của Chính phủ (Thủ\_tướng, 2022a).

- Cần có nhiều nghiên cứu hơn nữa về năng lực số trên diện rộng và quy mô hơn nữa. Mặc dù có nhiều nỗ lực, nghiên cứu của tác giả chắc còn nhiều hạn chế. Cụ thể nghiên cứu không phát hiện sự khác biệt về năng lực số theo các nhóm tuổi, hay giữa nhóm sinh viên và đối tượng khác.

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# CÁC NHÂN TỐ ẢNH HƯỞNG ĐẾN TÍNH KỊP THỜI TRONG CÔNG BỐ BÁO CÁO TÀI CHÍNH CỦA CÁC DOANH NGHIỆP NIÊM YẾT TRÊN THỊ TRƯỜNG CHỨNG KHOÁN VIỆT NAM

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## **Tóm tắt**

Thông tin luôn là yếu tố hàng đầu, không thể thiếu và rất quan trọng đối với các nhà đầu tư trên thị trường chứng khoán. Thông tin chính xác và kịp thời sẽ giúp nhà đầu tư có những phân tích, xem xét và đưa ra những quyết định kinh tế chính xác. Bài nghiên cứu đặt ra mục tiêu là đánh giá tính kịp thời, nhận diện và xác định các nhân tố ảnh hưởng tính kịp thời của công bố báo cáo tài chính (BCTC) của các doanh nghiệp niêm yết trên thị trường chứng khoán Việt Nam. Phương pháp được sử dụng trong nghiên cứu là mô hình hồi quy đa biến để kiểm định mối quan hệ giữa tính kịp thời của thông tin với Quy mô của doanh nghiệp; Đòn bẩy tài chính; Lợi nhuận kinh doanh; Lĩnh vực kinh doanh; Loại công ty kiểm toán; Loại BCTC ý kiến kiểm toán; Loại ý kiến kiểm toán đến tính kịp thời của BCTC. Dữ liệu sử dụng từ các BCTC đã được kiểm toán của 274 doanh nghiệp được niêm yết tại SGDK Hà Nội (HNX) và Sở giao dịch Thành phố Hồ Chí Minh (HOSE) từ năm 2018 đến năm 2021 với 1.096 quan sát. Kết quả phân tích hồi quy đa biến cho thấy có 6 nhân tố ảnh hưởng đến tính kịp thời của BCTC là: quy mô doanh nghiệp, hiệu quả kinh doanh, lĩnh vực kinh doanh, và công ty kiểm toán, loại BCTC và loại ý kiến kiểm toán.

**Từ khóa:** Tính kịp thời, báo cáo tài chính, công bố thông tin, doanh nghiệp niêm yết

## **Abstract**

*Information is always the leading and indispensable factor for investors in the stock market, because accurate and timely information assists investors in analyzing, considering, and making accurate economic decisions. The purpose of this study is to evaluate and identify driving factors in the timeliness of financial statement disclosure of public companies on the Vietnam stock market. The method used in the study is the multivariable regression model to test for associations between the timeliness of financial statement disclosure and the size of the enterprise; financial leverage; business profitability; business area; type of audit firm; type of financial statements; type of audit opinion on the timeliness of financial statements. Based on the data collected from audited financial statements of 274 firms listed on Hanoi Stock Exchange (HNX) and Ho Chi Minh City Exchange (HOSE) from 2018 to 2021 with 1096 observations, research results of multivariate regression analysis show that there are six determinants of the timeliness of financial statements, including business size, business performance, business sector, audit firm, type of financial statements, and type of audit opinion.*

**Key words:** *Timeliness, financial statements, disclosure of information, public companies*

## 1. Đặt vấn đề

Trong tất cả các hoạt động nói chung trên thị trường chứng khoán thì thông tin luôn là yếu tố hàng đầu và không thể thiếu khi thực hiện các hoạt động đầu tư. Thông tin lại càng quan trọng hơn đối với các nhà đầu tư trên thị trường chứng khoán. Trong đó, thông tin BCTC lại càng có ý nghĩa hơn đối với quyết định của các nhà đầu tư. Sự chính xác và kịp thời là yếu tố quan trọng của thông tin giúp cho nhà đầu tư có những quyết định chính xác. Thông tin chính xác và kịp thời sẽ giúp nhà đầu tư có những phân tích, xem xét và đưa ra những quyết định kinh tế. Chính vì vậy, việc công khai, minh bạch và sự kịp thời của thông tin tài chính là một trong những nhân tố giúp cho việc bảo vệ quyền lợi của nhà đầu tư và giúp cho thị trường chứng khoán hoạt động ngày càng hiệu quả.

Sự chậm trễ trong việc công bố các BCTC được kiểm toán không chỉ ảnh hưởng đến tính hữu dụng của thông tin mà còn ảnh hưởng đến độ tin cậy và sự thích hợp của các tài liệu. Do đó, bên cạnh tính chính xác và có độ tin cậy thì kịp thời là một đặc tính quan trọng của kế toán và là một yếu tố cơ bản có liên quan đến tính minh bạch của thông tin BCTC. Đối với một nền kinh tế thị trường đang phát triển như Việt Nam thì việc công bố các báo cáo chưa kịp thời vẫn còn tồn tại và ảnh hưởng không nhỏ tới chất lượng của BCTC. Trong thực tế việc công bố thông tin của các doanh nghiệp niêm yết (DNNY) đã xem nhẹ, có những DNNY nhưng website sơ sài, không cập nhật thường xuyên, thông tin không công bố kịp thời cho người sử dụng. Chính vì thế, cần có các chính sách, biện pháp nâng cao tính kịp thời của BCTC. Để có cơ sở cho việc đề xuất các kiến nghị, giải pháp thì cần thiết phải xác định các yếu tố và mức độ tác động của từng yếu tố qua đó xác định được yếu tố ảnh hưởng trọng tâm.

Bài nghiên cứu đặt ra mục tiêu là đánh giá tính kịp thời, nhận diện và xác định các nhân tố ảnh hưởng tính kịp thời của công bố BCTC của các DNNY trên thị trường chứng khoán Việt Nam; cùng với đó đo lường, đánh giá mức độ ảnh hưởng của các nhân tố này tính kịp thời của công bố BCTC giai đoạn 2018-2021, làm cơ sở đề xuất các kiến nghị phù hợp nhằm cải thiện tính kịp thời của công bố BCTC của các DNNY.

## 2. Cơ sở lý thuyết

### 2.1. Tổng quan nghiên cứu

Carslaw và Kaplan (1991) nghiên cứu các yếu tố ảnh hưởng đến tính kịp thời của BCTC các công ty phi tài chính được niêm yết trên sàn chứng khoán tại New Zealand. Nghiên cứu kiểm định mối quan hệ các yếu tố của doanh nghiệp bao gồm: Quy mô công ty, ngành công nghiệp, loại công ty kiểm toán, ý kiến kiểm toán đôn bẫy tài chính, lợi nhuận kinh doanh, tầm quan trọng của cổ đông, ban kiểm soát với tính kịp thời của BCTC các công ty niêm yết. Bằng phương pháp nghiên cứu định lượng, sử dụng phương pháp thống kê mô tả, hồi quy đa biến. Mẫu nghiên cứu bao gồm 103 công ty niêm yết ở New Zealand trong giai đoạn 2 năm từ 1987 đến 1988. Kết quả nghiên cứu cho thấy có mối quan hệ tác động tích cực giữa yếu tố: quy mô công ty, đôn bẫy tài chính, ngành công nghiệp, ý kiến kiểm toán, lợi nhuận kinh doanh, loại công ty kiểm toán và tính kịp thời của BCTC. Yếu tố tầm quan trọng của cổ đông và ban kiểm soát không có tác động.

Raja Ahmad và Kamarudin (2003) đã phân tích các yếu tố quyết định sự chậm trễ trong kiểm toán tại Malaysia và các yếu tố ảnh hưởng đến tính kịp thời của BCTC. Mẫu gồm

100 công ty niêm yết tại sàn giao dịch chứng khoán Kuala Lumpur giai đoạn 1996-2000. Nghiên cứu kiểm định mối quan hệ các nhân tố của doanh nghiệp bao gồm: ngành (sản xuất, phi sản xuất), ý kiến kiểm toán, loại công ty kiểm toán, lợi nhuận kinh doanh, quy mô doanh nghiệp, tỷ lệ nợ, khoản mục bất thường, công ty cuối năm với tính kịp thời của BCTC được xác định là khoảng thời gian giữa ngày BCTC và ngày báo cáo kiểm toán. Sử dụng phương pháp thống kê mô tả, hồi quy đa biến. Kết quả nghiên cứu cho thấy có 6 trọng tâm biến giải thích là đáng kể bao gồm ngành, tỷ lệ nợ, loại công ty kiểm toán, ý kiến kiểm toán, lợi nhuận kinh doanh, công ty cuối năm: Hệ số của hai biến quy mô công ty và khoản mục bất thường đã không được như kỳ vọng.

Ahmed (2003) đã kiểm tra tính kịp thời của báo cáo hàng năm của doanh nghiệp ở ba quốc gia Nam Á, đó là Bangladesh, Ấn Độ và Pakistan. Dựa trên một mẫu lớn gồm 558 báo cáo thường niên cho năm 1998, phân tích hồi quy đa biến chỉ ra rằng ngày cuối năm tài chính là một yếu tố quyết định quan trọng ở mỗi quốc gia. Quy mô của công ty kiểm toán, được đo lường bằng hệ số tải của phí kiểm toán, số lượng đơn vị báo cáo được kiểm toán bởi một công ty kiểm toán và môi liên kết quốc tế, cho thấy các công ty kiểm toán lớn mất ít thời gian hơn đáng kể ở Ấn Độ và Pakistan. Khả năng sinh lời và quy mô doanh nghiệp là những yếu tố quyết định quan trọng chỉ ở Pakistan. Không có bằng chứng thống kê nào hỗ trợ giả thuyết giám sát, như chỉ số điều kiện tài chính của Zmijeski đề xuất. Kết quả hồi quy giai đoạn 2 cho thấy chỉ có độ trễ kiểm toán liên quan đáng kể với thời gian các công ty gửi báo cáo hàng năm lên Sở giao dịch chứng khoán (SDGCK) và tổ chức đại hội đồng thường niên ở mỗi quốc gia. Kết quả cho thấy có thể cải thiện tính kịp thời bằng cách giảm sự chậm trễ trong việc xác minh các tài khoản cuối năm. Các giải thích khả thi cho những phát hiện này cùng với những hạn chế và hàm ý được đưa ra.

Asli Turel (2010) nghiên cứu các yếu tố liên quan đến tính kịp thời của báo cáo hàng năm của các BCTC ở các Công ty giao dịch chứng khoán Tehran. Nghiên cứu này báo cáo kết quả của một cuộc điều tra thực nghiệm về tính kịp thời của các BCTC của 211 công ty phi tài chính niêm yết trên SGDCCK Istanbul. Phân tích mô tả chỉ ra rằng 59% công ty lập BCTC riêng và 66% công ty lập BCTC hợp nhất công bố BCTC của họ ít hơn thời gian tối đa cho phép sau năm tài chính. 28% số công ty lập BCTC riêng và 16% số công ty lập BCTC hợp nhất đã vượt quá thời hạn quy định. Phân tích hồi quy đa biến chỉ ra rằng cả dấu hiệu thu nhập, ý kiến kiểm toán, công ty kiểm toán và ngành đều ảnh hưởng đến tính kịp thời. Các phát hiện chỉ ra rằng các công ty báo cáo thu nhập ròng, có ý kiến kiểm toán chuẩn mực và đang hoạt động trong lĩnh vực sản xuất công bố BCTC của họ sớm hơn. Mặt khác, có thể thấy rằng các công ty được kiểm toán bởi 4 công ty kiểm toán lớn đều là những công ty báo cáo muộn.

Afify (2009) tìm hiểu tác động của các nhân tố đặc điểm hội đồng quản trị (HĐQT), lợi nhuận kinh doanh và ngành công nghiệp đến thời hạn công bố BCTC ở Ai Cập. Kiểm định các yếu tố: Quy mô của HĐQT, tỷ lệ thành viên độc lập của HĐQT, tính kiêm nhiệm chức danh chủ tịch tổng giám đốc, tỷ lệ cổ phần nắm giữ bởi nhà đầu tư, lợi nhuận kinh doanh. Mẫu nghiên cứu BCTC của 85 công ty phi tài chính niêm yết trên Sàn giao dịch chứng khoán Ai Cập. Kết quả cho thấy: Quy mô của HĐQT, tỷ lệ thành viên độc lập của HĐQT, ngành công nghiệp và lợi nhuận kinh doanh ảnh hưởng tích cực đến thời hạn công bố BCTC của các công ty niêm yết tại Ai Cập.

Rabia Aktas và Mahmut Kargin (2011) nghiên cứu xem xét mối quan hệ giữa tính kịp thời BCTC với các biến độc lập bao gồm: loại BCTC (riêng lẻ hay hợp nhất), đặc điểm công ty (quy mô, tuổi, kết quả kinh doanh), loại ngành, loại thị trường, khả năng sinh lời, quyền sở hữu công cộng. Sử dụng phương pháp phân tích thực nghiệm và thống kê mô tả đối với 82 công ty niêm yết tại SGDCK Thổ Nhĩ Kỳ giai đoạn 2008-2010. Kết quả cho thấy BCTC (riêng lẻ hay hợp nhất), khả năng sinh lời, đặc điểm của công ty (tuổi đời, quy mô, kết quả kinh doanh), loại ngành có ảnh hưởng đáng kể đến tính kịp thời của việc lập BCTC của các công ty niêm yết.

Hoang Thi Viet Ha cùng các cộng sự (2018) nghiên cứu các nhân tố ảnh hưởng đến tính kịp thời của BCTC (FR) của các doanh nghiệp tại Việt Nam. Nghiên cứu này sử dụng dữ liệu bảng với 1.070 quan sát, tại 214 công ty niêm yết trên thị trường chứng khoán Việt Nam giai đoạn 2012 - 2016. Kết quả thu được bằng phương pháp GLS cho thấy có 04 biến độc lập, bao gồm BCTC hợp nhất (CON), công ty kiểm toán (AUDIT), khả năng sinh lời (ROA) và quy mô của doanh nghiệp (SIZE) liên quan đến tính kịp thời của các BCTC và ý nghĩa thống kê. Có hai yếu tố, bao gồm đòn bẩy tài chính (LV) và ngành công nghiệp (NGÀNH) không ảnh hưởng đến tính kịp thời của báo cáo tài chính. Ngoài ra, kết quả nghiên cứu cho thấy có sự khác biệt và ý nghĩa thống kê về thời gian xuất bản của các loại BCTC và thời điểm bắt đầu BCTC khác nhau. Có hai yếu tố ảnh hưởng đến cấp ngành nhưng không có ý nghĩa thống kê về thời điểm tính toán báo cáo tài chính, ngoài ra, kết quả nghiên cứu cho thấy có sự khác biệt có ý nghĩa thống kê về thời điểm, BCTC đã công bố trong loại hình kiểm toán BCTC nhằm lập thời hạn của BCTC năm.

Tại Việt Nam, tác giả Đặng Đình Tân (2013) đã đánh giá một số nhân tố liên quan đến hoạt động kiểm toán độc lập và mức độ phức tạp của việc lập BCTC ảnh hưởng đến tính kịp thời của BCTC các công ty niêm yết tại Việt Nam thông qua việc khảo sát 175 BCTC đã kiểm toán của 120 công ty niêm yết trên sàn HNX và HOSE. Kết quả nghiên cứu cho rằng không có sự khác biệt nào giữa các công ty được kiểm toán bởi các công ty Big Four và các công ty kiểm toán khác, đồng thời xem xét khả năng cải thiện tính kịp thời của BCTC của các công ty niêm yết qua hai năm 2010, 2011.

Phạm Ngọc Toàn (2016) đã xác định các nhân tố ảnh hưởng đến tính kịp thời của BCTC và phân tích tầm quan trọng về tính kịp thời của BCTC đối với nhà đầu tư, các chủ thể báo cáo và sự phát triển của thị trường vốn. Mẫu nghiên cứu bao gồm 77 công ty niêm yết (DNNY) trên SGDCK Tp. Hồ Chí Minh (HOSE) giai đoạn 2010-2014. Tác giả sử dụng phương pháp nghiên cứu định lượng để đánh giá mức độ tác động của các nhân tố đến tính kịp thời của BCTC. Kết quả nghiên cứu cho thấy nhân tố: Loại BCTC, lợi nhuận kinh doanh, loại công ty kiểm toán, và đòn bẩy tài chính có tác động thuận chiều đến tính kịp thời của BCTC. Trong khi đó, nhân tố quy mô công ty và ngành nghề kinh doanh tác động nghịch chiều đến tính kịp thời của BCTC các DNNY trên HOSE. Từ đó, tác giả đề xuất một số kiến nghị nhằm nâng cao tính kịp thời của BCTC các DNNY.

Nguyễn Thị Xuân Vy và Nguyễn Vĩnh Khương (2016) nghiên cứu và cung cấp bằng chứng về mối quan hệ giữa tính kịp thời của việc công bố thông tin tài chính và đặc trưng doanh nghiệp ở các công ty niêm yết trên thị trường chứng khoán Việt Nam (TTCK VN).

Dựa vào dữ liệu của 100 công ty niêm yết có công bố BCTC trong giai đoạn 2012 - 2014, bằng phương pháp định lượng, nhóm tác giả đã đưa đến kết luận rằng: số lượng công ty con, tính phức tạp trong hoạt động (đại diện cho đặc trưng cấu trúc), biến đổi trong khả năng sinh lời hàng năm (đại diện cho đặc trưng tài chính) và ý kiến kiểm toán là các biến có ảnh hưởng đến tính kịp thời của việc công bố BCTC.

Nguyễn Văn Bảo và Nguyễn Thanh Tú (2018) thực hiện nghiên cứu nhằm xem xét các nhân tố ảnh hưởng đến tính kịp thời của BCTC của các công ty niêm yết (DNNY) trên thị trường chứng khoán (TTCK) Việt Nam và phân tích tầm quan trọng về lĩnh vực kịp thời của BCTC đối với nhà đầu tư, các chủ thể báo cáo và sự phát triển của thị trường vốn. Mẫu nghiên cứu gồm 150 DNNY, trên SGDCK Tp. Hồ Chí Minh và SGDCK Hà Nội, trong năm 2017. Tác giả sử dụng phương pháp nghiên cứu định lượng, để đánh giá mức độ tác động của các nhân tố đến tính kịp thời của BCTC. Kết quả nghiên cứu cho thấy, 2 nhân tố đòn bẩy tài chính và quy mô công ty có tác động ngược chiều đến tính kịp thời của BCTC của các DNNY; nhân tố loại BCTC, ý kiến kiểm toán, loại ngành có tác động cùng chiều, trong khi đó nhận tố thu nhập trên cổ phiếu không ảnh hưởng đến tính kịp thời của BCTC. Từ đó, tác giả đề xuất một số kiến nghị nhằm nâng cao tính kịp thời của BCTC, của các DNNY trên TTCK Việt Nam.

Nguyễn Kim Quốc Trung (2018) đã nghiên cứu những nhân tố tác động đến tính kịp thời của BCTC của các công ty niêm yết tại Việt Nam. Bài viết sử dụng phương pháp nghiên cứu định tính nhằm nghiên cứu những nhân tố ảnh hưởng đến tính kịp thời của BCTC của các công ty niêm yết trên SGDCK Hà Nội (HNX) và SGDCK TP. Hồ Chí Minh (HOSE) trong giai đoạn nghiên cứu (2012-2016). Kết quả nghiên cứu cho thấy, các nhân tố sau đây có thể tác động đến tính kịp thời của báo cáo tài chính: Quy mô của doanh nghiệp; Loại công ty kiểm toán; Sự thay đổi của lợi nhuận; Loại báo cáo tài chính; Loại ý kiến kiểm toán; Lĩnh vực kinh doanh.

Đoàn Thị Cẩm Thu (2018) đã nghiên cứu và phân tích các yếu tố ảnh hưởng đến tính kịp thời của BCTC và đề xuất một số gợi ý nhằm cải thiện tính kịp thời của BCTC tại các công ty niêm yết (DNNY) ở Việt Nam. Nghiên cứu sử dụng phương pháp thống kê mô tả, phân tích hồi quy và kiểm định mô hình bằng phần mềm STATA với mẫu nghiên cứu là 825 quan sát được thu thập từ BCTC của các DNNY trên thị trường chứng khoán Việt Nam giai đoạn 2011 - 2015. Kết quả nghiên cứu cho thấy, nhân tố tỷ suất lợi nhuận trên vốn chủ sở hữu (ROE), sự thay đổi lợi nhuận, loại BCTC và loại ý kiến kiểm toán có tác động cùng chiều đến tính kịp thời của BCTC. Trong khi đó, các nhân tố loại BCTC và loại công ty kiểm toán có tác động nghịch chiều đến tính kịp thời của BCTC. Từ đó, tác giả đề xuất một số gợi ý chính sách nhằm cải thiện tính kịp thời của BCTC tại các DNNY ở Việt Nam.

## ***2.2. Tính kịp thời của báo cáo tài chính***

Theo IASB (2010), kịp thời là đặc điểm chất lượng quan trọng của BCTC, trong đó đòi hỏi các thông tin cung cấp cho người sử dụng càng nhanh càng tốt. Thông tin không kịp thời sẽ dẫn đến sự chậm trễ của các quyết định, làm cho hiệu quả quyết định sẽ không cao thậm chí là không thể ra quyết định.

Việc công nhận chính thức đầu tiên về tầm quan trọng của tính kịp thời bắt đầu từ năm 1954 bởi AAA (1955). Họ quan sát thấy rằng tính kịp thời báo cáo là một yếu tố thiết yếu trong việc công bố thông tin thích hợp. Sau đó, nhiều nhà nghiên cứu và các cơ quan chuyên môn thừa nhận vai trò của tính kịp thời trong BCTC doanh nghiệp.

Tính kịp thời (TKT) trong nghiên cứu này là các thông tin và số liệu kế toán phải được công bố đúng thời hạn và theo quy định có liên quan. Được đo lường bằng số ngày kể từ ngày kết thúc niên độ theo quy định của pháp luật đến ngày phát hành BCTC đã được kiểm toán.

### *Các quy định pháp lý liên quan đến tính kịp thời của BCTC*

Theo Luật Kế toán (2003), BCTC năm của đơn vị kế toán phải được nộp cho cơ quan nhà nước có thẩm quyền trong thời hạn chín mươi ngày, kể từ ngày kết thúc kỳ kế toán năm theo quy định của pháp luật, đối với báo cáo quyết toán ngân sách thì thời hạn nộp báo cáo được thực hiện theo quy định của Chính phủ đồng thời đơn vị kế toán thuộc hoạt động kinh doanh phải công khai BCTC chậm nhất là 120 ngày kể từ ngày kết thúc năm tài chính.

Theo Luật Doanh nghiệp (2014) doanh nghiệp phải có nghĩa vụ lập và nộp BCTC đúng thời hạn theo quy định của pháp luật về kế toán. Công ty cổ phần phải gửi BCTC hàng năm đã được Đại hội đồng cổ đông thông qua đến cơ quan nhà nước có thẩm quyền theo quy định của pháp luật về kế toán và pháp luật có liên quan.

Theo Luật Chứng khoán (2006) công ty đại chúng nói chung và công ty có cổ phiếu được niêm yết tại SGDCCK hoặc trung tâm giao dịch chứng khoán nói riêng phải công bố thông tin định kỳ về BCTC năm trong thời hạn 10 ngày kể từ ngày có BCTC đã được kiểm toán.

Theo Thông tư số 200/2014/TT-BTC, có quy định về thời hạn nộp BCTC hàng quý phải nộp BCTC quý chậm nhất là 20 ngày, kể từ ngày kết thúc kỳ kế toán quý; đối với công ty mẹ, Tổng công ty nhà nước chậm nhất là 45 ngày và quy định về thời hạn nộp BCTC hàng năm phải nộp BCTC năm chậm nhất là 30 ngày, kể từ ngày kết thúc kỳ kế toán năm; đối với công ty mẹ, Tổng công ty nhà nước chậm nhất là 90 ngày.

Theo Thông tư 96/2020/TT-BTC, công ty đại chúng phải công bố BCTC năm đã được kiểm toán trong thời hạn 10 ngày, kể từ ngày tổ chức kiểm toán ký báo cáo kiểm toán nhưng không vượt quá 90 ngày, kể từ ngày kết thúc năm tài chính.

Tóm lại, theo khuôn khổ pháp lý hiện hành tại Việt Nam, các công ty niêm yết trên thị trường chứng khoán có thời hạn công bố BCTC năm chậm nhất là 90 ngày kể từ ngày kết thúc năm tài chính..

## **2.3. Lý thuyết nền tảng và giả thuyết nghiên cứu**

### *2.3.1. Lý thuyết thông tin hữu ích*

Theo lý thuyết thông tin hữu ích, thông tin tài chính được xây dựng dựa trên các giả thuyết (Godfrey và cộng sự, 2003):

- Luôn tồn tại sự mất cân đối về mặt thông tin giữa người lập BCTC và người sử dụng thông tin.

- Nhu cầu của người sử dụng thông tin kế toán là không được xác định trước và cần được xác định thông qua dẫn chứng thực tế.

- Việc đáp ứng thông tin của người sử dụng được thực hiện thông qua những bên có lợi ích liên quan đến tình hình tài chính của doanh nghiệp.

- Tính hữu ích của thông tin cần được đánh giá trong mối tương quan lợi ích - chi phí khi thực hiện công việc kế toán.

Do đặc điểm mất cân đối về mặt thông tin giữa các đối tượng bên trong và bên ngoài doanh nghiệp, những đối tượng bên ngoài luôn có xu hướng dựa vào thông tin kế toán như một tài liệu quan trọng cho việc ra quyết định kinh tế. Trên cơ sở đó, các đặc điểm chất lượng của BCTC được xác định. Trước hết BCTC cần bao gồm các thông tin thích hợp, nghĩa là các thông tin có thể giúp người sử dụng đánh giá được quá khứ, dự đoán tương lai của doanh nghiệp và các thông tin này cần thể hiện trung thực, đúng bản chất tình hình kinh tế - tài chính tại doanh nghiệp. Ngoài ra còn có những yêu cầu khác về thông tin kế toán như trình bày dễ hiểu, khả năng so sánh, khả năng kiểm tra và tính kịp thời phải được đáp ứng.

Áp dụng vào mô hình nghiên cứu: Lý thuyết thông tin hữu ích yêu cầu BCTC phải cung cấp các thông tin về tình trạng tài chính, kết quả hoạt động, dòng tiền trong doanh nghiệp cũng như những thông tin khác một cách chính xác và kịp thời cho việc ra quyết định kinh tế của người sử dụng thông tin, đặc biệt là nhà đầu tư, chủ nợ và các cổ đông.

### 2.3.2. Lý thuyết ủy nhiệm (Lý thuyết đại diện)

Theo Charles W. L. Hill và Thomas M. Jones (1992), lý thuyết ủy nhiệm xuất hiện trong bối cảnh việc quản trị kinh doanh gắn liền với những nghiên cứu về hành vi của người chủ và người làm thuê thông qua các hợp đồng. Mối quan hệ ủy nhiệm là mối quan hệ giữa bên ủy nhiệm (một người hoặc nhiều người) và một bên khác được gọi là bên được ủy nhiệm để quản lý doanh nghiệp và thực hiện một số công việc được ủy nhiệm. Lý thuyết ủy nhiệm giả định rằng cả hai bên (bên ủy nhiệm và bên được ủy nhiệm) đều muốn tối đa hóa lợi ích của mình. Khi bên được ủy nhiệm hành động vì lợi ích riêng của họ mà gây bất lợi cho bên ủy nhiệm thì bên ủy nhiệm sẽ đưa ra các biện pháp để giới hạn lại lợi ích riêng của bên được ủy nhiệm. Do đó sẽ làm phát sinh chi phí ủy nhiệm (Agency cost). Chi phí ủy nhiệm là chi phí trả cho sự xung đột lợi ích giữa hai bên bao gồm chi phí giám sát (Monitoring cost), chi phí liên kết (bonding cost) và chi phí khác (Residual cost).

Theo lý thuyết ủy nhiệm, mâu thuẫn giữa bên ủy nhiệm và bên được ủy nhiệm là rất đáng kể vì thường người điều hành doanh nghiệp chỉ sở hữu một phần rất nhỏ cổ phần của doanh nghiệp. Vì vậy, để hạn chế chi phí ủy nhiệm và đạt được sự cân bằng lợi ích của cả hai bên, người điều hành phải công bố thông tin nhiều hơn đến các cổ đông. Do đó, lý thuyết ủy nhiệm đã giải thích được ảnh hưởng của các đặc trưng doanh nghiệp như quy mô công ty, lợi nhuận kinh doanh, khả năng sinh lời đến việc công bố thông tin BCTC kịp thời. Nguyên nhân là do các công ty có lợi nhuận cao thì nhà quản lý luôn muốn công bố thông tin nhiều hơn để thể hiện khả năng quản lý của mình.

Áp dụng vào mô hình nghiên cứu: Theo lý thuyết ủy nhiệm, trong phần lớn các doanh nghiệp hoạt động có quy mô lớn, các mâu thuẫn giữa bên ủy nhiệm và bên được ủy nhiệm là rất đáng kể vì người điều hành doanh nghiệp thường chỉ sở hữu một phần nhỏ cổ phần. Do đó, để hạn chế chi phí ủy nhiệm, người điều hành cần phải công bố thông tin nhiều hơn

đến các cổ đông. Như vậy, lý thuyết ủy nhiệm đã góp phần giải thích ảnh hưởng của yếu tố quy mô đến việc công bố thông tin.

Ngoài ra, lý thuyết ủy nhiệm cũng góp phần giải thích ảnh hưởng của yếu tố lợi nhuận kinh doanh đến việc công bố thông tin, vì đối với những công ty có lợi nhuận cao, nhà quản lý muốn công bố thông tin nhiều hơn để thể hiện khả năng quản lý của mình.

### 2.3.2. Lý thuyết thông tin bất cân xứng

Lý thuyết thông tin bất cân xứng (Asymmetric Information) lần đầu tiên xuất hiện vào những năm 1970 và đến năm 2001, các nhà khoa học nghiên cứu lý thuyết này là George Akerlof, Michael Spence và Jose Stiglitz đã được nhận giải Nobel kinh tế cho những nỗ lực nghiên cứu của lý thuyết về thông tin bất cân xứng. Ngoài ra, nghiên cứu của một học giả kinh tế nổi tiếng trên thế giới về lý thuyết thông tin bất cân xứng đã đưa ra khái niệm về thông tin bất cân xứng như sau: “Thông tin bất cân xứng trên TTCK xảy ra khi một hoặc nhiều nhà đầu tư sở hữu được thông tin riêng hoặc có nhiều thông tin công bố hơn về một công ty so với các nhà đầu tư còn lại” (Kyle, 1985). Nói cách khác, “thông tin bất cân xứng xuất hiện khi người mua và người bán có các thông tin khác nhau”.

Trong quá trình phát triển của nền kinh tế, người ta gặp phải hàng loạt các vấn đề cần lý giải như tại sao ở một số quốc gia, ngân hàng lại áp dụng lãi suất cho vay lại cao gấp 2 đến 3 lần mức bình thường đối với một số doanh nghiệp? Tại sao các công ty lại chấp nhận bỏ ra hàng tỷ đồng vào các chiến dịch quảng cáo? Những câu hỏi thuộc những lĩnh vực khác nhau nhưng đều phản ánh một hiện tượng phổ biến mà Akerlof đã chỉ ra trong bài viết có tựa đề “thị trường trái chanh” (Akerlof, 1970), trong đó ông lý luận rằng: trong hai bên tham gia giao dịch, một bên thường có nhiều thông tin hơn bên kia. Đó chính là hiện tượng thông tin bất cân xứng (asymmetric information).

Áp dụng vào mô hình nghiên cứu: Từ những nội dung cơ bản về lý thuyết thông tin bất cân xứng, có thể thấy, thông tin bất cân xứng là tình trạng mà các bên tham gia giao dịch không có được thông tin như nhau, một bên tham gia giao dịch trên thị trường (ban điều hành công ty, cổ đông lớn) có nhiều thông tin hơn, có thông tin sớm hơn hoặc tiếp cận thông tin dễ dàng hơn so với các bên còn lại (các nhà đầu tư nhỏ lẻ). Thông tin bất cân xứng chính là tình trạng thông tin không đầy đủ, không kịp thời, không tin cậy, không chính xác và không tạo điều kiện để tiếp cận dễ dàng đối với các nhà đầu tư còn lại trên thị trường.

Mô hình nghiên cứu: Dựa vào các nghiên cứu trước đây, tác giả chọn ra 7 nhân tố: (1) Quy mô của doanh nghiệp; (2) Đòn bẩy tài chính; (3) Lợi nhuận kinh doanh; (4) Lĩnh vực kinh doanh; (5) Loại công ty kiểm toán; (6) Loại BCTC ý kiến kiểm toán; (7) Loại ý kiến kiểm toán đến tính kịp thời của BCTC, để tiến hành kiểm định mối quan hệ giữa các nhân tố này với tính kịp thời của BCTC của các doanh nghiệp niêm yết trên thị trường chứng khoán Việt Nam.

Theo đó, mô hình nghiên cứu được tác giả khái quát đề xuất trong bảng 1.



**Bảng 1. Tóm tắt các yếu tố tác động và kỳ vọng**

Yếu tố	Tên biến	Nghiên cứu cơ sở	Lý thuyết nền	Đo lường các biến	Kỳ vọng
<b>Biến phụ thuộc</b>	Tính kịp thời của BCTC (TKT)			= Ngày kết thúc niên độ theo quy định đến Ngày ký báo cáo kiểm toán	
<b>Biến độc lập</b>	Quy mô doanh nghiệp (SIZE)	Ahmed và Hossain (2010), Haw và Ro (1990)	Lý thuyết ủy nhiệm	= Logarit tự nhiên của tổng tài sản	+/-
	Đòn bẩy tài chính (LV)	Carslaw và Kaplan (1991), Owusu và Ansah (2000), Ahmed và Hossain (2010)	Lý thuyết ủy nhiệm	= Nợ phải trả/ Tổng tài sản	-
	Lợi nhuận kinh doanh (ROE)	Trueman (1990), Carslaw và Kaplan (1991), Afify (2009)	Lý thuyết ủy nhiệm; Lý thuyết thông tin bất cân xứng	= (Lợi nhuận sau thuế/ Vốn chủ sở hữu)*100%	+
	Lĩnh vực kinh doanh (NGANH)	Ayoib Che-Ahmad và Shamharir Abidin (2008), Ahmad và Kamarudin (2003), Aktas và Kargin (2011)	Lý thuyết thông tin hữu ích	1: Doanh nghiệp sản xuất	+
				0: Doanh nghiệp phi sản xuất	
	Loại công ty kiểm toán (CTKT)	Gilling (1977), Raja và Khairul (2003)	Lý thuyết thông tin hữu ích	1: Công ty kiểm toán Big Four	+
				0: Công ty kiểm toán Non-Big Four	
	Loại BCTC (BCTC)	Aktas và Kargin (2011)	Lý thuyết thông tin hữu ích	1: BCTC hợp nhất	+/-
				0: BCTC riêng lẻ	
	Loại ý kiến kiểm toán (YKKT)	Ash Turel (2010); Bengu Vuran và Burcu Adiloglu (2013)	Lý thuyết thông tin hữu ích	1: Chấp nhận toàn phần	+
	0: Không chấp nhận toàn phần				

*Nguồn: Tác giả tổng hợp từ các nghiên cứu trước*

Với các giả thuyết nói đã nêu về các nhân tố trên, mô hình hồi quy được đề xuất để kiểm định các giả thuyết được đề xuất có dạng như sau:

$$TKT = \beta_0 + \beta_1 * SIZE + \beta_2 * LV + \beta_3 * ROE + \beta_4 * NGANH + \beta_5 * CTKT + \beta_6 * BCTC + \beta_7 * YKKT + \varepsilon$$

Trong đó:

- Biến phụ thuộc

TKT: Tính kịp thời của BCTC

- Biến độc lập

SIZE: Quy mô doanh nghiệp

LV: Đòn bẩy tài chính

ROE: Lợi nhuận kinh doanh

NGANH: Lĩnh vực kinh doanh của doanh nghiệp

CTKT: Loại công ty kiểm toán của doanh nghiệp

BCTC: Loại BCTC của doanh nghiệp

YKKT: Loại ý kiến kiểm toán của công ty kiểm toán.

### 3. Kết quả của nghiên cứu

**Bảng 2. Thống kê các biến định lượng trong mô hình**

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
SIZE	1096	23.627	33.071	28.287	1.656
LV	1096	.013	.917	.477	.204
ROE	1096	-56.200	58.320	11.564	10.238
TKT	1096	15.000	149.000	77.243	15.550
Valid N (listwise)	1096				

*Nguồn: Thống kê dữ liệu từ SPSS*

Trong các công ty khảo sát thì quy mô doanh nghiệp thấp nhất là 23.627 và cao nhất là 33.071; ROE thay đổi từ -56.20% đến 58.32% mức trung bình trong mẫu là 11.56%. Đòn bẩy tài chính (Thương số nợ trên tổng tài sản) thay đổi từ mức 0.013 đến 0.917.

Số ngày từ khi kết thúc năm tài chính cho đến ngày ký báo cáo kiểm toán của các công ty niêm yết trên TTCKVN trong mẫu nghiên cứu giao động từ 15 ngày đến 149 ngày, thời hạn phát hành báo cáo kiểm toán trung bình là 77 ngày. Độ lệch chuẩn phản ánh mức chênh lệch bình quân giữa thời hạn phát hành báo cáo kiểm toán của các công ty niêm yết trong mẫu nghiên cứu xấp xỉ là 15 ngày.

**Bảng 3. Thống kê các mức độ kịp thời của BCTC của các doanh nghiệp khảo sát**

TKT					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Từ 90 ngày trở lên	112	10.2	10.2	10.2
	Từ 60-89 ngày	835	76.2	76.2	86.4
	Từ 30-59 ngày	132	12.0	12.0	98.4
	Nhỏ hơn 30 ngày	17	1.6	1.6	100.0
	Total	1.096	100.0	100.0	

*Nguồn: Thống kê dữ liệu từ SPSS*

Mức độ kịp thời của việc công bố BCTC thấp nhất (mức 1- từ 90 ngày trở lên) ở mức 9% tương đương với 112 mẫu công bố BCTC muộn.

Ở mức 2 trong khoảng từ 60-89 ngày chiếm tỷ lệ cao nhất, 835 doanh nghiệp tương ứng với 76.2%. Ở mức 3, các doanh nghiệp công bố BCTC từ 30-59 ngày chiếm 12% tương ứng với 132 mẫu trong tổng thể 1096 mẫu. Ở mức kịp thời cao nhất (mức 4, <30 ngày) chỉ có 17 mẫu đạt được, chiếm 1.6%.

**Bảng 4. Thống kê mô tả thời gian công bố BCTC trong giai đoạn 2018 - 2021**

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
2018	274	15.0	143.0	76.526	15.9842
2019	274	15.0	149.0	77.639	17.3924
2020	274	26.0	110.0	78.288	14.2967
2021	274	27.0	110.0	76.518	14.3223

*Nguồn: Thống kê dữ liệu từ SPSS*

Trong 1.096 mẫu quan sát của 174 công ty niêm yết trên sàn HOSE trong 4 năm từ 2018 - 2021 thì tính kịp thời của BCTC dao động trung bình ở khoảng 76-78 ngày. Con số này cũng không được kịp thời lắm, tuy nhiên vẫn kịp theo quy định của nhà nước (90 ngày). Tuy nhiên vẫn có những công ty có thể phát hành BCTC được kiểm toán rất sớm chỉ khoảng 15 ngày kể từ ngày kết thúc năm tài chính, tuy nhiên có những công ty trễ thời hạn theo quy định lên đến 149 ngày.

Theo biểu đồ trên, tính kịp thời của BCTC trung bình của các công ty niêm yết và số công ty chậm nộp BCTC có sự biến động qua các năm. Trong giai đoạn 2018-2020, trung bình số ngày mà các công ty công bố tăng lên từ 76.526 ngày đến 78.288 ngày, tính kịp thời giảm. Nhưng tính kịp thời cũng tăng chớ lại, thời gian công bố giảm từ 78.288 ngày còn 76.518 ngày trong giai đoạn 2020-2021. Số công ty chậm công bố BCTC cũng có xu hướng giảm trong giai đoạn năm 2019-2021, từ 36 công ty xuống còn 21 công ty. Điều này chứng tỏ các công ty đã cải thiện để phát hành các BCTC sớm hơn.

Một số công ty tiêu biểu có tính kịp thời trong công bố BCTC qua các năm như sau:

**Bảng 5: Một số công ty tiêu biểu có tính kịp thời trong công bố BCTC qua các năm**

Năm	Công ty
2018	Công ty Cổ phần (CTCP) Lương thực thực phẩm Safoco (SAF) - 15 ngày, CTCP Phát triển hạ tầng Vĩnh Phúc (IDV) - 25 ngày, CTCP Tập đoàn Công nghệ CMC (CMG) - 17 ngày
2019	CTCP Lương thực thực phẩm Safoco (SAF) - 17 ngày, CTCP Phát triển hạ tầng Vĩnh Phúc (IDV) - 21 ngày, CTCP Tập đoàn Công nghệ CMC (CMG) - 29 ngày
2020	CTCP Lương thực thực phẩm Safoco (SAF) - 27 ngày, CTCP Phát triển hạ tầng Vĩnh Phúc (IDV) - 26 ngày, CTCP Tập đoàn Công nghệ CMC (CMG) - 29 ngày, CTCP Dược liệu và thực phẩm Việt Nam (VHE) - 29 ngày
2021	CTCP Lương thực thực phẩm Safoco (SAF) - 27 ngày, CTCP Tập đoàn Công nghệ CMC (CMG) - 29 ngày, CTCP Ngân Sơn (NST) - 27 ngày, CTCP Dược phẩm Cửu Long (HOSE: DCL) - 27 ngày

*Nguồn: Tác giả tổng hợp*

Cụ thể như sau: Công ty Cổ phần Lương thực thực phẩm Safoco (SAF), CTCP Phát triển hạ tầng Vĩnh Phúc (IDV), CTCP Tập đoàn Công nghệ CMC (CMG) có tính kịp thời cao nhất trong mẫu khảo sát trong cả 4 năm.

**Bảng 6. Một số công ty có tính kịp thời rất thấp và chậm trễ trong việc công bố BCTC qua các năm**

Năm	Công ty
2018	CTCP KOSY (HOSE: KOS) - 146 ngày; CTCP Tập đoàn Đức Long Gia Lai (DLG) -106 ngày
2019	CTCP Tập đoàn ASG (ASG) -149 ngày; CTCP Tập đoàn Đức Long Gia Lai (DLG) - 139 ngày; CTCP Đầu tư và Công nghiệp Tân Tạo (ITA) -115 ngày
2020	CTCP Quốc Cường Gia Lai (QCG) - 110 ngày; CTCP Tập đoàn Đức Long Gia Lai (DLG) -100 ngày; CTCP FECON (FCN) - 100 ngày; CTCP Hoàng Anh Gia Lai (HAG) - 100 ngày
2021	CTCP Quốc Cường Gia Lai (QCG) - 110 ngày

*Nguồn: Tác giả tổng hợp*

### 3.1. Phân tích tương quan

Trước khi tiến hành kiểm tra hồi quy mô hình nghiên cứu, tác giả phân tích ma trận hệ số tương quan giữa các biến độc lập và biến phụ thuộc nhằm mục đích xem có hay không mối quan hệ tuyến tính giữa các biến. Khoảng giá trị của hệ số tương quan sẽ nhận giá trị từ -1 đến 1 và dấu của hệ số tương quan thể hiện mối quan hệ cùng chiều hoặc ngược chiều hay không có mối quan hệ tuyến tính khi hệ số tương quan bằng 0. Phân tích ma trận tương quan sử dụng hệ số tương quan Pearson để lượng hóa mức độ chặt chẽ của mối liên hệ giữa 7 biến độc lập là: Quy mô DN, Loại BCTC, Lợi nhuận kinh doanh, Đòn bẩy tài chính, Loại công ty kiểm toán, Ý kiến kiểm toán, Lĩnh vực kinh doanh với biến phụ thuộc là tính kịp thời của BCTC.

**Bảng 7. Ma trận tương quan giữa biến phụ thuộc và các biến độc lập**

		Correlations							
		SIZE	LV	ROE	NGANH	CTKT	BCTC	YKKT	TKT
SIZE	Pearson Correlation	1	.325**	.022	-.211**	.396**	.537**	-.036	-.154**
	Sig. (2-tailed)		.000	.468	.000	.000	.000	.237	.000
	N	1096	1096	1096	1096	1096	1096	1096	1096
LV	Pearson Correlation	.325**	1	.013	-.103**	-.053	.098**	.037	-.023
	Sig. (2-tailed)	.000		.655	.001	.079	.001	.226	.439
	N	1096	1096	1096	1096	1096	1096	1096	1096
ROE	Pearson Correlation	.022	.013	1	.137**	.123**	-.048	.228**	.270**
	Sig. (2-tailed)	.468	.655		.000	.000	.110	.000	.000
	N	1096	1096	1096	1096	1096	1096	1096	1096

Correlations									
		SIZE	LV	ROE	NGANH	CTKT	BCTC	YKKT	TKT
NGANH	Pearson Correlation	-.211**	-.103**	.137**	1	.029	-.194**	.072*	.332**
	Sig. (2-tailed)	.000	.001	.000		.341	.000	.016	.000
	N	1.096	1.096	1.096	1.096	1.096	1.096	1.096	1.096
CTKT	Pearson Correlation	.396**	-.053	.123**	.029	1	.194**	.063*	.127**
	Sig. (2-tailed)	.000	.079	.000	.341		.000	.038	.000
	N	1.096	1.096	1.096	1.096	1.096	1.096	1.096	1.096
BCTC	Pearson Correlation	.537**	.098**	-.048	-.194**	.194**	1	-.036	-.229**
	Sig. (2-tailed)	.000	.001	.110	.000	.000		.239	.000
	N	1.096	1.096	1096	1096	1096	1096	1096	1096
YKKT	Pearson Correlation	-.036	.037	.228**	.072*	.063*	-.036	1	.174**
	Sig. (2-tailed)	.237	.226	.000	.016	.038	.239		.000
	N	1.096	1.096	1.096	1.096	1.096	1.096	1.096	1.096
TKT	Pearson Correlation	-.154**	-.023	.270**	.332**	.127**	-.229**	.174**	1
	Sig. (2-tailed)	.000	.439	.000	.000	.000	.000	.000	
	N	1.096	1.096	1.096	1.096	1.096	1.096	1.096	1.096
**. Correlation is significant at the 0.01 level (2-tailed).									
*. Correlation is significant at the 0.05 level (2-tailed).									

Nguồn: Thống kê dữ liệu từ SPSS

Với kết quả từ bảng phân tích tương quan giữa các biến độc lập và biến phụ thuộc trên, có thể nhận thấy rằng:

- Nhân tố quy mô doanh nghiệp có giá trị hệ số tương quan (Sig.) là 0.000 < 0.01 (mức ý nghĩa 1%) cho thấy biến độc lập này có ý nghĩa về mặt thống kê với biến phụ thuộc TKT của BCTC. Hệ số tương quan Pearson Correlation là -0.154 thể hiện tác động ngược chiều đến tính kịp thời của BCTC phù hợp với giả thuyết H1 đặt ra. Tạm thời có thể kết luận các doanh nghiệp có quy mô càng lớn thì TKT càng thấp.

- Nhân tố đòn bẩy tài chính có giá trị hệ số tương quan (Sig.) là 0.439 > 0.1 (mức ý nghĩa 10%) cho thấy biến độc lập này không có ý nghĩa về mặt thống kê tương quan với biến phụ thuộc TKT của BCTC, vì vậy việc kiểm định của nhân tố này sẽ loại khỏi tiến hành trong phân tích hồi quy.

- Nhân tố lợi nhuận kinh doanh có giá trị hệ số tương quan (Sig.) là 0.00 < 0.01 (mức ý nghĩa 5%) thể hiện biến độc lập này có ý nghĩa về mặt thống kê với biến phụ thuộc TKT

của BCTC. Hệ số tương quan Pearson Correlation là 0.270 thể hiện tác động cùng chiều đến TKT BCTC, phù hợp với giả thuyết H3 đã đặt ra.

- Nhân tố lĩnh vực kinh doanh có giá trị hệ số tương quan (Sig.) là 0.000 < 0.01 (mức ý nghĩa 1%) cho thấy biến độc lập này có ý nghĩa về mặt thống kê với biến phụ thuộc TKT của BCTC. Hệ số tương quan Pearson Correlation là 0.332 thể hiện tác động cùng chiều đến TKT BCTC, phù hợp với giả thuyết H4 đã đặt ra. Tạm thời có thể kết luận các công ty thành lập càng lâu thì việc TKT của BCTC càng cao.

- Nhân tố công ty kiểm toán có giá trị hệ số tương quan (Sig.) là 0.000 < 0.01 (mức ý nghĩa 1%) cho thấy biến độc lập này có ý nghĩa về mặt thống kê với biến phụ thuộc TKT của BCTC. Hệ số tương quan Pearson Correlation là -0.229 thể hiện tác động ngược chiều đến TKT của BCTC khác với giả thuyết H5 đặt ra. Tạm thời có thể kết luận các công ty có báo cáo tài chính hợp nhất thì TKT càng thấp.

- Nhân tố loại BCTC có giá trị hệ số tương quan (Sig.) là 0.000 < 0.01 (mức ý nghĩa 1%) cho thấy biến độc lập này có ý nghĩa về mặt thống kê với biến phụ thuộc TKT của BCTC. Hệ số tương quan Pearson Correlation là 0.127 thể hiện tác động cùng chiều đến tính kịp thời của BCTC phù hợp với giả thuyết H6 đặt ra. Tạm thời có thể kết luận các công ty được kiểm toán bởi các công ty kiểm toán Big 4 thì TKT càng cao.

- Nhân tố Loại ý kiến kiểm toán có giá trị hệ số tương quan (Sig.) là 0.000 < 0.01 (mức ý nghĩa 1%) cho thấy biến độc lập này có ý nghĩa về mặt thống kê với biến phụ thuộc TKT của BCTC. Hệ số tương quan Pearson Correlation là 0.174 thể hiện tác động cùng chiều đến tính kịp thời của BCTC phù hợp với giả thuyết H7 đặt ra. Tạm thời có thể kết luận các công ty có ý kiến chấp nhận toàn phần của kiểm toán thì TKT càng cao.

Bảng 3.10 cho thấy, chỉ có 6 biến độc lập đó là SIZE, ROE, NGANH, CTKT, BCTC, YKKT có tương quan với biến phụ thuộc TKT. Biến còn lại là LV không tương quan với biến phụ thuộc (Sig. > 0.05) nên loại khỏi mô hình. Các biến độc lập ROE, NGANH, CTKT và YKKT tương quan cùng chiều với biến TKT; biến SIZE và biến BCTC tương quan nghịch chiều với biến TKT.

### 3.2. Kết quả phân tích hồi quy

Nghiên cứu thực hiện chạy hồi quy tuyến tính đa biến với phương pháp đưa vào một lượt (phương pháp Enter), trong đó:

- TKT: biến phụ thuộc mã hóa dựa vào biến TKT (1: Từ 90 ngày trở lên; 2: Từ 60 đến 90 ngày; 3: Từ 30 đến 60 ngày; 4: Nhỏ hơn 30 ngày)

- SIZE, ROE, NGANH, CTKT, BCTC, YKKT là các biến độc lập theo thứ tự sau: Quy mô DN, Lợi nhuận kinh doanh, Lĩnh vực kinh doanh của DN, Loại công ty kiểm toán của DN, Loại BCTC của DN, Loại ý kiến kiểm toán của công ty kiểm toán.

**Bảng 8. Phương pháp nhập các biến vào phần mềm SPSS**

Variables Entered/Removed <sup>a</sup>			
Model	Variables Entered	Variables Removed	Method
1	YKKT, BCTC, NGANH, CTKT, ROE, SIZ <sup>Eb</sup>		Enter

a. Dependent Variable: TKT

b. All requested variables entered.

Nguồn: Thống kê dữ liệu từ SPSS

### 3.3. Đánh giá mức độ phù hợp của mô hình hồi quy tuyến tính bội

Theo Hoàng Trọng và Chu Nguyễn Mộng Ngọc (2008), hệ số xác định  $R^2$  được chứng minh là hàm không giảm theo số biến độc lập được đưa vào mô hình, càng đưa theo biến độc lập vào mô hình thì  $R^2$  càng tăng. Tuy nhiên, điều này cũng được chứng minh rằng, không phải phương trình càng có nhiều biến sẽ càng phù hợp hơn với dữ liệu. Trong trường hợp này, hệ số xác định  $R^2$  hiệu chỉnh được sử dụng để phản ánh chính xác hơn mức độ phù hợp với mô hình hồi quy tuyến tính bội.  $R^2$  hiệu chỉnh không nhất thiết tăng lên khi nhiều biến độc lập được đưa thêm vào phương trình, nó là thước đo sự phù hợp được sử dụng cho tình huống hồi quy tuyến tính bội vì nó không phụ thuộc vào độ phóng đại của  $R^2$ .

**Bảng 9. Đánh giá mức độ phù hợp của mô hình hồi quy tuyến tính bội**

Model Summary <sup>b</sup>										
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.467 <sup>a</sup>	.218	.213	.429	.218	50.515	6	1089	.000	2.020

a. Predictors: (Constant), YKKT, BCTC, NGANH, CTKT, ROE, SIZE

b. Dependent Variable: TKT

Nguồn: Thống kê dữ liệu từ SPSS

Bảng 9 cho thấy, giá trị hệ số xác định hiệu chỉnh là 0.213, nghĩa là mô hình hồi quy tuyến tính đã xây dựng phù hợp với dữ liệu 21.3%. Nói cách khác, 21.3% khoảng biến thiên trong tính kịp thời của BCTC được dự đoán phụ thuộc vào 6 biến độc lập, với độ tin cậy 95%.

Hệ số Durbin-Watson là 2.020,  $k' = 6$ ,  $n = 1096$ , tra bảng DW ta có  $dL = 1.887$  và  $dU = 1.910$ . Gắn vào thanh giá trị Durbin-Watson (Nếu  $dU < DW < 4-dU$ , kết luận rằng không có sự tự tương quan bậc nhất), ta thấy  $1.887 < 2.020 < 2.090$ , như vậy, không có sự tương quan chuỗi bậc nhất trong mô hình.

### 3.4. Kiểm định độ phù hợp của mô hình hồi quy tuyến tính bội

Kiểm định F về tính phù hợp của mô hình hồi quy tuyến tính tổng thể. Kiểm định này cho chúng ta biết biến phụ thuộc có tương quan tuyến tính với toàn bộ các biến độc lập hay không.

Giả thuyết  $H_0$  là:  $\beta_0 = \beta_1 = \beta_2 = \beta_3 = \beta_4 = \beta_5 = \beta_6 = \beta_7 = 0$

Kiểm định F và giá trị sig.

Nếu giả thuyết  $H_0$  bị bác bỏ, chúng ta có thể kết luận các biến độc lập trong mô hình có thể giải thích được sự thay đổi của biến phụ thuộc, điều này đồng nghĩa mô hình xây dựng phù hợp với tập dữ liệu các biến.

**Bảng 10. Kiểm định tính phù hợp của mô hình hồi quy tuyến tính bội**

ANOVA <sup>a</sup>						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	55.658	6	9.276	50.515	.000 <sup>b</sup>
	Residual	199.977	1.089	.184		
	Total	255.635	1.095			

a. Dependent Variable: TKT

b. Predictors: (Constant), YKKT, BCTC, NGANH, CTKT, ROE, SIZE

*Nguồn: Thống kê dữ liệu từ SPSS*

Giá trị Sig của kiểm định F là  $0.000 < 0.05$  và  $F = 50.515 > F$ . Điều này có ý nghĩa là các biến độc lập trong mô hình có tương quan tuyến tính với biến phụ thuộc, tức là sự kết hợp của các biến độc lập có thể giải thích được sự thay đổi của biến phụ thuộc. Mô hình hồi quy tuyến tính bội được xây dựng phù hợp với tổng thể và có thể sử dụng được.

### 3.5. Kiểm định giả thuyết về ý nghĩa của các hệ số hồi quy

**Bảng 11. Bảng kết quả các trọng số hồi quy**

Coefficients <sup>a</sup>								
Model		Unstandardized Coefficients		Standardized Coefficients	$t_{stat}$	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	2.369	.277		8.549	.000		
	SIZE	-.023	.010	-.079	-2.295	.022	.604	1.655
	ROE	.009	.001	.190	6.801	.000	.919	1.088
	NGANH	.240	.027	.248	8.868	.000	.916	1.091
	CTKT	.152	.030	.152	5.144	.000	.818	1.222
	BCTC	-.159	.033	-.156	-4.870	.000	.702	1.424
	YKKT	.144	.042	.095	3.433	.001	.942	1.061

a. Dependent Variable: TKT

*Nguồn: Thống kê dữ liệu từ SPSS*

Bảng 9 và 11, cho thấy hệ số  $< 0.8$  và hệ số phóng đại phương sai VIF của các biến độc lập trong mô hình này đều nhỏ hơn 10 cho thấy không có hiện tượng đa cộng tuyến xảy ra.

Nhìn vào giá trị Sig kiểm định từng biến độc lập, thấy được các biến SIZE, ROE, NGANH, CTKT, BCTC, YKKT có giá trị Sig nhỏ hơn hoặc bằng 0.05 có nghĩa là các biến đó có ý nghĩa trong mô hình, với mức ý nghĩa 5%.

Hệ số Beta của các biến cho thấy biến SIZE và biến BCTC có tác động nghịch chiều với biến phụ thuộc TKT, các biến còn lại có tác động thuận chiều với biến phụ thuộc, với mức ý nghĩa 5%.



### 3.6. Kiểm định giả định phương sai của sai số (phần dư) không đổi

Để kiểm định giả định phương sai của sai số (phần dư) không đổi, ta sử dụng đồ thị phân tán của phần dư đã được chuẩn hóa (Standardized Residual) và giá trị dự báo đã được chuẩn hóa (Standardized predicted value).

**Bảng 12. Bảng kiểm định giả định phương sai của sai số**

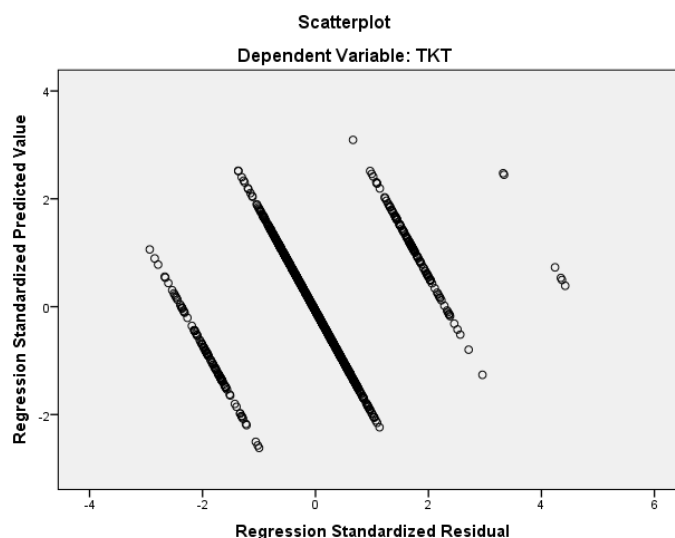
Residuals Statistics <sup>a</sup>					
	Minimum	Maximum	Mean	Std. Deviation	N
Std. Predicted Value	-3.120	3.202	.000	1.000	1.096
Std. Residual	-3.959	5.392	.000	.997	1.096

a. Dependent Variable: TKT

*Nguồn: Thống kê dữ liệu từ SPSS*

Biểu đồ 1 cho thấy các phần dư phân tán ngẫu nhiên quanh trục O (là quanh giá trị trung bình của phần dư) trong một phạm vi không đổi. Điều này có nghĩa là phương sai của phần dư không đổi.

**Biểu đồ 1. Biểu đồ phân tán giữa giá trị dự đoán và phần dư từ hồi quy**



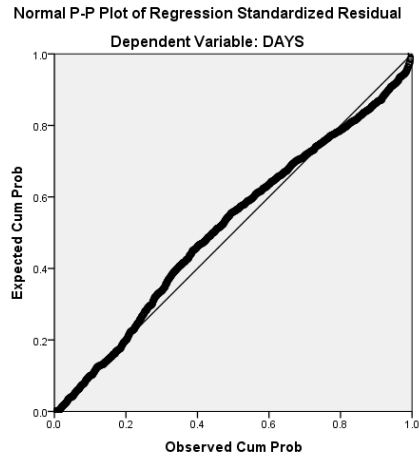
*Nguồn: Thống kê dữ liệu từ SPSS*

### 3.7. Kiểm tra giả định các phần dư có phân phối chuẩn

Phần dư có thể không tuân theo phân phối chuẩn vì những lý do như sử dụng sai mô hình, phương sai không phải là hằng số, số lượng các phần dư không đủ nhiều để phân tích (Hoàng Trọng và Mộng Ngọc, 2008). Biểu đồ tần số (Histogram, Q-Q plot, P-P plot) của các phần dư đã được chuẩn hóa được sử dụng để kiểm tra giả định này.

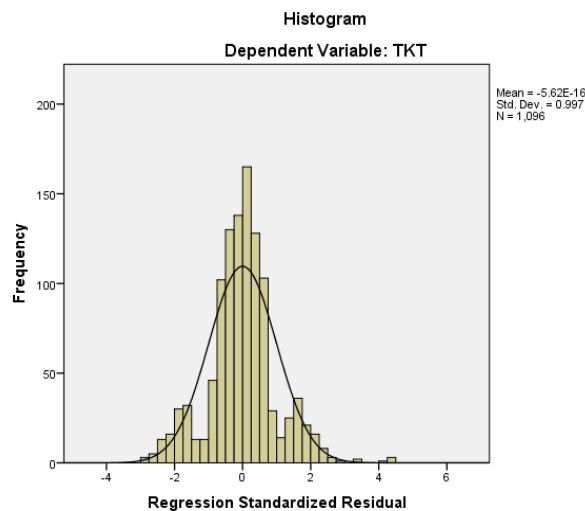
Kết quả từ biểu đồ tần số P-P plot cho thấy các điểm phân tán xung quanh được kỳ vọng. Cũng cho thấy giả định phân phối chuẩn của phần dư không bị vi phạm.

## Biểu đồ 2. Đồ thị P-P Plot của phần dư - đã chuẩn hóa



Nguồn: Thống kê dữ liệu từ SPSS

## Biểu đồ 3. Đồ thị Histogram của phần dư - đã chuẩn hóa



Nguồn: Thống kê dữ liệu từ SPSS

Kết quả từ biểu đồ tần số Histogram của phần dư (Biểu đồ 3) cho thấy, phân phối của phần dư xấp xỉ chuẩn (trung bình Mean lệch với 0 vì số quan sát khá lớn, độ lệch chuẩn Std. Dev = 0.997). Điều này có nghĩa là giả thuyết phân phối chuẩn của phần dư không bị vi phạm.

Kiểm định Durbin Watson = 2.020 (bảng 9 trong khoảng  $[1 < D < 3]$ ) nên không có hiện tượng tương quan của các phần dư (Hoàng Trọng và Mộng Ngọc, 2008).

### 3.8. Kiểm tra giả định không có mối tương quan giữa các biến độc lập (Hiện tượng đa cộng tuyến)

Cộng tuyến là trạng thái trong đó các biến độc lập có tương quan chặt chẽ với nhau. Vấn đề của hiện tượng đa cộng tuyến là cung cấp cho mô hình những thông tin rất giống nhau và rất khó tách rời ảnh hưởng của từng biến một đến biến phụ thuộc. Hiệu ứng khác của sự tương quan khá chặt chẽ giữa các biến độc lập là nó làm tăng độ lệch chuẩn của các hệ số hồi quy và làm giảm giá trị thống kê của kiểm định ý nghĩa của chúng nên các hệ số

có khuynh hướng kém ý nghĩa hơn khi không có hiện tượng đa cộng tuyến và hệ số vẫn khá cao (Hoàng Trọng và Chu Nguyễn Mộng Ngọc, 2008).

Để kiểm tra hiện tượng đa cộng tuyến, chỉ số thường dùng là hệ số phóng đại phương sai VIF (Variance Inflation Factor). Thông thường nếu  $R^2 < 0.8$  và VIF của một biến độc lập nào đó  $> 5$  hoặc hệ số Tolerance  $< 0.5$  thì biến này không có giá trị giải thích biến thiên của biến phụ thuộc trong mô hình tuyến tính bội (Lê Quang Hùng, 2015).

Bảng 9 và 11 cho thấy hệ số  $R^2 < 0.8$  và hệ số phóng đại phương sai VIF của các biến độc lập trong mô hình này đều nhỏ hơn 5 (lớn nhất là 1.655) và hệ số Tolerance đều lớn hơn 0.5 (nhỏ nhất là 0.604) cho thấy không có hiện tượng đa cộng tuyến xảy ra (Lê Quang Hùng, 2015).

### **3.9. Đánh giá mức độ tác động của các yếu tố ảnh hưởng đến tính kịp thời của Báo cáo tài chính các công ty niêm yết trên thị trường chứng khoán Việt Nam**

Trọng số hồi quy được thể hiện dưới hai dạng (1) chưa chuẩn hóa (Unstandardized estimate) và (2) chuẩn hóa (Standardized estimate). Vì trọng số hồi quy chưa chuẩn hóa, giá trị của nó phụ thuộc vào thang đo và mặt khác các biến độc lập có đơn vị khác nhau nên chúng ta không thể dùng chúng để so sánh mức độ tác động của các biến độc lập vào biến phụ thuộc trong cùng mô hình được. Trọng số hồi quy chuẩn hóa được dùng để so sánh mức độ tác động của các biến phụ thuộc vào biến độc lập. Biến độc lập nào có trọng số này càng lớn có nghĩa biến đó tác động mạnh vào biến phụ thuộc.

Căn cứ vào bảng 10, từ thông số thống kê trong mô hình hồi quy, phương trình hồi quy tuyến tính bội của các yếu tố tác động tới tính kịp thời của BCTC các DN niêm yết trên sàn CKVN với các hệ số chuẩn hóa như sau:

$$\text{TKT} = -0.079 \text{ SIZE} + 0.190 \text{ ROE} + 0.248 \text{ NGANH} + 0.152 \text{ CTKT} - 0.156 \text{ BCTC} + 0.095 \text{ YKKT}$$

Các hệ số hồi quy mang dấu dương thể hiện các yếu tố trong mô hình hồi quy trên ảnh hưởng tỷ lệ thuận đến tính kịp thời của BCTC và ngược lại, các hệ số hồi quy mang dấu âm thể hiện các yếu tố trong mô hình hồi quy ảnh hưởng tỷ lệ nghịch đến tính kịp thời của BCTC.

**Bảng 13. Bảng so sánh kết quả mô hình và kỳ vọng**

STT	Biến	Kỳ vọng	Kết quả
1	SIZE	-	-
2	LV	-	N/A
3	ROE	+	+
4	NGANH	+	+
5	CTKT	+	+
6	BCTC	+/-	-
7	YKKT	+	+

Theo bảng 13, kết quả đạt được gần với kỳ vọng ban đầu tác giả đã đặt ra ban đầu, trong các nhân tố thì nhân tố SIZE và BCTC đi ngược lại với kỳ vọng, tuy nhiên nó có thể giải thích được và đồng quan điểm với một số nghiên cứu trước đây.

## 4. Kết luận và hàm ý

### 4.1. Kết quả

Kết quả phân tích hồi quy đa biến cho thấy có 6 nhân tố ảnh hưởng đến tính kịp thời của BCTC là: Quy mô doanh nghiệp, Hiệu quả kinh doanh, Lĩnh vực kinh doanh, và Công ty kiểm toán, Loại BCTC và Loại ý kiến kiểm toán.

Các nhân tố có tác động:

Quy mô doanh nghiệp (SIZE) là yếu tố đầu tiên có tác động nghịch chiều đến tính kịp thời của BCTC và mức ý nghĩa thống kê là 5%. Kết quả nghiên cứu thể hiện rằng thời hạn công bố BCTC của công ty có quy mô lớn hơn sẽ dài hơn thời hạn công bố BCTC của công ty có quy mô nhỏ hơn. Kết quả nghiên cứu phù hợp với giả thuyết H4 đã xây dựng ban đầu đồng thời tương tự với kết quả nghiên cứu Ahmed và Hossain (2010).

Mối quan hệ thuận chiều giữa Lợi nhuận công ty (ROE) và tính kịp thời được thể hiện rất rõ, là yếu tố có tác động lớn nhất trong các yếu tố tác động thuận chiều tới tính kịp thời của BCTC. Nó thể hiện rằng nếu công ty có lợi nhuận càng cao thì công ty sẽ công bố thông tin càng sớm để các nhà đầu tư có thể thấy được tình trạng tốt của công ty, kỳ vọng sẽ thu hút nhiều nhà đầu tư hơn, giá cổ phiếu công ty có thể tăng lên tận dụng các lợi thế trên thị trường cũng như các khoản thưởng cho ban giám đốc công ty và ngược lại nếu công ty thua lỗ công ty sẽ công bố chậm trễ hơn bởi nếu công bố sớm thì kỳ vọng sẽ ngược lại. Kết quả thuận chiều đó giống với các nghiên cứu trước đây của Carslaw và Kaplan (1991), Afify (2009).

- Yếu tố Lĩnh vực kinh doanh là yếu tố thứ hai trong mô hình tác động thuận chiều tới tính kịp thời của BCTC. Kết quả nghiên cứu cho thấy, các DN thuộc ngành sản xuất CBTT kịp thời hơn các DN phi sản xuất. Kết quả này ngược lại với nghiên cứu trước đây của Ashton et al (1987), Carslaw và Kaplan (1991). Avoib Che-Ahmad và Shamharir Abidin (2008) và phù hợp với kết quả của Turel (2010) cho thấy các công ty làm việc trong ngành công nghiệp sản xuất đã có báo cáo kịp thời hơn. Trên thực tế, điều này có thể giải thích là do các DN sản xuất thường có nhân sự nhiều hơn nên tổ chức công tác kế toán mang tính chuẩn mực, quy củ hơn các DN phi sản xuất.

- Loại công ty kiểm toán (CTKT) là yếu tố thứ ba trong mô hình tác động thuận chiều tới tính kịp thời của BCTC, cho rằng các doanh nghiệp được kiểm toán bởi các công ty Big Four công bố thông tin kịp thời hơn bởi nhiều yếu tố của quy mô công ty kiểm toán như sự chuyên nghiệp của kiểm toán viên, kinh nghiệm, uy tín, linh hoạt của các công ty kiểm toán sẽ cho ra kết quả sớm hơn. Kết quả trên phù hợp với đa phần các tác giả nghiên cứu như Gilling (1977), Raja Adzrin Raja Ahmad và Khairul Anuar Bin Kamarudin (2003).

- Loại BCTC là yếu tố có tác động nghịch chiều đến tính kịp thời của BCTC. Kết quả nghiên cứu thể hiện rằng thời hạn công bố BCTC hợp nhất sẽ dài hơn thời hạn công bố BCTC riêng lẻ. Kết quả này phù hợp với dự kiến ban đầu. Cũng giống như các quốc gia khác, thời gian lập BCTC hợp nhất của các công ty ở Việt Nam lâu hơn nhiều so với việc lập BCTC riêng lẻ, vì BCTC hợp nhất phức tạp và cần nhiều thời gian để tổng hợp số liệu từ các công ty thành viên. Điều này đã ảnh hưởng đến TKT của BCTC, do đó để giảm thời hạn công bố BCTC, các công ty mẹ cần phải giảm thời hạn lập BCTC hợp nhất. Kết quả thuận chiều này giống với nghiên cứu trước đây của Aktas và Kargin (2011).

Kết quả nghiên cứu cho thấy, ý kiến của kiểm toán viên cũng là nhân tố có ảnh hưởng đến tính kịp thời của BCTC. Khi DN nhận được ý kiến kiểm toán chấp nhận toàn phần, đồng nghĩa với việc họ nhận được những thông tin tốt từ công ty kiểm toán, do đó họ sẽ CBTT sớm hơn các DN nhận được ý kiến kiểm toán dạng khác. Điều này phù hợp với kết quả nghiên cứu của Asl Turel (2010) và Bengu Vuran và Burcu Adiloglu (2013).

## **4.2. Hàm ý từ kết quả nghiên cứu**

### **4.2.1. Đối với các cơ quan quản lý**

Có thể nói việc chậm công bố thông tin BCTC luôn là chủ đề nóng đối với các DNNY tại Việt Nam. Kết thúc thời hạn công bố thông tin luôn có tình trạng các SGDCCK phải nêu tên, ra văn bản nhắc nhở các doanh nghiệp vi phạm và bị Ủy ban chứng khoán Nhà nước xem xét xử phạt hành chính. Trên cơ sở kết quả nghiên cứu về ảnh hưởng của các nhân tố đến tính kịp thời của BCTC, tác giả đề xuất các kiến nghị tập trung vào nhóm các nhân tố tác động đến tính kịp thời của BCTC như sau: Tuân thủ quy định chặt chẽ của Bộ Tài chính và của Ủy ban Chứng khoán Nhà nước, xem xét thay đổi niên độ kế toán, tuân thủ quy định chặt chẽ về kế toán. Đối với các công ty thực hiện BCTC hợp nhất cần đồng nhất quy trình khóa sổ, lập BCTC hợp nhất và quá trình này cần có cán bộ giám sát thực hiện, tùy vào thực trạng, quy mô, mức độ khối lượng công việc để lựa chọn công ty kiểm toán phù hợp.

Tăng cường phối hợp với các phương tiện thông tin đại chúng trong việc truyền thông về thông tin TTCK, nó rất cần thiết đặc biệt cho những người quan tâm tới chất lượng thông tin của TTCK ở các phương tiện đó, những doanh nghiệp vi phạm, xử phạt phải được công bố thông tin rộng rãi, để các nhà đầu tư có thể nắm được thông tin cũng như nếu có khắc phục hậu quả phải cam kết thời gian và biện pháp sao cho cụ thể hợp lý. Bên cạnh đó, đa phần các công ty đều chờ gần đến hạn phát hành BCTC mới công bố thông tin, làm cho tính linh hoạt của thị trường bị chậm đi rất nhiều, vậy nên cần có những chính sách khuyến khích đối với những công ty phát hành BCTC sớm và công bố cho các nhà đầu tư một cách nhanh chóng các công ty đó. Đồng thời, tác giả cũng đề xuất kiến nghị đối với các cơ quan quản lý cần tăng cường giám sát doanh nghiệp hoạt động kém, thắt chặt quy định công bố thông tin, đưa ra những chế tài nghiêm khắc, rút ngắn thời hạn công bố BCTC.

### **4.2.2. Đối với các doanh nghiệp niêm yết**

- Đối với các doanh nghiệp có quy mô lớn cần có những biện pháp để thực hiện kiểm toán kịp thời và công bố thông tin đúng hạn. Một vài kiến nghị như:

- + Doanh nghiệp có quy mô lớn việc bắt buộc phải xây dựng và tuân thủ quy trình chặt chẽ về kế toán, xây dựng bộ máy kế toán chuyên nghiệp với các quy trình phân công công việc cụ thể rõ ràng hơn... nhằm nâng cao tính kịp thời và chất lượng thông tin kế toán duy trì hình ảnh của DN trong mắt các Nhà đầu tư, nhằm thu hút hiệu quả hơn vốn đầu tư.

- + Quá trình tuyển dụng nhân viên kế toán của DN lớn cũng yêu cầu nhân viên có trình độ và chuyên môn cao hơn so với các doanh nghiệp nhỏ nhằm hạn chế thấp nhất các sai sót cũng như việc không hiểu hết bản chất công việc được giao dẫn đến BCTC chậm trễ.

+ Các công ty có quy mô lớn nên chọn những công ty kiểm toán hàng đầu như Big Four, với kinh nghiệm cũng như đội ngũ nhân viên chuyên nghiệp sẽ giúp việc kiểm toán được tiến hành nhanh chóng và chính xác hơn.

- Yếu tố lợi nhuận kinh doanh được đo lường bằng ROE với ý nghĩa là cứ 1 đồng vốn chủ sở hữu đầu tư vào doanh nghiệp thì mang về bao nhiêu đồng lợi nhuận. Kết quả nghiên cứu cho thấy các công ty có hiệu quả kinh doanh tốt thường công bố BCTC kịp thời hơn các công ty có hiệu quả kinh doanh thấp. Do đó, giải pháp đưa ra là nhằm để tăng tính kịp thời ở các công ty có hiệu quả kinh doanh thấp. Nên tác giả kiến nghị các công ty có hiệu quả kinh doanh thấp cần có những giải pháp nâng cao hiệu quả kinh doanh đồng thời có các biện pháp nhằm giám sát việc công bố thông tin kịp thời đến các đối tượng sử dụng thông tin của BCTC như:

- + Tăng doanh thu tiêu thụ sản phẩm; cắt giảm chi phí hữu ích như: chi phí nghiên cứu phát triển, chi phí quảng cáo, chi phí duy tu bảo dưỡng thiết bị;

- + Phân đầu giảm chi phí sản xuất và hạ giá thành sản phẩm;

- + Sử dụng vốn chủ sở hữu một cách có hiệu quả.

- Việc lựa chọn công ty kiểm toán, tùy vào quy mô, ngành sản xuất và nhiều yếu tố khác để doanh nghiệp có thể chọn cho công ty mình công ty kiểm toán phù hợp:

- + Đối với các công ty sản xuất, nhiều công ty con, mức độ công việc phức tạp nên chọn những công ty kiểm toán lớn, kinh nghiệm và uy tín để công việc kiểm toán có thể thực hiện chính xác và kịp thời.

- + Và ngược lại đối với công ty phi sản xuất, khối lượng công việc ít hơn cũng có thể lựa chọn cho mình tuy nhiên cần chú ý hơn tới các quy định liên quan, bởi chỉ có những công ty kiểm toán nào được BTC cho phép mới được kiểm toán cho các công ty niêm yết.

- Kết quả nghiên cứu cho thấy loại BCTC là yếu tố có ảnh hưởng đến TKT của BCTC. Các công ty có BCTC riêng lẻ thường công bố thông tin kịp thời hơn các công ty thực hiện BCTC hợp nhất do công ty hợp nhất phải đợi các công ty con chốt số liệu báo cáo cuối năm sau đó mới tiến hành xử lý và thời gian kiểm toán BCTC hợp nhất sẽ dài hơn các BCTC riêng lẻ. Do vậy, tác giả đề xuất những kiến nghị để giúp những công ty thực hiện BCTC hợp nhất rút ngắn thời gian công bố BCTC nhằm đảm bảo tính kịp thời gồm:

- \* *Thứ nhất*, đồng nhất quy trình khóa sổ và lập BCTC hợp nhất. Doanh nghiệp nên xây dựng và triển khai quy trình khóa sổ kế toán và lập BCTC một cách đồng bộ cho tất cả các đơn vị trong tập đoàn. Quy trình đồng nhất này phải đảm bảo một số yêu cầu tối thiểu sau:

- Đồng nhất về chính sách kế toán áp dụng: các hoạt động kinh doanh tương tự nhau trên phạm vi toàn bộ tập đoàn cần được ghi nhận và xử lý theo cùng một chính sách, một phương án thống nhất. Điều này đảm bảo số liệu ghi nhận giữa các đơn vị có sự tương đồng và thể hiện đầy đủ hoạt động của toàn bộ tập đoàn. Quá trình này không chỉ bao gồm đồng bộ các chính sách ghi nhận nghiệp vụ kinh tế phát sinh, mà còn đồng bộ về quá trình lập BCTC, đồng bộ các thủ tục kiểm soát được thiết lập trong quá trình như thực hiện các

bút toán điều chỉnh cuối kỳ, quá trình soát xét, kiểm tra và phê duyệt BCTC. Đồng nhất hệ thống mẫu biểu báo cáo: các mẫu biểu báo cáo, bao gồm cả báo cáo tổng hợp và báo cáo chi tiết cần được quy định đầy đủ, đồng nhất và thống nhất áp dụng giữa các đơn vị thành viên.

- Quy định về thời hạn hoàn thành báo cáo giữa các đơn vị: để đáp ứng thời gian hoàn thành BCTC hợp nhất thì BCTC các công ty con, công ty liên kết trong tập đoàn cũng cần phải được hoàn thành trong thời gian phù hợp.

\* *Thứ hai*, hướng dẫn và giám sát thực hiện. Các hệ thống chính sách, thủ tục, mẫu biểu đã được thiết lập cần được phổ biến đầy đủ tới các đơn vị thành viên, tới những người trực tiếp làm nhiệm vụ ghi chép kế toán phục vụ cho quá trình hợp nhất. Việc đào tạo, phổ biến kiến thức cần được làm thường xuyên, nhằm đảm bảo hệ thống nhân sự nắm bắt, cập nhật đầy đủ những yêu cầu mới, những khó khăn phát sinh. Quá trình này cũng nhằm đảm bảo trong trường hợp có sự thay đổi về nhân sự kế toán thì những người mới đảm trách công việc có thể đáp ứng yêu cầu. Việc lập thử nghiệm BCTC hợp nhất có thể được tiến hành để xác định trước các vấn đề phát sinh và có thời gian xử lý kịp thời. Ngoài ra, trong quá trình lập BCTC hợp nhất, các doanh nghiệp cũng nên có một bộ phận hoặc cán bộ giám sát quá trình hợp nhất. Quá trình giám sát có thể đối với việc thực hiện ghi chép ban đầu tại các đơn vị thành viên, việc tuân thủ các quy định về mẫu biểu, thông tin, chính sách cũng như đáp ứng yêu cầu về thời hạn. Bộ phận giám sát cũng có thể là nơi nắm bắt và giải đáp các thắc mắc, khó khăn phát sinh tại đơn vị. Đảm bảo rằng, các vấn đề phát sinh tại mỗi đơn vị cục bộ đã được giải quyết trước khi lập BCTC và hơn nữa, nếu đó là những vấn đề liên quan đến toàn bộ tập đoàn thì cần được phổ biến đến tất cả các đơn vị liên quan.

\* *Thứ ba*, nâng cao chất lượng nguồn nhân lực kế toán. Với một đội ngũ nhân viên kế toán giỏi và dày dặn kinh nghiệm, BCTC của doanh nghiệp không chỉ được lập một cách nhanh chóng mà còn đảm bảo về mặt chất lượng.

Cần nâng cao năng lực chuyên môn và đạo đức của đội ngũ nhân viên kế toán trong DN để có thể kịp thời lập BCTC theo quy định của pháp luật và đảm bảo tính trung thực, khách quan, từ đó tạo điều kiện thuận lợi cho công việc kiểm toán của các kiểm toán viên và rút ngắn thời gian công bố BCTC. Lựa chọn công ty kiểm toán có uy tín, chuyên nghiệp để góp phần tăng sự đảm bảo của BCTC được soát xét. Các công ty niêm yết cần nhận thức về những tác động tích cực của việc công bố thông tin kịp thời đến người sử dụng như là một tiêu chí thể hiện trách nhiệm của mình đối với xã hội, thể hiện uy tín, hình ảnh và vị thế của mình trên thị trường chứng khoán. Vì vậy các công ty nên có giải pháp hạn chế tình trạng chậm công bố thông tin BCTC trong tương lai.

#### 4.2.3. Đối với công ty kiểm toán

Biên công ty kiểm toán có ý nghĩa, nhóm công ty kiểm toán Big Four vẫn được nhà đầu tư đánh giá cao. Do đó, các công ty kiểm toán cần cải thiện chất lượng kiểm toán nhằm nâng cao sự tin cậy của công chúng vào kết quả kiểm toán. Để nâng cao hiệu quả kiểm toán, các công ty kiểm toán lập kế hoạch kiểm toán cụ thể, xây dựng mô hình kiểm toán một cách chặt chẽ, có hệ thống và khoa học hơn. Đồng thời, các công ty kiểm toán cần thường xuyên kiểm tra tính hiệu quả, tính tuân thủ kiểm toán của công ty.

Trong bối cảnh Việt Nam hiện nay có nhiều công ty kiểm toán đang hoạt động và Big Four là nhóm công ty đang có uy tín nhất. Các công ty kiểm toán quy mô vừa và nhỏ nên phát triển theo hướng chuyên nghiệp hóa như các công ty kiểm toán Big Four.

#### 4.2.4. Đối với nhà đầu tư

Phần lớn các nhà đầu tư ở Việt Nam còn hạn chế về khả năng phân tích, đọc hiểu nội dung của BCTC, đa phần là đầu tư theo nhóm, theo số đông và phong trào cộng với sự thay đổi thất thường của TTCK ở Việt Nam, nên khi đưa ra quyết định đầu tư, nhà đầu tư cần thận trọng, hiểu rõ thực trạng doanh nghiệp mà mình dự tính đầu tư. Nhà đầu tư nên tự trang bị cho mình những vốn kiến thức cần thiết cộng với nắm rõ các quy định pháp lý, để hiểu được doanh nghiệp đó công bố thông tin có chính xác, có kịp thời hay không, hay tại sao doanh nghiệp mình muốn đầu tư lại chậm công bố thông tin BCTC, tại sao các BCTC quý 1, 2, 3 lời mà cả năm doanh nghiệp lại lỗ... từ đó đưa ra những quyết định phù hợp.

Thường xuyên theo dõi thông tin được công bố trên các phương tiện thông tin đại chúng để nắm được các doanh nghiệp nào thường xuyên vi phạm quy định công bố thông tin, vi phạm chất lượng BCTC để có thể đầu tư vốn một cách hợp lý.

Như vậy thông qua việc tìm hiểu cơ sở lý thuyết và tổng quan các nghiên cứu trước liên quan đến đề tài về tính kịp thời của BCTC của các DNNY, tác giả đề xuất mô hình nghiên cứu các nhân tố ảnh hưởng đến tính kịp thời của BCTC của các doanh nghiệp niêm yết trên TTCK Việt Nam bao gồm 7 nhân tố: Quy mô doanh nghiệp, Đòn bẩy tài chính, Lợi nhuận kinh doanh, Lĩnh vực kinh doanh, Loại công ty kiểm toán, Loại báo cáo tài chính, Loại ý kiến kiểm toán từ đó đề xuất ra các hàm ý chính sách nhằm tăng cường hiệu quả của việc công bố kịp thời thông tin BCTC.

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# CÁC NHÂN TỐ ẢNH HƯỞNG TỚI ĐỘC LẬP TÀI CHÍNH Ở GIỚI TRẺ

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## **Tóm tắt**

Nghiên cứu đánh giá tác động của các nhân tố ảnh hưởng tới độc lập tài chính ở giới trẻ. Kết quả nghiên cứu cho thấy: 4 nhân tố ảnh hưởng tới quyết định độc lập tài chính ở giới trẻ đó là nhân khẩu học (tuổi, giới tính và trình độ học vấn), tài chính cá nhân, yếu tố cá nhân và yếu tố xã hội. Những yếu tố đó đều có mức độ ảnh hưởng khác nhau và hầu hết các nhân tố đó đều ảnh hưởng tích cực đến quyết định độc lập tài chính của giới trẻ.

**Từ khóa:** Độc lập tài chính, quản lý tài chính cá nhân, chi tiêu, tiết kiệm, giới trẻ

## **Abstract**

*This study assesses the impact of factors affecting financial independence of young adults include demographics (age, gender and education level), personal finance, personal factors and social element. These factors have a positive influence on the financial independence decision of young people. In which, the personal finance variable has the strongest impact on financial independence decisions in young adults.*

**Keywords:** *financial independence, personal financial management, spending, savings, young adults*

## **1. Giới thiệu**

Xu hướng độc lập tài chính trước phát triển rất mạnh ở các nước đang phát triển như Mỹ, Anh... Theo một phân tích mới của Trung tâm Nghiên cứu Pew (PRC) - Trung tâm cung cấp thông tin về các vấn đề xã hội, dư luận và xu hướng nhân khẩu học đang định hình Hoa Kỳ và thế giới khảo sát đa số người Mỹ đều nói rằng thanh niên nên độc lập tài chính ở độ tuổi 22. Tuy nhiên, thực tế khi PRC phân tích dữ liệu của Cục điều tra dân số Mỹ (USCB) cho thấy rằng chỉ 24% thanh niên được coi là độc lập tài chính vào năm 22 tuổi, so với 32% vào năm 1980. Và cũng trong điều tra này, PRC chỉ ra rằng 45% người lớn trong độ tuổi từ 18-29 nhận được sự giúp đỡ tài chính từ cha mẹ, trong khi 59% cha mẹ nói rằng họ hỗ trợ con cái trưởng thành. Một vài năm tham gia vào lực lượng lao động làm tăng đáng kể tỷ lệ thanh niên được coi là độc lập về tài chính. Tính đến năm họ 29 tuổi, con số này là 47% thanh niên độc lập tài chính vào năm 2018, so với 50% năm 1980.

Có thể nhận thấy rằng để đạt được độc lập tài chính thì có sự tác động của nhiều yếu tố như tâm lý, gia đình, hành vi cá nhân... Nghiên cứu của Lephe và Mortimer vào năm 2009 đã đo lường sự độc lập về tài chính của thanh niên bằng cách kiểm tra tỷ lệ phần trăm chi phí sinh hoạt của họ đến từ thu nhập hoặc tiết kiệm của chính họ hoặc từ thu nhập và/hoặc tiết kiệm của vợ/chồng hoặc bạn đời của họ ở độ tuổi 23-24. Kết quả cho thấy ở độ tuổi 23-24, 73,7% số người được hỏi cho biết họ độc lập về tài chính và có thể tự trang trải chi phí. Một nghiên cứu của Hà Lan được thực hiện bởi Billari và Liefbroer vào năm 2007 về sự độc lập tài chính của thanh niên, ảnh hưởng của các chi phí và lợi ích kinh tế tới tình hình độc lập tài chính của thanh niên. Hiệu quả kinh tế cũng được coi là một yếu tố quan trọng để thanh

niên độc lập về tài chính. Yếu tố này đã được đo lường bằng cách kết hợp thông tin từ các câu hỏi liên quan đến kỳ vọng trong tương lai, công việc và quyền sở hữu nhà. Một yếu tố ít được nhắc đến là giới tính. Theo nghiên cứu so sánh sự độc lập tài chính giữa các quốc gia đang phát triển cho thấy rằng phụ nữ trẻ có khả năng độc lập tài chính ít hơn so với nam giới. Hành vi tiết kiệm cũng là yếu tố tác động trực tiếp đến độc lập tài chính ở giới trẻ. Friedline và Elliott đã thực hiện một nghiên cứu đánh giá về hành vi tiết kiệm giữa thanh niên da trắng và da đen vào năm 2011. Ảnh hưởng của cha mẹ đến sự độc lập tài chính. Cha mẹ đóng một vai trò quan trọng trong quá trình xã hội hóa tài chính của trẻ em (Kim, LaTaillade và Kim, 2011). Sự độc lập về tài chính của thanh niên gắn liền với tình trạng kinh tế của cha mẹ họ. So sánh giữa các quốc gia đã chỉ ra rằng hỗ trợ tài chính gia đình, cung cấp nhà ở và lao động chăm sóc rõ ràng là quan trọng đối với hạnh phúc kinh tế của thanh niên (Smeeding và Phillips, 2002). Những người trẻ tuổi được lớn lên trong những ngôi nhà có nhiều tài sản hơn vào thời điểm còn nhỏ của họ có nhiều khả năng có kết quả tích cực hơn, chẳng hạn như tốt nghiệp trung học, đăng ký vào đại học và thành lập tài khoản tiết kiệm và kiểm tra độc lập của riêng họ (Destin, 2009), tất cả đều là điều kiện cần thiết để độc lập tài chính.

Tại Việt Nam, nghiên cứu của tác giả Trần Thanh Thu và cộng sự (2020) tập trung nghiên cứu về chương trình giáo dục tài chính quốc gia trong bối cảnh số hóa ngành tài chính, nhóm tác giả này đã chỉ ra rằng: Việt Nam có chỉ số quan tâm và am hiểu kiến thức tài chính thấp hơn so với đại đa số các nước châu Á. Bên cạnh đó, các số liệu hiểu biết về tài chính ở mức độ trên trung bình chỉ chiếm 24%, nhưng có đến 93% người Việt Nam không có hứng thú cải thiện (Doug, 2019). Tuy nhiên, dịch bệnh nở rộ ảnh hưởng đến kinh tế, ảnh hưởng đến thu nhập của mọi người khiến chúng ta quan tâm hơn về vấn đề quản lý chi tiêu, độc lập tài chính. Vấn đề này ảnh hưởng sâu sắc đến suy nghĩ, quyết định về độc lập tài chính của giới trẻ hiện nay, đặc biệt là giới trẻ ở Việt Nam.

## **2. Phương pháp nghiên cứu**

### **2.1. Thu thập dữ liệu**

Thông tin sơ cấp được thu thập thông qua khảo sát giới trẻ trên địa bàn thành phố Hà Nội trong thời gian từ tháng 12/2021 đến tháng 1/2022 dưới hình thức khảo sát online. Mẫu khảo sát là giới trẻ trong độ tuổi từ 20 đến 35 đang sinh sống và làm việc tại Hà Nội. Mẫu khảo sát thu được là 115 phiếu, số phiếu hợp lệ là 95 phiếu đạt tỷ lệ 93.12%.

Bảng câu hỏi khảo sát được thiết kế làm 3 phần. Cụ thể:

- ✓ Phần đầu tiên hỏi về các thông tin cá nhân như: giới tính, độ tuổi, trình độ học vấn, thu nhập hàng tháng...
- ✓ Phần thứ hai về câu hỏi phỏng vấn theo dạng câu hỏi mở kết hợp trắc nghiệm nhiều đáp án về tài chính cá nhân, độc lập tài chính và nghỉ hưu sớm.
- ✓ Phần cuối cùng được yêu cầu trả lời về các yếu tố ảnh hưởng đến quyết định độc lập tài chính, thang đo được sử dụng để đánh giá là dạng thang đo Linkert 5 mức độ, với quy ước: mức 1 - hoàn toàn không đồng ý, mức 2 - không đồng ý, mức 3 - bình thường, mức 4 - đồng ý, mức 5 - hoàn toàn đồng ý.

### **2.2. Phương pháp phân tích và xử lý dữ liệu**

Nghiên cứu thực hiện các phương pháp phân tích gồm: (i) đánh giá độ tin cậy của thang đo Cronbach's Alpha, (ii) phân tích nhân tố khám phá EFA, (iii) phân tích mức độ tương quan, (iv) phân tích hồi quy tuyến tính được sử dụng để kiểm định mô hình nghiên cứu.

Đồng thời đối chiếu với các nghiên cứu trước để bàn luận về kết quả khảo sát và đề xuất một số giải pháp để tiến gần hơn với ước mơ độc lập tài chính ở giới trẻ.

### 3. Kết quả nghiên cứu

#### 3.1. Mô hình nghiên cứu

Mô hình nghiên cứu được xây dựng dựa trên nghiên cứu của Nguyễn Lan và cộng sự (2020); Xiao, Chatterjee và Kim (2014) có điều chỉnh ở phần câu hỏi phỏng vấn và thêm yếu tố mới do nhóm tác giả đề xuất. Các biến của mô hình được mô tả trong bảng dưới đây:

**Bảng 1. Mô tả các biến của mô hình nghiên cứu**

Tên biến	Các biến quan sát	Ký hiệu	Nguồn tham khảo
Độc lập tài chính (FI)	Quyết định ĐLTC	Biến phụ thuộc	Nguyễn Lan và cộng sự (2020)
Nhân khẩu học (DF)	Tuổi	DF1	Nguyễn Lan và cộng sự (2020)
	Giới tính	DF2	
	Trình độ học vấn	DF3	
Yếu tố tài chính cá nhân (PFF)	Thu nhập cá nhân	PFF1	Xiao, J., Chatterjee, S., & Kim, J. (2014)
	Lĩnh vực công việc	PFF2	
Yếu tố nhóm (PPF)	Tôi luôn so sánh chi tiêu và tiết kiệm của tôi với bạn bè tôi	PPF1	Xiao, J., Chatterjee, S., & Kim, J. (2014)
	Tôi có những kế hoạch về tài chính trong tương lai nên tôi làm theo	PPF2	
Yếu tố cá nhân (PF)	Tôi thường tiêu tiền vào những thứ không cần thiết	PF1	Xiao, J., Chatterjee, S., & Kim, J. (2014)
	Khi nhận được lương/thưởng, tôi thường tiêu ngay trong vòng 2-3 ngày sau đó	PF2	
	Tôi luôn tiêu vào những thứ có giá trị lớn hơn thu nhập của tôi/không có khả năng mua nó	PF3	
	Tôi luôn thất bại trong việc kiểm soát bản thân tiêu tiền	PF4	
	Tôi thấy việc lập kế hoạch tài chính thật là phiền phức	PF5	
	Tôi có một khoản nợ chưa thanh toán	PF6	
	Tôi có khả năng giải quyết vấn đề tài chính	PF7	
	Tôi luôn cân nhắc rất kỹ càng trước khi mua một thứ gì đó	PF8	
	Tôi luôn để 1 phần thu nhập của mình để tiết kiệm/dự phòng cho tương lai	PF9	
Yếu tố gia đình (FF)	Khi còn nhỏ, bố mẹ tôi luôn dạy tôi phải tiết kiệm	FF1	Xiao, J., Chatterjee, S., & Kim, J. (2014)
	Bố mẹ luôn dạy tôi hiểu giá trị của đồng tiền	FF2	
	Bố mẹ tôi đang thực hiện việc tiết kiệm	FF3	

Tên biến	Các biến quan sát	Ký hiệu	Nguồn tham khảo
Yếu tố xã hội (SF)	Tôi thấy độc lập tài chính đang ngày càng phổ biến trong giới trẻ	SF1	Nhóm tác giả tự phát triển
	Trong thời kỳ Covid-19, tôi cảm thấy độc lập tài chính là điều cần thiết	SF2	
	Đại dịch Covid-19 ảnh hưởng rất nhiều đến kế hoạch tương lai của tôi	SF3	

Nguồn: Tổng hợp của nhóm tác giả

Mô hình nghiên cứu:

$$FI = \alpha + \beta_1 DF + \beta_2 PFF + \beta_3 PPF + \beta_4 PF + \beta_5 FF + \beta_6 SF + u$$

Trong đó:

- $\alpha$  là hệ số chặn
- $\beta_1, \beta_2, \beta_3, \beta_4, \beta_5, \beta_6$  là các hệ số
- $u$  là sai số

### 3.2. Độ tin cậy Cronbach's Alpha

Nhằm kiểm tra độ tin cậy của thang đo, nghiên cứu này tiến hành sử dụng hệ số Cronbach's Alpha. Các biến có hệ số tương quan biến tổng (Corrected Item - Total Correlation) <0.3 sẽ bị loại bỏ và tiêu chuẩn chọn thang đo khi mức giá trị hệ số Cronbach's Alpha >0.6 (Nguyễn Đình Thọ, 2009).

Kết quả kiểm tra cho thấy, có 3 nhóm đạt yêu cầu về độ tin cậy (Bảng 2)

**Bảng 2. Kết quả kiểm định thang đo Cronbach's Alpha của các thang đo**

Thang đo	Biến quan sát	Cronbach's Alpha	Hệ số tương quan biến tổng - Corrected Item - Total Correlation
Yếu tố tài chính cá nhân - PFF	PFF1	0.807	0.690
	PFF2		0.592
Yếu tố cá nhân - PF	PF1	0.421	0.742
	PF2		0.421
	PF3		0.518
	PF4		0.496
	PF5		0.405
	PF6		0.420
	PF7		0.365
	PF8		0.436
	PF9		0.356
Yếu tố xã hội - SF	SF1	0.898	0.845
	SF2		0.856
	SF3		0.707

Nguồn: Kết quả từ phần mềm SPSS

Từ bảng kết quả phân tích độ tin cậy Cronbach's Alpha, ta thấy thang đo PFF có hệ số Cronbach' Alpha = 0.807 > 0.6, cho thấy thang đo được đo lường rất tốt. Đối với 3 biến quan sát trong yếu tố này, cả ba đều có hệ số tương quan giữa các biến tổng >0.3. Hay nói cách khác, nhân tố Yếu tố tài chính cá nhân - PFF đạt yêu cầu về độ tin cậy.

Thang đo PF có hệ số Cronbach' Alpha = 0.742 > 0.6, có nghĩa là hệ số này có độ tin cậy tốt cho mô hình nghiên cứu. Cụ thể đối với từng biến quan sát trong nhóm nhân tố PF, hệ số tương quan giữa biến tổng của 9 biến quan sát trong nhóm nhân tố đều lớn hơn 0.3 ta thấy các biến quan sát này đều đủ điều kiện. Do đó, nhân tố Yếu tố cá nhân - PF là một nhân tố đáng tin cậy và thang đo được sử dụng tốt.

Tương tự với thang đo SF cũng có hệ số Cronbach' Alpha rất tốt là 0.898 và các biến quan sát trong biến SF cũng có hệ số tương quan giữa các biến tổng >0.3. Do đó, nhóm nhân tố Yếu tố xã hội - SF cũng đạt điều kiện để tiến hành các bước tiếp theo.

Mặt khác, thang đo PPF - nhân tố Nhóm có hệ số Cronbach's Alpha = 0.290 <0.6, đồng thời thang đo FF cũng có kết quả tương tự với PPF, hệ số Cronbach' Alpha của nhân tố Gia đình là 0.383 <0.66. Do đó, chúng tôi đã tiến hành loại bỏ hai nhóm nhân tố là Yếu tố nhóm Peer Pressure - PPF và nhân tố Yếu tố gia đình - FF ra khỏi mô hình nghiên cứu.

### 3.3. Nhân tố khám phá EFA - Exploratory Factor Analysis

**Bảng 3. Kết quả kiểm định nhân tố khám phá EFA**

	Initial Eigenvalues			Extraction Sums of Squared Loadings			Relation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	4.172	29.800	29.800	4.172	29.800	29.800	3.016	21.544	21.544
2	2.656	18.974	48.775	2.656	18.974	48.775	2.825	20.177	41.721
3	1.139	8.134	71.024	1.139	8.134	71.024	1.966	14.045	71.024
4	0.957	6.837	77.861						
5	0.227	1.623	97.252						
6	0.189	1.351	98.603						
7	0.127	0.907	99.510						
8	0.069	0.490	100.000						
KMO	0.684								
Sig.	0								

*Nguồn: Kết quả từ phần mềm SPSS*

Sau khi tiến hành kiểm định thang đo với hệ số tin cậy Cronbach' Alpha, các thang đo đủ điều kiện đánh giá tiếp theo bằng phương pháp phân tích nhân tố EFA để đánh giá mức độ hội tụ của các biến quan sát theo từng thành phần. Điều kiện để phân tích nhân tố khám phá là: (i) hệ số KMO phải nằm trong khoảng 0.5 đến 1, (ii) kiểm định Bartlett có ý nghĩa thống kê với mức giá trị Sig < 0.5, (iii) tổng phương sai trích tối thiểu là 50%, (v) hệ số Eigenvalue > 1 và (vi) hệ số tải nhân tố - Factor loading >0.5. Một điều kiện nữa cần xem xét là hệ số tải nhân tố của biến quan sát phải đảm bảo đạt ít nhất 0.3.

**Bảng 4. Kết quả ma trận xoay Rotated Component Matrix**

	1	2	3
PFF1	0.788		
PFF2	0.758		
PF4		0.792	
PF6		0.789	
PF5		0.762	
PF9		0.756	
PF7		0.752	
SF1			0.874
SF2			0.763

*Nguồn: Kết quả từ phần mềm SPSS*

Từ bảng kết quả ma trận xoay (Bảng 4), các biến bị loại bao gồm: PF1, PF2, PF3 và PF8 vì hệ số tải nhân tố nhỏ hơn 0.5. Sau khi loại 4 biến quan sát không đủ tiêu chuẩn, 9 biến quan sát còn lại được giữ lại trong phân tích và hệ số tải nhân tố của từng biến quan sát đều lớn hơn 0.5.

Kết quả từ phân tích độ tin cậy Cronbach's Alpha và phân tích nhân tố khám phá EFA, mô hình nghiên cứu đã được phát triển thành 12 biến quan sát, 1 biến phụ thuộc và 4 biến độc lập.

Mô hình nghiên cứu như sau:

$$FI = \alpha + \beta_1 DF + \beta_2 PFF + \beta_3 PF + \beta_4 SF + u$$

### 3.4. Tương quan

**Bảng 5. Mức độ tương quan Pearson Correlation**

		DF1	DF2	DF3	PFF	PF	SF	FI
DF1	Pearson Correlation	1	-.038	-.392	.593	.333	.412	.645
	Sig. (2-tailed)		.713	.000	.000	.001	.000	.000
	N	95	95	95	95	95	95	95
DF2	Pearson Correlation	-.038	1	.236	-.049	-.082	.107	.089
	Sig. (2-tailed)	.713		.021	.640	.429	.303	.390
	N	95	95	95	95	95	95	95
DF3	Pearson Correlation	-.392	.236	1	-.025	-.060	-.205	-.055
	Sig. (2-tailed)	.000	.021		.807	.567	.046	.597
	N	95	95	95	95	95	95	95



		DF1	DF2	DF3	PFF	PF	SF	FI
PFF	Pearson Correlation	.593	-.049	-.205	1	.147	.241	.605
	Sig. (2-tailed)	.000	.640	.807		.156	.019	.000
	N	95	95	95	95	95	95	95
PF	Pearson Correlation	-.333	-.082	-.060	.147	1	.453	.780
	Sig. (2-tailed)	.001	.429	.567	.156		.000	.000
	N	95	95	95	95	95	95	95
SF	Pearson Correlation	.412	.107	-.205	.241	.453		.746
	Sig. (2-tailed)	.000	.303	.046	.019	.000		.000
	N	95	95	95	95	95	95	95
FI	Pearson Correlation	.645	.089	.062	-.055	.605	.780	1
	Sig. (2-tailed)	.000	.390	.597	.000	.000	.000	
	N	95	95	95	95	95	95	95

*Nguồn: Kết quả từ phần mềm SPSS*

Để đánh giá mối tương quan giữa các biến trong mô hình, nhóm tác giả thực hiện kiểm tra mức độ tương quan Pearson. Kết quả tương quan Pearson cho biết quan hệ giữa biến độc lập và biến phụ thuộc có quan hệ tương quan. Giá trị Sig nhỏ hơn 0.05 thì hệ số r mới có ý nghĩa thống kê, ngược lại giá trị Sig lớn hơn 0.5 thì không có tương quan giữa 2 biến.

Nhìn bảng kết quả mức độ tương quan Pearson, giá trị Sig trong kiểm định tương quan giữa 5 biến phụ thuộc DF1, DF2, PFF, PF và SF với biến phụ thuộc FI đều nhỏ hơn 0.05. Bên cạnh đó chỉ có một biến phụ thuộc là DF3 có giá trị Sig >0.05. Như vậy, có mối quan hệ tuyến tính giữa các biến độc lập lập trên và biến phụ phụ thuộc. Giữa các biến độc lập, mối tương quan giữa biến độc lập SF và biến phụ thuộc FI là mạnh nhất khi hệ số tương quan giữa hai cặp biến này là cao nhất.

### **3.5. Kết quả hồi quy**

Kết quả hồi quy có R bình phương hiệu chỉnh = 0.616, giá trị này cho biết biến phụ thuộc trong mô hình giải thích được 61.6% các biến độc lập, còn lại 38.4% là do các biến ngoài mô hình và sai số ngẫu nhiên. Nói cách khác, 61.6% thay đổi về quyết định độc lập tài chính của giới trẻ được giải thích bởi sự thay đổi trong các biến độc lập bao gồm: Nhân khẩu học (DF1, DF2, DF3); Tài chính cá nhân (PFF); Yếu tố cá nhân (PF), Yếu tố xã hội (SF). Ngoài ra, giá trị Durbin-Waston = 1.843 nằm trong khoảng từ 1.5 đến 2.5 nên kết quả không vi phạm giả định tự tương quan bậc nhất.

**Bảng 6. Kết quả mô hình hồi quy**

Model	Unstandardized Coefficients		Standardized Coefficients Beta	t	Sig.	Collinearity Statistics	
	B	Std. Error				Tolerance	VIF
(Constant)	1.019	.485		2.102	.038		
DF1	.141	.109	.189	1.296	.019	.435	2.298
DF2	.053	.121	.045	.438	.003	.878	1.139
DF3	.020	.130	.018	.158	.005	.698	1.432
PFF	.249	.076	.412	3.260	.002	.581	1.722
PF	.238	.118	.229	2.027	.046	.727	1.376
SF	.037	.102	.042	.357	.022	.679	1.473

*Nguồn: Kết quả từ phần mềm SPSS*

Từ kết quả phân tích mô hình hồi quy, ta thấy nhân tố Yếu tố tài chính cá nhân - PFF có vai trò quan trọng, với hệ số Beta chuẩn hóa trong mô hình hồi quy là 0.412 và giá trị Sig = 0.002 phản ánh sự ảnh hưởng của nhân tố này 41.2% tới quyết định độc lập tài chính.

Các nhân tố Nhân khẩu học có giá trị Sig > 0.05, hay nói cách khác nhân tố này có tác động lên biến phụ thuộc. Hệ số Beta chuẩn hóa của DF1, DF2, DF3 mang dấu dương, có nghĩa là nếu giá trị DF1 - Tuổi, DF2 - Giới tính, DF3 - Trình độ học vấn tăng 1% thì quyết định độc lập tài chính tăng lần lượt là 0.189%, 0.045% và 0.018%.

Nhân tố Yếu tố cá nhân - PF có chỉ số Beta chuẩn hóa = 0.229 với giá trị Sig = 0.046, hàm ý rằng yếu tố cá nhân có ảnh hưởng tích cực tới quyết định độc lập tài chính ở giới trẻ hiện nay.

Nhân tố Yếu tố xã hội - SF có ảnh hưởng thấp hơn so với nhân tố PF và PFF với hệ số Beta chuẩn hóa = 0.042 và giá trị Sig = 0.022 < 0.05. Do đó, nếu giá trị của SF tăng 1% thì sẽ có ảnh hưởng đến quyết định độc lập tài chính ở giới trẻ là 0.042%.

Hệ số phóng đại phương sai - VIF đánh giá hiện tượng đa cộng tuyến trong mô hình hồi quy. Ngưỡng VIF từ 10 trở lên sẽ xảy ra hiện tượng đa cộng tuyến mạnh. Cụ thể trong bảng phân tích hồi quy trên, hệ số VIF của các biến độc lập đều nhỏ hơn 10, do đó không vi phạm giả định đa cộng tuyến.

Từ các hệ số hồi quy, chúng tôi xây dựng được phương trình hồi quy phản ánh tác động của các yếu tố khác nhau trong mô hình lên quyết định độc lập tài chính ở giới trẻ như sau:

$$FI = 1.019 + 0.141 * DF1 + 0.053 * DF2 + 0.020 * DF3 + 0.249 * PFF + 0.238 * PF + 0.037 * SF$$

### **3.6. Kiểm định**

Để đánh giá độ phù hợp mô hình một cách chính xác, nghiên cứu tiến hành kiểm định giả thuyết. Các số liệu của kiểm định F được lấy từ bảng phân tích phương sai ANOVA theo bảng dưới đây:

**Bảng 7. Kết quả phân tích phương sai ANOVA**

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	7.474	6	1.246	3.279279	.006
	Residual	33.432	88	.380		
	Total	40.905	94			

*Nguồn: Kết quả từ phần mềm SPSS*

Bảng ANOVA cho biết kết quả kiểm định F để đánh giá giả thuyết của mô hình hồi quy. Giá trị Sig kiểm định F bằng  $0.006 < 0.05$ , do đó mô hình hồi quy là phù hợp.

#### 4. Thảo luận

Nghiên cứu này nghiên cứu về các nhân tố ảnh hưởng tới quyết định Độc lập tài chính ở giới trẻ. Nghiên cứu có chủ đề thực tế, có tầm quan trọng vì liên quan tới vấn đề tài chính cá nhân, đặc biệt trong hoàn cảnh đại dịch Covid-19 đang lan rộng khắp thế giới. Để đạt được mục tiêu nghiên cứu nhằm giúp giới trẻ tiền gần hơn với giấc mơ độc lập tài chính, nhóm nghiên cứu đã tiến hành phân tích định lượng với mẫu khá khiêm tốn do ảnh hưởng của đại dịch Covid-19 nên việc tiến hành khảo sát giới trẻ độ tuổi từ 20 đến 35 được tiến hành theo hình thức online trong khu vực thành phố Hà Nội. Các kết quả phân tích nêu trên là bằng chứng để bỏ mối quan hệ tương quan của Yếu tố Gia đình - FF và Yếu tố nhóm Peer Pressure - PPF. Yếu tố này bị loại cho kết quả phù hợp với nghiên cứu của Nguyễn Lan (2020). Bên cạnh đó có 4 nhân tố ảnh hưởng tới quyết định độc lập tài chính ở giới trẻ đó là Nhân khẩu học (Tuổi, giới tính và trình độ học vấn), Tài chính cá nhân, Yếu tố cá nhân và Yếu tố xã hội. Những yếu tố đó đều có mức độ ảnh hưởng khác nhau và hầu hết các nhân tố đó đều ảnh hưởng tích cực đến quyết định độc lập tài chính của giới trẻ.

Qua kết quả phân tích, ta thấy biến độc lập tài chính cá nhân - PPF có tác động mạnh nhất lên quyết định độc lập tài chính ở giới trẻ, với hệ số Beta chuẩn hóa trong mô hình hồi quy là 0.412 và giá trị Sig = 0.002 phản ánh sự ảnh hưởng của nhân tố này 41.2% tới quyết định độc lập tài chính. Để giải thích rõ ràng hơn về ảnh hưởng của nhân tố Tài chính cá nhân tác động lên quyết định độc lập tài chính, các yếu tố như Thu nhập cá nhân hay tổng tài sản hiện có cao cho thấy người đó có khả năng chi trả/thanh toán cao hơn. Trên thực tế, khả năng chi trả đó không trùng với chi tiêu thực tế, do đó tiền là một yếu tố cần thiết nhưng không đủ để quyết định độc lập tài chính.

Nhóm nhân tố Yếu tố cá nhân - PF có chỉ số Beta chuẩn hóa = 0.229 với giá trị Sig = 0.046, phản ánh 22.9% sự ảnh hưởng của nhân nhân tố này lên biến phụ thuộc. Bản chất các hành vi chi tiêu, tiết kiệm, lối sống trong nhóm yếu tố Cá nhân có thể được điều chỉnh bởi yếu tố tâm lý như khả năng quản lý tài chính, thói quen chi tiêu hay yếu tố ngoại cảnh như xu hướng, lối mòn. Điều đó có thể khuyến khích, hấp dẫn một người ít chi tiêu lại có khả năng chi tiêu nhiều hơn.

Ngoài ra, yếu tố Nhân khẩu học có 3 yếu tố nhỏ là tuổi, giới tính và trình độ học vấn có hệ số Beta chuẩn hóa lần lượt là 0.189; 0.045 và 0.018. Về giới tính, kết quả cho thấy nam giới có xu hướng độc lập về tài chính cao hơn nữ giới. Điều này được giải thích bởi sự bất bình đẳng giới về thu nhập cũng như tác nhân tâm lý giữa hai giới. Về độ tuổi, thì rõ ràng một điều rằng sự tăng khi độ tuổi càng cao. Kết quả này trong thực tế là hợp lý do những

người trong độ tuổi cao hơn thì có những kinh nghiệm trong công việc và quản lý tài chính tốt hơn, dẫn đến sự độc lập tài chính cũng ít bị theo xu hướng hơn. Về trình độ học vấn, nghiên cứu này có cùng ý kiến với các nghiên cứu trước đây - nghiên cứu của Xiao và cộng sự (2014) đưa ra bằng chứng về sự ảnh hưởng tích cực của trình độ học vấn đối với quyết định ĐLTC của giới trẻ.

Bên cạnh đó, nghiên cứu đề xuất một nhân tố mới có ảnh hưởng tới quyết định ĐLTC ở giới trẻ là nhân tố Yếu tố xã hội. Các kết quả phân tích với hệ số Beta chuẩn hóa = 0.042 và giá trị Sig = 0.022 < 0.05 là bằng chứng cho thấy xã hội là nhân tố có ảnh hưởng tới ý định độc lập tài chính ở giới trẻ đặc biệt là trong điều kiện đại dịch Covid-19 đang lây lan khắp thế giới và điều đó ảnh hưởng không nhỏ đến thu nhập cá nhân cũng như tâm lý của giới trẻ.

## 5. Kết luận

Quản lý tài chính cá nhân không chỉ quan trọng trong giai đoạn dịch bệnh, mà gắn liền với kế hoạch cuộc đời của mỗi người. Việc hoạch định tài chính càng sớm càng tốt giúp cho các cá nhân xây dựng kế hoạch tài chính vững chắc. Bài nghiên cứu nhằm mục đích xem xét các nhân tố ảnh hưởng tới độc lập tài chính của giới trẻ tại Việt Nam. Các nghiên cứu có thể triển khai tiếp theo có thể thể theo các hướng sau: 1) so sánh kết quả nghiên cứu với các quốc gia trong khu vực; 2) nghiên cứu theo hướng tự do tài chính 3) mở rộng cho các đối tượng khác nhau.

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# KINH NGHIỆM QUỐC TẾ VỀ SỬ DỤNG TIỀN DI ĐỘNG ĐỂ THÚC ĐẨY TÀI CHÍNH TOÀN DIỆN

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## **Tóm tắt**

Trong bối cảnh nhiều khu vực vùng sâu vùng xa trên thế giới nói chung và ở các nước đang phát triển cũng như chưa phát triển nói riêng vẫn đang còn gặp khó khăn trong việc tiếp cận internet, các dịch vụ ngân hàng khó đến được với những người dân ở vùng này. Chính vì thế, một dịch vụ chi trả mới đã được nghiên cứu và tiếp cận với người dùng gần đây, có tên gọi là Tiền di động (Mobile Money). Tiền di động được coi là một xu hướng mới nhưng hiệu quả trong việc hướng tới một xã hội không dùng tiền mặt vì dịch vụ tài chính số này có thể tạo ra thói quen chi tiêu cho người dân, điều này thúc đẩy tài chính toàn diện tại các quốc gia. Chính vì thế, bài nghiên cứu này sẽ phân tích bài học kinh nghiệm từ những quốc gia đã áp dụng thành công chính sách tiền di động nhằm thúc đẩy tài chính toàn diện trên thế giới. Trong đó, bài học về mô hình kinh doanh, bài học về cơ cấu thị trường, bài học về những quy định và thuế, bài học về quốc tế hóa tiền di động cũng như bài học về cạnh tranh và khả năng tương tác được kiểm tra và đánh giá một cách cụ thể trong nghiên cứu này. Từ đó, vai trò của tiền di động từ những bài học kinh nghiệm được phân tích trong nghiên cứu sẽ là nền tảng nền tảng vững chắc để đưa ra các khuyến nghị nhằm thúc đẩy tài chính toàn diện của Việt Nam.

**Từ khóa:** Tiền di động, tài chính toàn diện, bài học kinh nghiệm, Kenya, dịch vụ tài chính số, vùng sâu vùng xa

## **Abstract**

*In the context that a wide range of remote areas in the world in general and in developing and undeveloped countries in particular are still facing difficulties in accessing the internet, banking services are difficult to reach this area. Therefore, a new payment service has been researched and accessible to users recently, called Mobile Money. Mobile money is considered a new but effective trend in moving towards a cashless society because this digital financial service can create spending habits among people, which promotes financial inclusion. Therefore, this study will analyze lessons learned from countries that have successfully applied mobile money policies to motivate financial inclusion around the world. Specifically, lessons on business models, lessons on competition level and market structure, lessons on regulations and taxes, lessons on internationalization of mobile money as well as lessons on competition and interoperability is examined and evaluated carefully in this report. From there, the role of mobile money from the lessons learned accessed in*

*the study will be a solid foundation for making recommendations to promote financial inclusion in Vietnam.*

**Keywords:** *Mobile money, financial inclusion, lessons learned, Kenya, digital financial services, remote areas*

## **1. Giới thiệu**

Bước sang thế kỷ XXI, thế giới đã chứng kiến sự phát triển, đổi mới không ngừng của công nghệ thông tin và viễn thông, đặc biệt là sự bùng nổ về thông tin di động với độ phổ biến của điện thoại di động - một sản phẩm, một dịch vụ xa xỉ nay đã trở thành một sản phẩm, dịch vụ bình dân. Mobile Money hay tiền di động, nền tảng thanh toán trên thiết bị di động, hiện đã có mặt và phát triển tại 95 quốc gia trên thế giới với hơn 1 tỷ tài khoản được đăng ký, với lượng giao dịch trung bình 1.9 tỷ đô la Mỹ mỗi ngày, không những cho phép khách hàng nạp tiền, lưu trữ, thanh toán, rút tiền và chuyển khoản nhanh chóng dưới dạng tiền điện tử thông qua mạng thông tin di động, mà còn cung cấp các dịch vụ khác như tiết kiệm, tín dụng và bảo hiểm... tới mọi người dân. Mobile Money đã và đang tạo ra một cuộc cách mạng toàn cầu về thương mại điện tử, đồng thời là cơ sở vững chắc góp phần thúc đẩy tài chính toàn diện, thu hẹp khoảng cách giữa thành thị - nông thôn, đóng góp không nhỏ vào sự phát triển kinh tế - xã hội của các quốc gia trên toàn thế giới. Mặc dù ngày càng có nhiều thành công, ngành công nghiệp tiền di động phải đối mặt với một số thách thức. Việc triển khai tiền di động ở các nước đang phát triển thường nhắm mục tiêu đến những khách hàng có thể là người nghèo, phân tán và ở xa. Tiền di động cũng trải dài trên hai ngành công nghiệp riêng biệt với các mô hình kinh doanh khác nhau. Viễn thông và thanh toán dựa trên giao dịch, với phí thu được từ các giao dịch; ngược lại, ngân hàng có được nguồn vốn miễn phí thông qua việc giữ tiền gửi của người sử dụng. Để giúp các nhà quản lý, các doanh nghiệp viễn thông có được cách nhìn toàn diện để triển khai dịch vụ tiền di động ở Việt Nam, nơi có độ phủ sóng mạng di động lên tới 99.8% dân số, bài viết nghiên cứu tổng kết một số kinh nghiệm thực tiễn trong việc sử dụng tiền di động để thúc đẩy tài chính toàn diện từ một số quốc gia có ngành này phát triển như Kenya, Philipinne. Hy vọng bài viết đóng góp hữu ích cho các cơ quan quản lý, các nhà hoạch định chính sách và các doanh nghiệp viễn thông tại Việt Nam.

## **2. Bài học kinh nghiệm từ triển khai chính sách tiền di động ở Kenya và một số nước trên thế giới nhằm thúc đẩy tài chính toàn diện**

### **2.1. Bài học về mô hình kinh doanh với tiền di động**

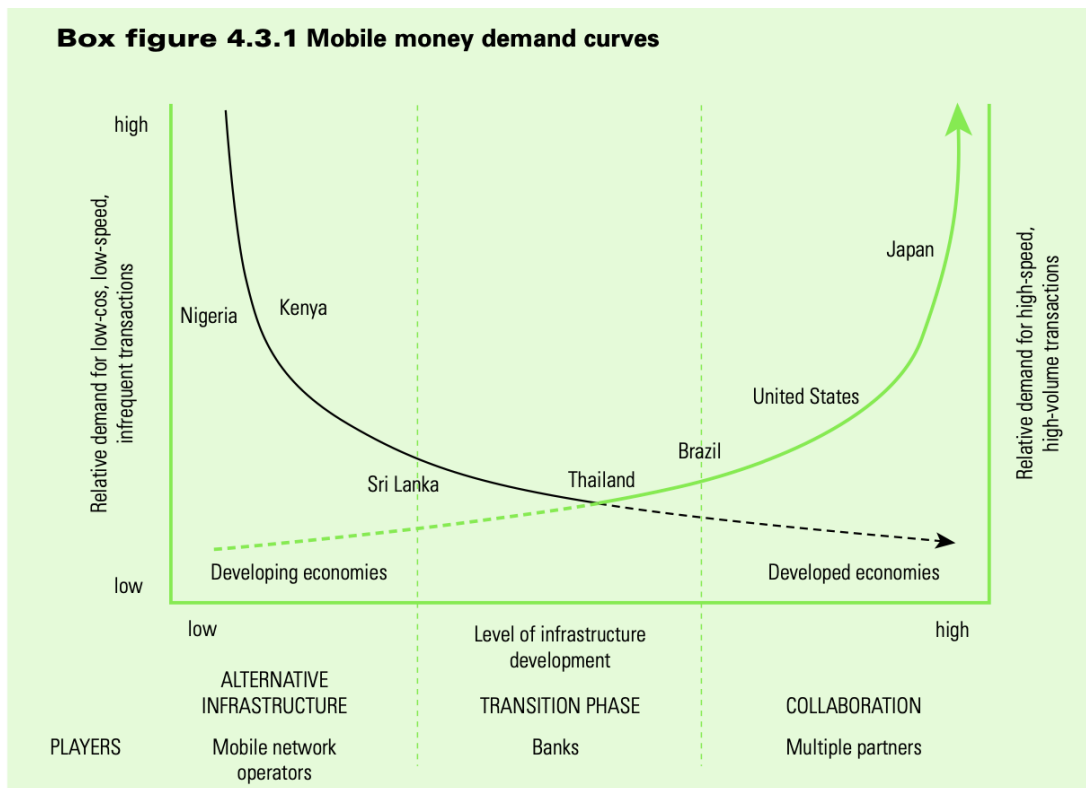
Mặc dù đã nhận được sự hỗ trợ cả trực tiếp và gián tiếp từ khu vực nhà nước, cho đến nay, tiền lưu động vẫn là một doanh nghiệp thuộc khu vực tư nhân. Để đạt được lợi nhuận, các nhà cung cấp tiền di động đã đi tiên phong trong ba mô hình kinh doanh chung: do nhà điều hành di động dẫn đầu, do ngân hàng dẫn đầu và cộng tác. Bởi vì các nhà khai thác kiểm soát nền tảng di động và có khả năng phân phối đáng kể thông qua mạng lưới đại lý bán lẻ hiện có của họ, hợp lý là việc triển khai tiền di động thường sẽ được khởi xướng bởi các nhà khai thác có thể hợp tác hoặc cộng tác với ngân hàng. Ở một số nơi, chẳng hạn



như Pakistan, nơi nhà điều hành Telenor mua 51% cổ phần của Ngân hàng tài chính vi mô Tameer, ranh giới giữa hai thực thể có thể bị xóa nhòa.

Có rất nhiều mô hình kinh doanh cho tiền di động. Mặc dù M-PESA đã phổ biến một mô hình chủ yếu dựa trên chuyển khoản ngang hàng, nhưng các hệ thống chuyển tiền di động ở những nơi khác lại hoàn toàn khác. Ví dụ: ở Nam Phi, WIZZIT là một nhà cung cấp tiền di động độc lập hoạt động trên tất cả các mạng di động và đã hợp tác với các ngân hàng để cung cấp cho khách hàng các tài khoản để truy cập. Tại Thái Lan, hai hoạt động tiền điện thoại di động tương đối thành công đã hợp tác với các nhà bán lẻ ngay từ đầu và nhấn mạnh vào các dịch vụ thanh toán hóa đơn.

Theo nghiên cứu về tiền điện thoại di động của Công ty Tài chính quốc tế, trong một thị trường nhất định, trường hợp kinh doanh đối với tiền điện thoại di động sẽ được thúc đẩy bởi những người chơi có động cơ mạnh nhất để phát triển tiền điện thoại di động; đề xuất giá trị chính cho khách hàng mục tiêu; và các yêu cầu về quy định, nhu cầu và quan hệ đối tác. Kết hợp các biến số này, Tổng công ty Tài chính liên quốc gia đã phát triển các đường cầu tiền lưu động cho thấy tiền lưu động có sức hấp dẫn khác nhau như thế nào trong các môi trường khác nhau.



Đường cong màu đen thể hiện nhu cầu tiền di động đối với các nền kinh tế đang phát triển. Khi các nước đang phát triển tiến bộ, cơ sở hạ tầng tài chính phát triển và cạnh tranh từ các ngân hàng, công ty thẻ tín dụng và các tổ chức tài chính khác tăng lên. Đường cong màu đen trở thành đường chằm do nhu cầu thay đổi từ chi phí thấp, tốc độ thấp và không thường xuyên sang tốc độ cao và khối lượng lớn như được biểu thị bằng đường cong màu xanh lam. Đường cong màu xanh lá cây bắt đầu có dấu chấm do các quốc gia phát triển đã có cơ sở hạ tầng tài chính đáng kể, do đó nhu cầu về các giao dịch chi phí thấp, tốc độ thấp, không thường xuyên là thấp. Sự liên tục được chia thành ba phần: cơ sở hạ tầng thay thế, giai đoạn chuyển tiếp và sự hợp tác. Ở các nền kinh tế đang phát triển, tiền di động đóng

vai trò như một cơ sở hạ tầng thay thế cho các dịch vụ tài chính hiện có; trong giai đoạn chuyển tiếp, tiền di động sẽ chuyển từ cơ sở hạ tầng thay thế sang cơ sở hạ tầng bổ sung. Trong giai đoạn hợp tác, tiền di động phải tích hợp đầy đủ với cơ sở hạ tầng tài chính.

## **2.2. Bài học về cơ cấu thị trường**

Các quy định quản lý và cơ cấu thị trường đóng vai trò quan trọng trong việc xác định cách thức hoạt động của thị trường đối với m-money và cách chúng phát triển theo thời gian (Donner, 2008). Thị trường viễn thông di động có hai mặt: nó liên quan đến một nền tảng áp đặt phí người dùng để người mua và người bán gặp nhau và được cấu thành bởi các yếu tố bên ngoài mạng mà không thể nội bộ hóa bằng thương lượng trực tiếp giữa người mua và người bán (Rochet và Tirole, 2004). Cơ cấu giá phải thu hút đủ người mua và người bán để cả hai bên đều thấy đáng giá khi sử dụng nền tảng. Đặc điểm chính giúp phân biệt thị trường hai mặt với thị trường tiêu chuẩn là nền tảng có thể ảnh hưởng đến khối lượng giao dịch bằng cách tính phí cho một bên của thị trường nhiều hơn cho bên kia để thu hút khách hàng. Mạng di động bao gồm nền tảng do Mobile Network Operators (MNOs) cung cấp, người dùng gửi và nhận cuộc gọi, tin nhắn và sử dụng các tính năng khác. MNO phải thiết lập cấu trúc định giá để thu hút đủ người dùng ở cả hai phía để có thể kiếm được tỷ suất sinh lợi thị trường. Rochet và Tirole (2004) cho rằng các nền tảng cạnh tranh và độc quyền đều có động cơ thu hút người dùng ở cả hai phía, nhưng nhìn chung họ không đặt ra cùng một mức hoặc cấu trúc giá để đạt được điều này.

M-money cũng là một thị trường hai mặt, trong phạm vi người tiêu dùng hoặc các doanh nghiệp phi tài chính giao dịch cả hai bên, với MNO cung cấp nền tảng cho người gửi (người trả tiền) và người nhận (người nhận tiền). Nói chung, và phù hợp với lý thuyết (Rochet và Tirole, 2003), người thanh toán và người được thanh toán phải chịu các mức giá khác nhau cho việc chuyển tiền. Phí rút tiền mặt (của người nhận tiền) thường lớn hơn phí chuyển tiền (của người trả tiền), với các khoản tiền gửi là miễn phí. Một đặc điểm khác biệt của m-money là thị trường được phân khúc giữa người dùng đã đăng ký và chưa đăng ký. Người dùng điện thoại không đăng ký dịch vụ m-money không thể SIM được kích hoạt cho m-money và do đó MNO không thể tính phí chuyển khoản m-money. Các MNO thường cho phép thanh toán từ người dùng đã đăng ký cho người dùng chưa đăng ký nhưng toàn bộ chi phí chuyển do người gửi đã đăng ký (người thanh toán) chịu. Thị trường cho các dịch vụ tài chính di động khác, chẳng hạn như bảo hiểm, trong đó một bên là tổ chức tài chính, thường không có hai mặt, vì biểu giá cho người dùng cuối được thiết lập chung và tiền thu được được chia sẻ giữa MNO và tổ chức tài chính.

Một tính năng thú vị nữa của m-money là giá mà người nhận thanh toán phải trả một phần là tự nguyện. Phí cho người được thanh toán nói chung là để rút tiền mặt, không phải là nhận m-money mỗi lần. Khi mạng lưới người dùng m-money mở rộng, người nhận có thể chọn gửi m-money tạm thời thay vì rút tiền mặt và sau đó sử dụng nó để thực hiện một khoản thanh toán bằng m-money. Khi mạng lưới m-money ngày càng mở rộng, người dùng có thể chọn rút tiền ít thường xuyên hơn. Nếu điều này xảy ra, chi phí chuyển tiền sẽ do người trả tiền (người gửi); phí trung bình mà người nhận trả cho mỗi đô la nhận được sẽ giảm; và tổng giá của một lần chuyển (tổng chi phí của người thanh toán và người nhận thanh toán) cũng sẽ giảm do phí rút tiền mặt giảm ngày càng giảm mạnh. Tuy nhiên, tác động hệ quả đến cấu trúc giá cả là không rõ ràng.

Trong lý thuyết về thị trường hai mặt, cơ cấu giá cả được chú trọng đáng kể như một động lực để kích thích tăng trưởng mạng lưới. Tuy nhiên, người dùng hiếm khi cho rằng chi phí là lý do chính dẫn đến việc tiêu tốn nhiều tiền hoặc lựa chọn nhà cung cấp. Các yếu tố phổ biến nhất là an toàn và thuận tiện (Jack và Suri, 2011), và sự gắn gũi với đại lý (Munyegera và Matsumoto, 2014; Abiona và Koppensteiner, 2016). Tuy nhiên, các nghiên cứu ở Kenya và Tanzania cho thấy rằng người dùng nhạy cảm với giá cả với những thay đổi trong chi phí chuyển tiền m-money (Mbiti và Weil, 2011; Economides và Jeziorski, 2015).

Economides và Jeziorski (2015) đã ước tính đường cầu đối với m-money của khách hàng Tigo ở Tanzania bằng cách sử dụng dữ liệu về mọi giao dịch m-money của Tigo trong thời gian từ tháng 12 năm 2012 đến tháng 2 năm 2013 xung quanh bước thay đổi trong cấu trúc giá vào tháng 1 năm 2013. Họ nhận thấy nhu cầu cao đối với hình thức tự chuyển khoản trong thời gian ngắn, tức là người gửi tiền sẽ chuyển tiền mặt vào ngày hôm sau hoặc sớm hơn để tránh mang tiền mặt qua một địa điểm hoặc thời gian cụ thể. Tự chuyển khoản chiếm một tỷ lệ đáng kể trong các giao dịch. Ở Tanzania, bảo mật là yếu tố quan trọng trong việc xác định nhu cầu chuyển tiền m-money.

Kimenyi và Ndung'u (2009) cho rằng duy trì tính cạnh tranh của thị trường là yếu tố then chốt trong sự phát triển thành công của M-Pesa ở Kenya nhưng điều này còn gây tranh cãi, đặc biệt là trong chừng mực nó liên quan đến việc chiếm dụng m-money ban đầu. Mạng lưới liên quan đến chi phí cố định đáng kể (Katz và Shapiro, 1985). Điều này có lợi cho người đi đầu tiên, đặc biệt nếu nó được hưởng chế độ bán độc quyền, và đây chính xác là tình huống mà Safaricom ban đầu thấy mình trong việc cung cấp các dịch vụ điện thoại di động thông thường ở Kenya. Việc thúc đẩy cạnh tranh có hệ thống trong việc cung cấp m-money ở Kenya chỉ được hỗ trợ hợp pháp vào năm 2014 với Đạo luật Hệ thống Thanh toán quốc gia (NPS). Một tính năng chính của NPS là nó đặt ngoài vòng pháp luật sự độc quyền của các tác nhân (Muthiora, 2015). Ở Uganda, hướng dẫn năm 2013 về hoạt động của m-money đã cấm các đại lý độc quyền ngay từ đầu (Muthiora, 2015). Tính độc quyền của đại lý khiến những người mới tham gia khó có thể phá vỡ một công ty đương nhiệm, vì chi phí cố định cao cho việc thiết kế một mạng lưới đại lý.

Trong một so sánh giữa Kenya, Tanzania và Zimbabwe, Robb và Vilakazi (2015) kết luận rằng tính độc quyền của đại lý có thể là một rào cản đáng kể đối với cạnh tranh, nhưng một rào cản quan trọng hơn là sự tồn tại của một nhà cung cấp điện thoại di động thống trị. Ở Kenya, ngay cả sau khi Đạo luật NPS được thông qua, Safaricom vẫn giữ vị trí thống trị. Ở Zimbabwe, Econet là MNO thống trị. Mặt khác, ở Tanzania, các mạng lưới có quy mô đồng đều hơn và ngay từ đầu, các đại lý không phải bị ràng buộc vào một MNO duy nhất. Vodacom đã đầu tư rất nhiều vào mạng lưới đại lý của mình nhằm tìm kiếm lợi thế là người đi đầu từ việc liên kết với Safaricom và khoảng 60% đại lý Tanzania của nó là độc quyền vào năm 2013 (Mas và John, 2013). Tuy nhiên, phí m-money ở Tanzania năm 2015 thấp hơn đáng kể so với hai quốc gia còn lại (Robb và Vilakazi, 2015). Tuy nhiên, m-money phát triển chậm hơn ở Tanzania so với Kenya mặc dù được giới thiệu về cơ bản đồng thời.

Một vấn đề cạnh tranh hơn nữa là khả năng tương tác. Khả năng tương tác của mạng có nghĩa là khách hàng sử dụng điện thoại có thể thực hiện và nhận cuộc gọi và tin nhắn bằng các MNO khác với các MNO mà họ đã đăng ký. Các quốc gia có khả năng tương tác mạng hoàn chỉnh, chẳng hạn như Kenya và Tanzania, có tỷ lệ dân số sử dụng m-money cao hơn. Ví dụ, vào năm 2015, m-money ở Kenya bao gồm 58.4% người sử dụng điện thoại di

động, trong khi ở Nigeria chỉ bao gồm 2.3%, mặc dù gần một nửa dân số (45%) có thuê bao điện thoại di động (Bảng 1). Khả năng tương tác giữa m-money có nghĩa là khách hàng có thể gửi tiền và chuyển tiền mặt bằng một MNO, trong khi người nhận có thể thu tiền mặt từ MNO khác. Tính đến năm 2016, khả năng tương tác của m-money đã được kích hoạt ở 15 quốc gia (GSMA, 2017), bao gồm cả ở Ghana, nơi nó trở thành bắt buộc từ tháng 5 năm 2018. Khả năng tương tác giữa m-money đã diễn ra tương đối chậm, đặc biệt là vì nó đặt ra các vấn đề quan trọng về mối quan hệ giữa các MNO và ngân hàng, vì một số hình thức thanh toán bù trừ là bắt buộc đối với các giao dịch giữa các MNO.

**Bảng 1. Tỷ lệ sử dụng tiền di động ở Sub-Saharan Africa, 2015**

Nước	Sử dụng tiền di động (%)
Benin	2.0
Botswana	20.8
Burkina Faso	3.1
Burundi	0.7
Cameroon	1.8
Chad	5.8
Congo, Dem. Rep.	9.2
Congo, Rep.	2.0
Cote d'Ivoire	24.3
Gabon	6.6
Ghana	13.0
Guinea	1.5
Kenya	58.4
Madagascar	4.4
Malawi	3.8
Mali	11.6
Mauritania	6.5
Mauritius	0.9
Namibia	10.4
Niger	3.9
Nigeria	2.3
Rwanda	18.1
Senegal	6.2
Sierra Leone	4.5
Somalia	37.1
South Africa	14.4
Tanzania	32.4
Togo	1.4
Uganda	35.1
Zambia	12.1
Zimbabwe	21.6
Sub-Saharan Africa	11.5

*Nguồn: Cơ sở dữ liệu hòa nhập tài chính của Ngân hàng Thế giới (Ngân hàng Thế giới, 2016b)*

- Tỷ lệ phần trăm số người được hỏi cho biết cá nhân sử dụng điện thoại di động để thanh toán hóa đơn hoặc để gửi hoặc nhận tiền thông qua Mobile Money Association

(GSMA) cho dịch vụ Unbanked (MMU) trong 12 tháng qua; hoặc nhận lương, chuyển khoản của chính phủ hoặc thanh toán cho các sản phẩm nông nghiệp qua điện thoại di động trong 12 tháng qua (% tuổi 15+).

### **2.3. Bài học về những quy định và thuế**

M-money bao gồm lĩnh vực tài chính và viễn thông, vốn thường chịu sự điều chỉnh của hai cơ quan quản lý độc lập. Các cơ quan quản lý viễn thông thường quan tâm nhiều hơn đến cạnh tranh, khả năng truy cập và khả năng tương tác mạng, trong khi các cơ quan quản lý ngân hàng quan tâm đến rủi ro và bảo vệ người tiêu dùng khi đối mặt với thông tin bất cân xứng. Chi phí cho MNOs khi nhận tiền gửi thường ít hơn nhiều so với việc bán thẻ cào phát sóng, thậm chí còn cho phép nhận hoa hồng đại lý (Leishman, 2010). Vì tiền gửi có thể được sử dụng để mua thời gian phát sóng, m-money cho phép các MNO thu hút thời gian phát sóng với chi phí thấp hơn so với thông qua tuyến đường thông thường và có thể mang lại cho các công ty đương nhiệm của m-money lợi thế cạnh tranh. Các MNO cũng có thể cố gắng sử dụng m-money để vượt rào và giữ chân các khách hàng viễn thông, những người đặc biệt coi trọng việc cung cấp m-money.

Về nguyên tắc, các vấn đề quy định liên quan đến chức năng ngân hàng sẽ phức tạp hơn những vấn đề liên quan đến chức năng viễn thông; và các chế độ quản lý tập trung vào ngân hàng đối với m-money vẫn còn sơ khai (Jones và cộng sự, 2016). Klein và Mayer (2011) cho rằng quy định ngân hàng đối với m-money có thể dễ dàng tuân theo hai điều kiện chính. Thứ nhất, các khoản tiền gửi của khách hàng được gửi theo cơ chế tiền gửi m-money phải được MNO rào lại, nếu không MNO đang hoạt động như một tổ chức nhận tiền gửi. Thứ hai, vì các dịch vụ m-money cấu thành một nhóm các dịch vụ ngân hàng truyền thống, nên mỗi dịch vụ phải được đánh giá riêng theo nhu cầu quy định của nó. Họ lập luận rằng chỉ nên tiến hành các dịch vụ đầu tư để một ngân hàng thay vì một MNO chịu rủi ro từ nhà cung cấp, và các dịch vụ này phải tuân theo quy định ngân hàng thận trọng. Hầu hết các hoạt động m-money khác có thể được phân loại là dịch vụ thanh toán; và Klein và Mayer (2011) lập luận rằng họ chỉ yêu cầu hành vi tiêu chuẩn của quy định kinh doanh. Chúng bao gồm trao đổi loại tiền này lấy loại tiền khác (tiền mặt cho số dư tiền điện tử trong ví di động của khách hàng); lưu trữ an toàn tiền mặt dưới dạng tiền điện tử; và kiều hối. Vì đại lý giao dịch với khách hàng bằng tiền mặt của chính họ, nên không thể thực hiện giao dịch với đại lý hoặc MNO giống như giao dịch ngân hàng. Đại lý đang đổi một dạng tiền này cho một dạng tiền khác và có thể hết tiền giống như máy ATM có thể hết tiền mặt. Jack và Suri (2011) báo cáo rằng 69% sự chậm trễ mà người Kenya gặp phải trong việc nhận tiền mặt từ đại lý là do đại lý không đủ tiền mặt; và 52% trong số những sự chậm trễ này mất ít nhất một ngày để giải quyết. Aker và Wilson (2013) báo cáo những kinh nghiệm tương tự ở Ghana.

Theo Klein và Mayer (2011), việc tách hệ thống thanh toán của một quốc gia do m-money khởi xướng là một bước phát triển tích cực, bởi vì cơ chế thanh toán là một hàng hóa công cộng và được tách biệt tốt hơn với hoạt động cho vay và đi vay rủi ro của các ngân hàng. Họ lập luận rằng quy định nên có chức năng và mỗi chức năng được thực hiện bởi m-money nên được quy định riêng biệt. Cách tiếp cận này được chấp nhận rộng rãi trong

các tài liệu (di Castri, 2013; Khiaonarong, 2014), nhưng có những phản đối quan trọng đối với việc điều chỉnh hoàn toàn dựa trên cơ sở chức năng. Thứ nhất, bất kỳ dịch vụ tài chính cụ thể nào về cơ bản đều giống nhau bất kể nó được cung cấp như thế nào. Các kế hoạch tiết kiệm, tín dụng và bảo hiểm M-money có thể tạo thành một gói lại các dịch vụ này dưới sự bảo trợ của MNO thay vì ngân hàng. Thứ hai, một đặc điểm khác biệt của m-money, mặc dù nó có chung với m-banking, là vấn đề an ninh mạng. Số dư m-money có thể được bảo vệ kém hơn so với số dư ngân hàng trong trường hợp tài khoản bị tấn công, trừ khi MNO và các cơ quan quản lý ngân hàng phối hợp các quy tắc của họ. Thứ ba, có thể lập luận rằng quy định chức năng thuần túy thiếu điểm chính là các thể chế không hoạt động chứ không phải hoạt động, và do đó có một trường hợp độc lập đối với các thể chế điều tiết bất kể chức năng chính xác của chúng (Llewellyn, 2006).

Không thể giả định rằng sự phá sản của bất kỳ tổ chức nào tham gia vào hoạt động của m-money sẽ không gây ra các tác động bên ngoài giống như sự thất bại của ngân hàng, đặc biệt là khi những quy định bảo vệ số dư m-money khác nhau giữa các quốc gia. Ở các quốc gia theo luật thông thường, quỹ tín thác được công nhận rộng rãi và các chương trình m-money thường sử dụng quỹ ủy thác làm kho lưu trữ số dư của khách hàng. Tuy nhiên, một số quốc gia chỉ yêu cầu tiền của khách hàng phải được 'bảo vệ' nhưng không quy định trách nhiệm ủy thác rõ ràng đối với khoản tiền đó. Ở các quốc gia luật dân sự, vị thế còn tồi tệ hơn, vì quỹ tín thác có khả năng áp dụng hạn chế và người thụ hưởng có thể có ít quyền đối với các quỹ do người ủy thác thay mặt họ nắm giữ. Các quy định của m-money thường cung cấp một số biện pháp bảo vệ tiền của khách hàng, nhưng không rõ mức độ hiệu quả của biện pháp bảo vệ này trong trường hợp ngân hàng hoặc MNO phá sản.

Tiền của khách hàng được giữ trong quỹ ủy thác tại ngân hàng cần được bảo vệ bởi các quy định ngân hàng địa phương trong trường hợp ngân hàng gặp sự cố. Sự bảo vệ chính có thể là thông qua bảo hiểm tiền gửi; nhưng tính đến năm 2013, hơn một nửa số quốc gia có hệ thống m-money trên toàn thế giới không có chương trình bảo hiểm tiền gửi hoạt động (Grossman, 2016). Khách hàng của m-money ở những quốc gia này sẽ đứng trước các chủ nợ không có bảo đảm và có rất ít cơ hội thu hồi được hơn một phần nhỏ số tiền gửi của họ. Bảo hiểm tiền gửi luôn áp đặt mức trần đối với số tiền bảo hiểm của mỗi khoản tiền gửi. Nếu quỹ ủy thác được coi là một khoản tiền gửi duy nhất, thì những người nắm giữ m-money sẽ có thể mất gần như toàn bộ số tiền của họ trong trường hợp không thành công vì chỉ một phần của toàn bộ quỹ sẽ được bảo hiểm. Thay vào đó, nếu quỹ ủy thác được coi như một khoản chuyển nhượng cho mục đích bảo hiểm tiền gửi, thì mỗi chủ sở hữu m-money cá nhân sẽ được hưởng một khoản thanh toán từ chương trình bảo hiểm tiền gửi đến mức tối đa theo luật định cho khoản tiền gửi m-money của chính họ và không phân biệt trong tổng số tiền trong quỹ ủy thác. Kể từ năm 2017, chỉ có các quy định của Hoa Kỳ và Kenya quy định rõ ràng về bảo hiểm tiền gửi chuyển tiếp theo các dòng này và các quy tắc của Kenya được giới thiệu gần đây là nhằm mục đích rõ ràng là bảo vệ tiền gửi m-money (Tổng công ty Bảo hiểm tiền gửi Kenya, 2017).

Các vấn đề khác phát sinh liên quan đến sự phá sản của một MNO có hoạt động bằng m-money, đặc biệt nếu khả năng tương tác với m-money bị hạn chế. Các đại lý sẽ không

thể giao dịch bằng cách sử dụng MNO đã phá sản, và tiền của họ và tiền của khách hàng của họ sẽ bị đóng băng một cách hiệu quả cho đến khi mạng được bán hoặc MNO kết thúc. Ngoài ra, các đại lý được biết là quản lý số dư m-money ở một mức độ nào đó, chẳng hạn như khi họ nhận chuyển khoản m-money từ trụ sở chính hoặc công ty tổng hợp mà không có khoản chuyển lại tiền mặt tương ứng, tạo ra tiền một cách hiệu quả, nếu chỉ là tạm thời (Jack et al., 2010). Các đại lý là những chủ nợ không có bảo đảm và do đó có khả năng mất bất kỳ khoản hoa hồng chưa thanh toán nào hoặc tiền mặt không được đổi ngay lấy m-money. Sự sụp đổ của một mạng lưới đại lý lớn có thể nghiêm trọng như việc đóng cửa một ngân hàng cỡ trung.

Tuy nhiên, Klein và Mayer (2011) kết luận rằng m-money cho phép hệ thống thanh toán "... được vận hành mà hầu như không có rủi ro đối với người nộp thuế... [và không]... cần phải có quy định thận trọng". Tuy nhiên, kết luận này đối với chúng tôi dường như là quá tự mãn. Chưa có chương trình m-money nào được thử nghiệm bởi sự thất bại của MNO hoặc của một ngân hàng đóng vai trò là đại lý ủy thác. Do không có bảo hiểm tiền gửi và các quy tắc chuyển tiền rõ ràng, và sự giám sát tối thiểu các mối quan hệ giữa đại lý và MNO ở hầu hết các quốc gia nơi m-money được sử dụng rộng rãi, rõ ràng sẽ có nhu cầu nghiên cứu và hành động nhiều hơn về các vấn đề pháp lý.

Một vấn đề quản lý cuối cùng liên quan đến hoạt động của chính sách tiền tệ. Tác động của m-money đối với tổng lượng tiền trong nền kinh tế phụ thuộc vào các quy định của ngân hàng và vào hình thức chính xác mà đối tác của m-money được giữ trong hệ thống ngân hàng (Aron, 2018). Khi tiền mặt được chuyển đổi thành m-money, khoản tiền đối ứng của nó sẽ trở thành một khoản tiền gửi trong hệ thống ngân hàng, thường là trong một số hình thức quỹ ủy thác. Ở Philippines, nơi các ngân hàng được yêu cầu giữ 100% dự trữ so với tiền gửi của quỹ ủy thác tiền lưu động, không có ảnh hưởng gì đến nguồn cung tiền do việc mua lại hoặc thanh lý m-money.

Ở các quốc gia khác như Kenya, nơi các ngân hàng áp dụng tỷ lệ dự trữ tiền mặt theo tỷ lệ trên tất cả các khoản tiền gửi, sẽ có tác động tiềm tàng đến số lượng tiền nếu sự tăng lên của m-money liên quan đến việc giảm nhu cầu tiền mặt của công chúng, đó là sự chuyển đổi nhu cầu từ tiền mặt sang tiền m-money. Vì các ngân hàng chỉ được yêu cầu giữ một phần nợ tiền gửi bằng tiền mặt, với điều kiện là tiền gửi ủy thác được coi như tương đương với các khoản tiền gửi khác, thì các ngân hàng có thể cho vay tiền ủy thác theo cách thông thường. Điều này sẽ có xu hướng làm tăng cung tiền thông qua lập luận số nhân dự trữ ngân hàng thông thường. Mặc dù vậy, điều này có thể không đòi hỏi bất kỳ sự thay đổi cơ cấu nào trong chính sách tiền tệ vì ảnh hưởng đến lượng tiền sẽ được phản ánh trực tiếp vào nợ phải trả tiền gửi của các ngân hàng.

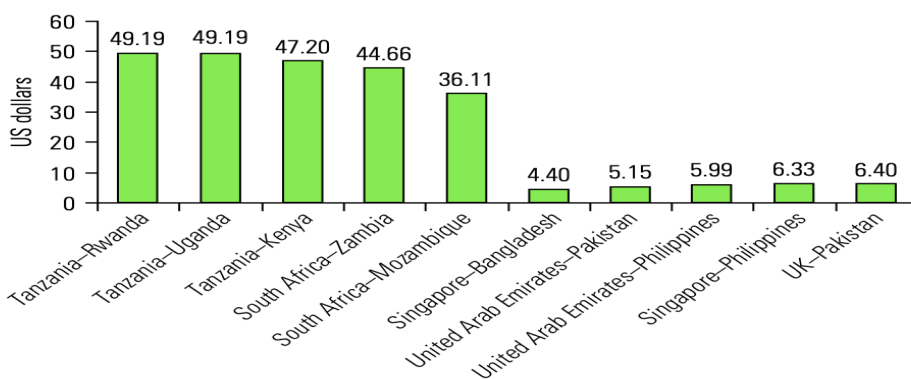
Việc đánh thuế đối với các giao dịch m-money đã được áp dụng ở một số quốc gia châu Phi, bao gồm Kenya, Uganda, Tanzania và Ghana, mặc dù việc xem xét rộng hơn chính sách thuế và m-money vẫn còn sơ khai. Thuế đối với m-money đã được thay đổi hoàn toàn ở Malawi sau khi bị công chúng phản đối, bao gồm cả các nhà kinh tế và chuyên gia thuế (Mzale, 2019). Lý do rõ ràng để đánh thuế các giao dịch m-money ở châu Phi là để mở rộng nguồn thu của chính phủ do quy mô và tốc độ tăng trưởng nhanh chóng trong lĩnh vực này.

Tuy nhiên, việc đánh thuế đối với các giao dịch m-money có thể làm giảm hoạt động và có thể giảm những lợi ích được ghi nhận cho đến nay, đặc biệt là trong việc cải thiện khả năng bao gồm tài chính. Ndung'u (2019a) lập luận rằng bất kỳ khoản thuế nào đối với các giao dịch m-money có khả năng chỉ có tác động tích cực nhỏ đến việc tăng nguồn thu của Chính phủ. Ví dụ, ở Kenya, thuế đối với các giao dịch m-money chiếm khoảng 1% tổng doanh thu. Hơn nữa, thuế có khả năng khuyến khích chuyển sang tiền mặt, và do đó sẽ có tác động không cân đối đối với những người có thu nhập thấp (Ndung'u, 2019b). Tuy nhiên, về cơ bản vẫn chưa có bằng chứng nghiên cứu đáng kể về vấn đề này.

#### 2.4. Bài học về quốc tế hóa tiền di động

Kiêu hối quốc tế là một trong những nguồn tài trợ bên ngoài lớn nhất ở các nước đang phát triển và thường đóng vai trò là cứu cánh cho người nghèo. Tuy nhiên, chi phí chuyển tiền từ nước ngoài thường lớn và không chắc chắn. Để kiểm tra, theo số liệu của Ngân hàng Thế giới, chi phí gửi tiền qua biên giới Tanzania-Kenya gần 10 lần giá gửi tiền từ Vương quốc Anh đến Pakistan vào năm 2011 (Figure 4.3).

**Figure 4.3. The most and least expensive remittance corridors**



**Source:** World Bank (<http://remittanceprices.worldbank.org>).

**Note:** Data is for Q3 2011.

Việc nói lỏng và cải thiện lượng kiều hối quốc tế sẽ có những tác động phát triển đáng kể, giống như việc nói lỏng các giao dịch chuyển tiền ở cấp nội địa đã thực hiện (Maimbo, Saranga và Strychacz 2011). Giá cả cao do cơ sở hạ tầng hệ thống thanh toán kém phát triển, khuôn khổ pháp lý không phù hợp và nhiều người di cư khó có được giấy tờ tùy thân để tiếp cận tài chính; thiếu minh bạch, cạnh tranh và bảo vệ quyền lợi người tiêu dùng cũng khiến giá cả ở mức cao. Tiền di động có thể làm được nhiều điều để giảm bớt tình trạng này, nhưng cần phải có sự trợ giúp của pháp luật và việc tạo ra cơ sở hạ tầng hệ thống thanh toán thích hợp.

Các nhà hoạch định chính sách lo ngại chính đáng về tài trợ cho tội phạm và khủng bố, cũng như các vấn đề chính sách tiền tệ phát sinh từ dòng chuyển tiền xuyên biên giới bất hợp pháp, nhưng các nhà quản lý cần tăng cường chú ý đến việc nói lỏng các ràng buộc chính sách đối với quốc tế hóa tiền lưu động. Vì các cuộc đàm phán đa quốc gia tốn nhiều thời gian, các dự án thí điểm nhỏ hơn có thể được thực hiện để khám phá cách cải thiện quy định về chuyển tiền di động quốc tế. Các khu vực có liên minh tiền tệ, chẳng hạn như



các khu vực của Tây Phi hoặc nơi có cơ sở hạ tầng hiện có, chẳng hạn như giữa Mexico và Hoa Kỳ, có thể dẫn đầu vì các cân nhắc về ngoại hối đã bị loại bỏ.

### **2.5. Bài học về cạnh tranh và khả năng tương tác**

Cũng cần có sự chú ý về quy định bổ sung đối với các vấn đề về cạnh tranh và khả năng tương tác. Giống như các ngành công nghiệp mạng khác, lợi thế theo quy mô và rào cản gia nhập cao có thể tạo ra kết quả thị trường không cạnh tranh trong ngành tiền di động. Trong trường hợp dịch vụ chuyên tiền di động được gắn với một nhà khai thác mạng di động thống trị (như trường hợp Safaricom của Kenya, có 68% thị trường thuê bao di động; xem Ủy ban truyền thông Kenya 2011), nhà khai thác đó có lợi thế hơn trong việc ra lệnh các điều khoản của sản phẩm.

Các hình thức quy định phù hợp vẫn đang xuất hiện và sẽ phụ thuộc vào bối cảnh. Quy định cạnh tranh sớm thậm chí có thể cản trở sự phát triển của tiền di động. Như một báo cáo gần đây của Diễn đàn kinh tế Thế giới đã lưu ý, “việc áp dụng ban đầu dường như được thúc đẩy bởi khả năng tiếp cận hạn chế đối với các dịch vụ tài chính chính thức, trái ngược với các thể chế phát triển tốt và thị trường cạnh tranh” (WEF 2011). Mặt khác, việc chờ đợi quá lâu để hạn chế các hành vi phi cạnh tranh có thể gây ra các chi phí xã hội và tài chính cho xã hội.

Một trong những cách chính để giảm sự thống trị của thị trường tiền di động là thông qua khả năng tương tác (Box 4.4). Khả năng tương tác có thể xảy ra ở nhiều cấp độ khác nhau: ở Nigeria, nơi Ngân hàng Trung ương muốn tránh một người chơi thống lĩnh thị trường, khả năng tương tác được yêu cầu ở cấp độ ngân hàng, bộ chuyển mạch và kênh thanh toán (IFC 2011). Ở các quốc gia khác, tiền di động xuất hiện trong một “khu vườn có tường bao quanh” vì khả năng tương tác không được phép về mặt kỹ thuật. Người tiêu dùng muốn hoán đổi giữa các dịch vụ tiền di động phải có nhiều thẻ SIM và sử dụng tiền mặt để trao đổi giữa các ví kỹ thuật số khác nhau (phát sinh thời gian, công sức và phí bổ sung).

Nhận thấy cơ hội thị trường, các công ty bên thứ ba đang bắt đầu cung cấp khả năng tương tác giữa các dịch vụ tiền di động khác nhau. Tuy nhiên, bởi vì các hệ thống tương tác này thường không chính thức, chúng vẫn còn tồn tại. Trong khi một số nhà quan sát cho rằng nhu cầu của người tiêu dùng cuối cùng sẽ gây áp lực buộc các nhà cung cấp phải cho phép khả năng tương tác đúng lúc (IFC 2011), những người khác lại phát hiện ra khả năng thất bại của thị trường.

Các nhà khai thác tiền di động thường miễn cưỡng cho phép khả năng tương tác chính thức bởi vì, sau khi đầu tư mạnh vào sản phẩm của mình, họ không muốn khách hàng dễ dàng chuyển tiền của họ sang đối thủ cạnh tranh. Trên thực tế, ở những thị trường mà khách hàng thường xuyên thay đổi nhà khai thác di động để tiết kiệm tiền, dịch vụ tiền di động được coi là một cách quan trọng để giữ khách hàng bị khóa vào mạng riêng của nhà khai thác. Tuy nhiên, có ý kiến cho rằng khả năng tương tác sẽ mang lại lợi ích cho các nhà khai thác bằng cách mở rộng nhóm khách hàng, giảm ưu đãi để có nhiều thẻ SIM (và do đó để

thực hiện cuộc gọi trên các mạng cạnh tranh) và giảm thiểu nhu cầu đại lý bán lẻ phải có tiền mặt, điều này gây tổn kém để di chuyển giữa các đại lý khác nhau (Mas 2011). Khả năng tương tác có thể cũng mang lại lợi ích cho các đại lý tiền di động, những người hiện đang phải duy trì cơ sở hạ tầng dự phòng cho mỗi lần triển khai tiền di động mà họ muốn phục vụ, cũng như tăng cường hiệu quả tổng thể trong nền kinh tế. Nhưng vì khả năng tương tác sớm có thể hạn chế sự phát triển của thị trường, các cơ quan quản lý phải tiếp cận vấn đề này một cách thận trọng.

#### **Box 4.4 Khả năng tương tác và đổi mới trong tiền điện thoại di động**

Sự phấn khích xung quanh việc triển khai tiền di động thành công đã thúc đẩy hoạt động sáng tạo bổ sung đáng kể. Khảo sát cảnh quan ở Kenya, Kendall et al. (2011) nhận thấy rằng M-PESA đã nổi lên như một nền tảng cho nhiều loại ứng dụng và dịch vụ mới. Các doanh nghiệp đã bắt đầu tích hợp M-PESA vào các hoạt động của họ, thường là để nâng cao hiệu quả và giảm chi phí. Các dự án kinh doanh khác cung cấp các dịch vụ hoàn toàn mới dựa trên điện thoại di động, chẳng hạn như kế hoạch tiết kiệm y tế từ Changamka Microhealth Ltd. Cuối cùng, một loại hình doanh nghiệp hoàn toàn mới đang phát triển; những doanh nghiệp này đóng vai trò là những người xây dựng cầu nối trung gian, cho phép những doanh nghiệp khác tích hợp với tiền điện thoại di động. Ví dụ,

Có lý do để lo lắng rằng sự khởi sắc ban đầu này là mỏng manh. Việc thiếu khả năng hoạt động liên thông liền mạch (ví dụ, thông qua giao diện lập trình ứng dụng M-PESA) là một phân nản phổ biến, làm tăng chi phí làm việc với M-PESA. Bởi vì đây là một dịch vụ độc quyền của Vodafone, các doanh nghiệp xây dựng trên nền tảng này phụ thuộc nhiều vào sự lựa chọn của Vodafone và chi nhánh địa phương của nó, Safaricom.

*Nguồn: [http://www.microsave.org/research\\_paper/analysis-of-financial-institutions-riding-the-m-pesa-rails](http://www.microsave.org/research_paper/analysis-of-financial-institutions-riding-the-m-pesa-rails)*

### **3. Kết luận**

Nhiều đặc điểm khiến tiền di động trở nên đầy hứa hẹn về quy mô, tác động, cách sử dụng đa dạng, vai trò mới lạ và rất thú vị nhưng sự thành công trong triển khai tiền di động để thúc đẩy tài chính toàn diện cũng luôn là một bài toán khó đặt ra cho cơ quan quản lý, các nhà hoạch định chính sách và cung cấp dịch vụ viễn thông. Với sự thận trọng này, các chính phủ, các nhà tài trợ và ngành công nghiệp có lý do chính đáng để nghiên cứu kỹ các hỗ trợ để tạo ra các dịch vụ tiền di động sôi động trong đó cho phép những người nghèo trên thế giới tham gia vào thị trường tài chính và giúp họ quản lý và sử dụng tiền của chính họ. Vì vậy, bài viết nghiên cứu đúc kết một số kinh nghiệm của các quốc gia có hệ thống tiền di động phát triển mạnh để góp phần hiện thực hóa vai trò của tiền di động trong việc tiếp cận dịch vụ tài chính của người nghèo nhằm thúc đẩy tài chính toàn diện ở Việt Nam.

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# NGHIÊN CỨU NHÂN TỐ ẢNH HƯỞNG ĐẾN HIỂU BIẾT TÀI CHÍNH CỦA SINH VIÊN TRÊN ĐỊA BÀN THÀNH PHỐ HÀ NỘI

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## **Tóm tắt**

Nghiên cứu này xem xét các yếu tố ảnh hưởng đến hiểu biết tài chính của sinh viên trên địa bàn thành phố Hà Nội. Bài viết sử dụng 348 mẫu khảo sát sinh viên các trường đại học trên toàn thành phố Hà Nội, kết quả từ mô hình hồi quy bội cho thấy ngành học, giới tính, số năm học đại học là những yếu tố tác động mạnh tới điểm hiểu biết tài chính của sinh viên. Cụ thể, nghiên cứu này cho thấy nhân tố liên quan đến ngành học của sinh viên, theo đó, nếu trong quá trình học đại học sinh viên theo khối ngành kinh tế hoặc trong chương trình có môn học liên quan đến ngành kinh tế - tài chính thì sẽ có hiểu biết tài chính tốt hơn, từ đó có thói quen chi tiêu lành mạnh, tránh được cám dỗ của tín dụng đen. Các nhân tố còn lại như giới tính, số năm theo học, quê quán đều có kết quả nghiên cứu nhất quán với các nghiên cứu trước đây về chiều tác động.

**Từ khóa:** Hiểu biết tài chính, tài chính toàn diện

## **Abstract**

*This study examines the factors affecting the financial literacy of students in Hanoi city. The research used 348 observations of students from universities across Hanoi city, the results from the multiple regression model showed that the majors, genders, and number of years in college education had a strong impact on student's financial literacy scores. The study shows that the financial literacy score of students majoring in economics or students attending short training course during university time are higher than that of other students. Then, they would have good expenditure plan as well as avoid from other social evils. Other determinants are found to have consistent impacts with previous studies.*

**Keywords:** Financial literacy, financial inclusion

## **1. Mở đầu**

Xu hướng hội nhập kinh tế quốc tế và toàn cầu hóa gắn liền với mở cửa thị trường và tự do hóa kinh tế đang diễn ra hết sức mạnh mẽ, là nhân tố quan trọng làm thay đổi cấu trúc, trật tự và cách hoạt động của nền kinh tế thế giới, hơn nữa xu hướng này còn là động lực để phát triển kinh tế quốc gia, khu vực và trên thế giới. Với sự phát triển nhanh chóng của khoa học, công nghệ và toàn cầu hóa kinh tế, các quốc gia đều đề cao việc phát triển nguồn nhân lực chất lượng cao thông qua giáo dục đào tạo để tiếp cận với tri thức mới, vươn lên trong phát triển kinh tế - xã hội, trong đó có Việt Nam.

Ngày nay, hiểu biết tài chính cá nhân ngày càng đóng vai trò quan trọng trong sự cân bằng, thịnh vượng của mỗi cá nhân nói riêng và sự ổn định, phát triển của nền kinh tế nói chung. Đối với các nền kinh tế mới nổi, công dân có hiểu biết về tài chính có thể đảm bảo rằng ngành tài chính có thể đóng góp hiệu quả thực sự cho tăng trưởng kinh tế và giảm nghèo (Faboyede & cộng sự, 2015).

Theo khảo sát của Tổ chức Hợp tác và phát triển kinh tế (OECD), tính đến năm 2015, có 59 quốc gia đã và đang xây dựng chiến lược giáo dục tài chính với tư cách là chiến lược quốc gia nhằm đóng góp vào sự phát triển tài chính toàn diện và đảm bảo tính bền vững của nền kinh tế. Chiến lược giáo dục tài chính là một trụ cột quan trọng của chiến lược tài chính toàn diện đối với một quốc gia, riêng tại khu vực Đông nam Á, tính đến năm 2016 có 5 quốc gia đã thiết kế để triển khai các chiến lược giáo dục tài chính toàn diện, trong đó Malaysia và Singapore là những nước tích cực nhất.

Ngày 22/01/2020, Thủ tướng Chính phủ đã ký ban hành Quyết định số 149/QĐ-TTg phê duyệt Chiến lược tài chính toàn diện quốc gia đến năm 2025, định hướng đến năm 2030. Theo đó, “tài chính toàn diện (TCTD) là việc mọi người dân và doanh nghiệp được tiếp cận và sử dụng các sản phẩm, dịch vụ tài chính một cách thuận tiện, phù hợp nhu cầu, với chi phí hợp lý, được cung cấp một cách có trách nhiệm và bền vững, trong đó chú trọng đến nhóm người nghèo, người thu nhập thấp, người yếu thế, doanh nghiệp nhỏ và vừa, doanh nghiệp siêu nhỏ”. Chiến lược TCTD hướng tới một trong các mục tiêu chính là “nâng cao hiểu biết tài chính cho người dân và doanh nghiệp, đảm bảo mọi người dân và doanh nghiệp có kiến thức, kỹ năng, thái độ, hành vi ứng xử phù hợp trong lựa chọn và sử dụng các sản phẩm, dịch vụ tài chính, xây dựng cơ chế bảo vệ người tiêu dùng tài chính để đảm bảo người tiêu dùng được cung cấp đầy đủ thông tin và đối xử công bằng”.

Với sự phát triển của nền kinh tế, nhu cầu vay vốn cá nhân và doanh nghiệp tăng cao đã thúc đẩy việc mở rộng quy mô tín dụng. Tuy nhiên, đến nay vẫn còn một số khách hàng chưa sử dụng dịch vụ ngân hàng. Ngoài khu vực tài chính chính thức chịu sự kiểm soát của nhà nước, còn có khu vực tài chính phi chính thức hoạt động ngoài phạm vi của pháp luật, còn được gọi là “tín dụng đen”. Vì vậy, việc thúc đẩy phát triển các tổ chức tín dụng, đặc biệt là phổ cập các dịch vụ tài chính là vô cùng quan trọng để người dân và doanh nghiệp có được tài chính dễ dàng và thuận tiện hơn (TS. Nguyễn Thị Thu Hoài, 2020). Đặc biệt đối với sinh viên - thế hệ trẻ và tương lai của đất nước, đây là đối tượng mới trưởng thành nên kiến thức còn yếu, dễ bị tổn thương bởi những rủi ro tài chính. Chính vì vậy nên đây là đối tượng hàng đầu cần được phổ cập kiến thức tài chính.

## **2. Tổng quan nghiên cứu**

Những năm trở lại đây việc chú trọng vào kiến thức tài chính của người dân Việt Nam, đặc biệt là nhóm đối tượng trẻ - nguồn lực vàng trong tương lai là mục tiêu cấp bách mà nhà nước đang theo đuổi. Với mục đích hướng tới nền công nghiệp, công nghiệp hóa, hiện đại hóa trong điều kiện phát triển kinh tế định hướng xã hội chủ nghĩa và hội nhập quốc tế gắn với phát triển tri thức, lấy khoa học, công nghệ, tri thức và nguồn nhân lực chất lượng cao làm động lực chủ yếu, huy động có hiệu quả mọi nguồn lực phát triển. Bởi vậy nguồn lực tri thức là một trong những yếu tố nền tảng để xây dựng phát triển đất nước.

Nghiên cứu của tác giả Trần Thanh Thu và cộng sự (2020) tập trung nghiên cứu về chương trình giáo dục tài chính quốc gia trong bối cảnh số hóa ngành tài chính, nhóm tác giả này đã chỉ ra rằng Việt Nam có chỉ số quan tâm và am hiểu đến kiến thức tài chính thấp hơn so với đại đa số các nước châu Á. Bên cạnh đó các số liệu hiểu biết về tài chính ở mức độ trên trung bình chỉ chiếm 24%, nhưng có đến 93% người Việt Nam không có hứng thú cải thiện theo Dougn (2019).

Đã có nhiều nghiên cứu nước ngoài về hiểu biết tài chính cá nhân, tuy nhiên mối quan hệ giữa các nhân tố ảnh hưởng đến hiểu biết tài chính cá nhân còn chưa được nhiều tác giả nghiên cứu triệt để. Nhìn chung, phần lớn các nghiên cứu này đều tìm mối quan hệ cùng chiều giữa các nhân tố như tuổi, giới tính, ngành học, thu nhập, giáo dục... và hiệu quả quản lý tài chính cá nhân. Hiểu biết về tài chính cá nhân đã trở thành một đề tài nghiên cứu khá nóng trên thế giới trong thập kỷ gần đây (theo Mohamad & cộng sự (2010), Annamaria & cộng sự (2010)...). Rất nhiều nhân tố đã được chỉ ra là có tác động đến hiểu biết về tài chính cá nhân như tuổi, giới tính, giáo dục và nghề nghiệp.

Độ tuổi tác động cùng chiều đến mức độ hiểu biết tài chính của cá nhân, tuy nhiên đây chưa phải là một xu hướng rõ ràng (Lê Hoàng Anh, 2018). Bên cạnh đó nghiên cứu của Chen & Volpe (1998), những người trong độ tuổi từ 23 - 29 và từ 40 tuổi trở lên sẽ có hiểu biết về tài chính nhiều hơn so với những độ tuổi còn lại. Với một khía cạnh tương đồng khác theo Lusardi & Mitchell (2011) cho rằng nhóm người trung niên có hiểu biết tài chính tốt nhất so với hai nhóm người trẻ và người già.

Trong khi đó, có nhiều nghiên cứu chỉ ra tầm quan trọng của giới tính khi cho rằng nam giới quản lý tài chính tốt hơn nữ giới: Kharchenko & Olga (2011), Al-Tamimi & Hussain (2009), Arrondel & cộng sự (2013), Koenen & Lusardi (2011); sinh viên nam hiểu biết về tài chính hơn sinh viên nữ, phù hợp với những phát hiện trước đó: Chen & Volpe (2002), Eitel & Martin (2009), Goldsmith (2006), Hira & Mugenda (2000). Cũng có rất nhiều nghiên cứu chỉ ra rằng, nơi cư trú ảnh hưởng đến hiểu biết về tài chính cá nhân. Cole & cộng sự (2008) chỉ ra những sinh viên Ấn Độ sống ở khu vực nông thôn được cho là có hiểu biết tài chính nhiều hơn những sinh viên sống trong khu vực thành thị. Theo Mohamad (2010), sinh viên ở ký túc xá có hiểu biết tài chính cao hơn sinh viên không ở ký túc, điều này được giải thích vì các sinh viên ở ký túc xá phải tự bươn trải, tự lập với cuộc sống xa gia đình hơn nên cũng phải cân đối chi tiêu và tìm hiểu những vấn đề liên quan đến tài chính hơn.

Bên cạnh các nhân tố về đặc điểm cá nhân, các nhà nghiên cứu chỉ ra rằng các nhân tố về hoàn cảnh gia đình như trình độ học vấn của bố mẹ, nghề nghiệp của bố mẹ, tình hình kinh tế của gia đình,... cũng có tác động đến mức độ am hiểu tài chính của sinh viên (Mohamad (2010)). Murphy (2005) nhận ra các sinh viên xuất thân từ một gia đình được giáo dục đầy đủ sẽ am hiểu về tài chính hơn và việc thường xuyên trao đổi kiến thức về lĩnh vực tài chính với bố mẹ sẽ củng cố nhận thức của sinh viên về tài chính. Lusardi & cộng sự (2011) cho rằng học vấn của người mẹ thực sự ảnh hưởng lớn đến nhận thức tài chính của một người, đặc biệt khi người mẹ đó tốt nghiệp bậc học cao đẳng. Như vậy, trình độ học vấn của bố mẹ tác động thuận chiều đến hiểu biết tài chính của sinh viên.

Năng lực học tập được sử dụng để dự đoán mức độ am hiểu tài chính và mức độ sung túc tài chính của sinh viên ở một số nghiên cứu trước đây (Chen & Volpe (1998), (2002), Sabri & cộng sự (2010), Shim & cộng sự (2009)). Jariah & cộng sự (2004) đã chỉ ra mối quan hệ chặt chẽ giữa trình độ học tập và hiểu biết tài chính, rằng sinh viên có điểm GPA cao hơn thì có mức độ hiểu biết tài chính tốt hơn. Nghiên cứu còn chỉ ra rằng các sinh viên được điểm GPA cao thường có xu hướng học hỏi kiến thức tài chính từ bạn bè nhiều hơn

những sinh viên có điểm GPA thấp. Thêm vào đó, số năm học tại một trường đại học có ảnh hưởng đến nhân thức tài chính của sinh viên, cụ thể, sinh viên đã tốt nghiệp am hiểu hơn sinh viên đại học, sinh viên năm 3 và năm 4 có nhận thức về tài chính tốt hơn những sinh viên khóa dưới.

Danes (1994) đã điều tra quan điểm của cha mẹ về cách tiêu dùng của con mình. Phụ huynh được hỏi ở độ tuổi nào thì họ có thể chia sẻ thông tin hay tham gia cùng với trẻ trong các hoạt động tài chính. Với những hoạt động tài chính phức tạp như hiểu biết về bảo hiểm hay có tài khoản ngân hàng riêng thì đa số các bậc phụ huynh đều tin rằng ở độ tuổi từ 15 - 17 thì trẻ mới cần tiếp cận. Hơn một nửa các bậc phụ huynh cũng tin rằng trẻ em trên 18 tuổi đã sẵn sàng tự quản lý tài khoản ngân hàng, thẻ tín dụng hay các khoản nợ của chúng. Frijins & cộng sự (2014) chỉ ra rằng các trải nghiệm tài chính có mối quan hệ thuận chiều tới hiểu biết tài chính của mỗi người. Những sinh viên bắt đầu thảo luận tài chính với bố mẹ khi đã hơn 18 tuổi có hiểu biết tài chính nhiều hơn so với phần còn lại.

José Manuel Cordero và cộng sự (2016) đã thực hiện một nghiên cứu để tìm hiểu xem, liệu việc triển khai các khóa học chuyên sâu về các khái niệm tài chính cơ bản ở trường học có ảnh hưởng đáng kể đến việc các sinh viên có thể áp dụng kiến thức và kỹ năng vào các tình huống tài chính thực tế. Nghiên cứu này khai thác tập hợp dữ liệu so sánh về các quốc gia tham gia đánh giá tài chính PISA 2012, bao gồm 18 trong số 70 nước tham gia vào làn sóng của PISA. Kết quả cho thấy rằng, các khóa học như vậy có một ý nghĩa quan trọng và tích cực, ảnh hưởng đến thành tích học sinh bất kể chiến lược nào được áp dụng để dạy học sinh các khái niệm tài chính.

Như vậy, có thể thấy, các nghiên cứu về nhân tố ảnh hưởng đến hiểu biết tài chính nói chung, và trong sinh viên được một số các học giả quan tâm. Tuy nhiên, khác với các nghiên cứu trước đây, nghiên cứu này bổ sung thêm nhân tố liên quan đến ngành học của sinh viên, theo đó, nếu trong quá trình học đại học sinh viên theo khối ngành kinh tế hoặc trong chương trình có môn học liên quan đến ngành kinh tế - tài chính thì sẽ có hiểu biết tài chính tốt hơn, từ đó có thói quen chi tiêu lành mạnh, tránh được cám dỗ của tín dụng đen. Các nhân tố còn lại như giới tính, số năm theo học, quê quán đều có kết quả nghiên cứu nhất quán với các nghiên cứu trước đây về chiều tác động.

### **3. Phương pháp nghiên cứu**

#### **3.1. Lựa chọn mô hình và biến số**

Dựa vào bài nghiên cứu của Richard Josua Christian Yap và cộng sự (2016) về ảnh hưởng của hiểu biết tài chính và thái độ đối với hành vi quản lý tài chính và sự hài lòng tài chính, nhóm tác giả xây dựng được mô hình nghiên cứu sau:

$$\text{FLS} = \beta_0 + \beta_1 \text{FIELD} + \beta_2 \text{GENDER} + \beta_3 \text{HOMETOWN} + \beta_4 \text{RESIDENCE} + \beta_5 \text{YEAR} + u_i$$

Trong đó:

Biến phụ thuộc:

FLS (Financial Literacy Score): Điểm hiểu biết về tài chính của sinh viên. Biến số này được tính điểm dựa trên 10 câu trả lời của sinh viên về hiểu biết tài chính. Các câu hỏi được lựa chọn dựa vào bộ câu hỏi đo lường hiểu biết tài chính của OECD/INFE (2018) đã được nhóm nghiên cứu chúng tôi thay đổi sao cho phù hợp với đối tượng sinh viên và bài nghiên



cứu. Các câu hỏi bao gồm các nội dung liên quan đến: lãi suất, các kênh đầu tư tài chính, hiểu biết về tín dụng đen, giá cả lạm phát, kế hoạch chi tiêu.

Biến độc lập:

(i) FIELD: Ngành học

(ii) GENDER: Giới tính

(iii) HOMETOWN: Nơi gia đình sinh viên sinh sống

(iv) RESIDENCE: Nơi ở hiện tại của sinh viên. Nghiên cứu định dạng biến này theo 2 giá trị: (1) nếu như sinh viên ở cùng với gia đình hoặc họ hàng (trong giai đoạn sinh viên không phải trả chi phí tiền nhà và tự mình chi tiêu ăn uống; (0) nếu như sinh viên ở kí túc xá hoặc thuê trọ cùng bạn bè.

(v) YEAR: Biến này thể hiện số năm mà sinh viên đang theo học, nhận các giá trị năm thứ nhất, năm thứ hai, năm thứ ba, năm thứ tư... và đã ra trường.

### 3.2. Mô tả thống kê khảo sát

Trên cơ sở dữ liệu khảo sát đối với 348 sinh viên trên địa bàn thành phố Hà Nội, Bảng 1 đưa ra tóm tắt về nhân khẩu học của người trả lời, các số liệu thống kê cho thấy rằng tỷ lệ nữ giới được hỏi là 62.36% và nam giới là 37.64%. Trong số các cá nhân được phỏng vấn, 57.18% là sinh viên đang học năm thứ ba, 13.51% là sinh viên học năm thứ hai, 10.92% là sinh viên học năm thứ 4, 9.48% là sinh viên học năm thứ nhất, còn lại 8.91% là sinh viên đã ra trường. Hầu hết những sinh viên được hỏi đều học khối ngành kinh tế (60.34%), còn lại là các khối ngành khác (39.66%). Những sinh viên được khảo sát đa số gia đình của họ đều sinh sống ở thành phố (70.11%), còn lại là sống tại nông thôn và miền núi (29.89%). Đối với việc sinh sống của sinh viên, những sinh viên sống cùng với gia đình hoặc nhà người thân họ hàng ở Hà Nội không mất phí sinh hoạt (46.55%); còn lại những sinh viên đến từ các thành phố khác thì thường ở trọ với bạn bè, ở trọ một mình, ở kí túc xá (53.45%).

**Bảng 1. Số liệu thống kê về nhân khẩu học của người trả lời**

<b>Giới tính</b>	Nữ	217	62.36%
	Nam	131	37.64%
<b>Năm sinh viên</b>	Năm 1	33	9.48%
	Năm 2	47	13.51%
	Năm 3	199	57.18%
	Năm 4	38	10.92%
	Đã ra trường	31	8.91%
<b>Khối ngành</b>	Kinh tế và có khóa học về kinh tế tài chính	210	60.34%
	Còn lại	138	39.66%
<b>Khu vực sinh sống của gia đình</b>	Thành phố	244	70.11%
	Nông thôn và miền núi	104	29.89%
<b>Nơi ở hiện tại</b>	Ở không mất tiền “1”	162	46.55%
	Ở mất tiền “0”	186	53.45%

*Nguồn: Dữ liệu khảo sát của nhóm nghiên cứu*

Bảng 2 đưa ra số liệu thống kê số điểm hiểu biết về tài chính của sinh viên sau khi họ hoàn thành 10 câu hỏi trắc nghiệm về kiến thức tài chính trong phần B bảng khảo sát của nhóm nghiên cứu. Trong đó, 80 điểm là số điểm nhiều sinh viên đạt được nhất (14.49%), phổ biến thứ hai là 60 điểm hiểu biết tài chính với 13.22% trên tổng số 438 phiếu hợp lệ, tiếp theo đó là số lượng sinh viên đạt 70 điểm về hiểu biết tài chính (11.21%). Trong bảng khảo sát, chỉ có 1 sinh viên duy nhất đạt 0 điểm (0.29%) và có tới 7 sinh viên xuất sắc trên tổng số 348 sinh viên đạt 100 điểm (2.01%) về mức độ hiểu biết tài chính. 7.18% là tỷ lệ phần trăm sinh viên đạt từ 10 điểm đến 25 điểm và từ 30 đến 45 là số điểm 53 sinh viên đạt được (15.23%) trên tổng số 348 sinh viên. Dựa vào bảng có thể thấy rằng đa số sinh viên được khảo sát đều đạt được từ 50 điểm trở lên, chiếm hơn 70% trên tổng số phiếu hợp lệ. 29.61% sinh viên có số điểm từ 50 đến 65 điểm, từ 70 điểm đến 85 điểm hiểu biết tài chính là 36.21% sinh viên đạt được. Số điểm cao nhất từ 90 đến 100 điểm hiện có 40 sinh viên đạt được trên tổng số 348 sinh viên được khảo sát (11.49%).

**Bảng 2. Số liệu thống kê số điểm hiểu biết về tài chính của sinh viên**

<b>Hiểu biết tài chính</b>	0 điểm	1	0.29%
	10 điểm	6	1.72%
	15 điểm	1	0.29%
	20 điểm	11	3.16%
	25 điểm	7	2.01%
	30 điểm	15	4.31%
	35 điểm	4	1.15%
	40 điểm	28	8.05%
	45 điểm	6	1.72%
	50 điểm	28	8.05%
	55 điểm	12	3.45%
	60 điểm	46	13.22%
	65 điểm	17	4.89%
	70 điểm	39	11.21%
	75 điểm	20	5.75%
	80 điểm	52	14.94%
	85 điểm	15	4.31%
	90 điểm	31	8.91%
95 điểm	2	0.57%	
100 điểm	7	2.01%	

*Nguồn: Dữ liệu khảo sát của nhóm nghiên cứu*

#### **4. Kết quả nghiên cứu**

Sau khi xử lý các khuyết tật của mô hình, nhóm nghiên cứu đã thu được kết quả như sau:

**Bảng 3. Các nhân tố ảnh hưởng đến hiểu biết tài chính của sinh viên trên địa bàn Hà Nội**

Biến số	Hiểu biết tài chính của sinh viên
C	3.656123***
Ngành học	0.253033***
Giới tính	-0.087516*
Quê quán	0.031020
Nơi cư trú hiện tại	0.010727
Năm học đại học	0.085387***

Ghi chú: \*  $p < 0.1$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$

Nguồn: Kết quả thu được từ mô hình Eviews

Thứ nhất, kết quả thu được từ mô hình cho thấy ngành học mang dấu dương có tác động mạnh tới điểm hiểu biết tài chính của sinh viên và có ý nghĩa thống kê ở mức 1%. Các kết quả thu được từ mô hình cho thấy biến ngành học có tác động đúng với dấu theo kỳ vọng về lý thuyết cũng như thực tiễn. Theo đó, thống kê này cho thấy đối với sinh viên học khối ngành kinh tế sẽ có điểm hiểu biết tài chính cao hơn các sinh viên học khối ngành khác do sinh viên không thuộc khối ngành kinh tế chỉ được giảng dạy các môn chuyên ngành và một số môn học thực tế, tuy nhiên hầu như không có môn học liên quan đến quản lý tài chính cá nhân. Hơn nữa, chương trình giảng dạy của các sinh viên theo ngành kinh tế được tiếp cận trực tiếp các vấn đề liên quan đến tài chính và các bạn sinh viên cũng chủ động tìm hiểu về các kiến thức kinh tế. Kết quả nghiên cứu này là hoàn toàn tương tự như kết quả thu được từ các nghiên cứu của Nguyễn Thị Hải Yến (2014), Chen & Volpe (1998), Peng et al. (2007).

Trong khi đó, qua khảo sát của nhóm nghiên cứu đối với các sinh viên thuộc khối ngành kỹ thuật, thì không có bất cứ mô học nào hay chương trình ngoại khóa nào có liên quan đến vấn đề về tài chính, đặc biệt là tài chính cá nhân. Theo các số liệu mà nhóm thu thập được, đa số các ngành kỹ thuật đều không được tiếp cận và giảng dạy về kiến thức tài chính. Ví dụ điển hình là ngành kỹ thuật điện tử viễn thông của Đại học Bách khoa Hà Nội có tổng cộng gần 80 môn học và trong số đó chiếm đến 90% là các môn học liên quan đến chuyên ngành và hỗ trợ kiến thức. Sinh viên chỉ được học một số môn về kỹ năng mềm và ứng xử trong công việc nhưng không có môn nào đề cập đến kiến thức tài chính. Theo kết quả thu được từ khảo sát của nhóm nghiên cứu, sinh viên theo học các ngành không liên quan đến kinh tế có tỷ lệ sinh viên sử dụng tín dụng đen chiếm đa số hơn 83% tổng số sinh viên đã từng sử dụng tín dụng đen. Chính vì vậy, việc bổ sung các kiến thức về tài chính cho sinh viên là rất cần thiết.

Thứ hai, giới tính mang dấu âm có ý nghĩa thống kê ở mức 10% có tác động đến điểm hiểu biết tài chính của sinh viên. Kết quả thu được từ mô hình hồi quy bội cho biết rằng điểm hiểu biết tài chính của nam và nữ có sự khác biệt đáng kể. Theo đó, điểm trung bình hiểu biết tài chính của nam thấp hơn điểm trung bình của nữ. Điều này được giải thích do sinh viên nữ có xu hướng lập kế hoạch dự tính mức chi tiêu hàng tháng và khả năng tiết kiệm cao hơn so với sinh viên nam. Phát hiện này phù hợp với hầu hết các nghiên cứu trước đây của Nguyễn Thị Hải Yến (2014), Nguyễn Đăng Tuệ (2017), Mandell (2008),... Tuy nhiên, kết quả này lại trái ngược với kết quả của các nghiên cứu của Kharchenko &

Olga (2011), Al-Tamimi & Hussain (2009), Arrondel & cộng sự (2013), Koenen & Lusardi (2011): nam giới quản lý tài chính tốt hơn nữ giới. Điều này được lý giải do sự khác nhau giữa nền văn hóa các nước trên thế giới, phụ nữ ở một số nước ngoài có điểm hiểu biết tài chính thấp hơn đáng kể so với nam giới, dẫn đến khả năng đánh giá và quản lý dòng tiền kém hơn, từ đó ít có trách nhiệm trong việc chi tiêu.

*Thứ ba, mối tương quan thuận giữa năm học và điểm hiểu biết tài chính của sinh viên có ý nghĩa thống kê ở mức 1% cho thấy rằng năm học có tác động mạnh đến điểm hiểu biết tài chính của sinh viên. Kết quả thống kê chỉ ra rằng sinh viên có số năm học càng cao hoặc đã ra trường có xu hướng hiểu biết tài chính hơn sinh viên năm nhất năm hai. Kết quả nghiên cứu này phù hợp với nghiên cứu của Nguyễn Thị Hải Yến (2014), hơn thế nữa, hầu hết các sinh viên có chuyên ngành liên quan đến lĩnh vực kinh tế đã học về các môn tài chính cơ bản kể từ năm đầu tiên. Do đó, mức độ hiểu biết tài chính của họ sẽ tăng dần theo từng năm cùng với chương trình học nâng cao hơn ở các năm học về sau của họ. Các sinh viên năm nhất khi tiếp cận với môi trường đại học nên sẽ gặp nhiều vấn đề liên quan đến chi tiêu hàng ngày và rủi ro tài chính, do đó sẽ phải trau dồi và học hỏi thêm nhiều kiến thức để thích nghi dần với môi trường mới này. Hơn thế nữa, sinh viên càng học lên cao thì càng được tiếp cận với các công cụ tài chính. Ngay cả đối với những người không phải sinh viên khối ngành kinh tế, kiến thức của họ cũng có thể cải thiện trong quá trình học do nhu cầu ngày càng tăng của họ về việc tìm hiểu về tài chính để tham gia vào thị trường sau khi tốt nghiệp (Nguyễn Thị Hải Yến, 2014).*

Ngoài ra, kết quả từ mô hình chỉ ra rằng biến nơi cư trú và biến quê quán không có ý nghĩa về mặt thống kê cho thấy hai biến này có tác động không đáng kể đến điểm hiểu biết tài chính của sinh viên. Trái lại với kết quả nghiên cứu của Nguyễn Thị Hải Yến (2014), biến nơi cư trú có tác động lớn đến điểm hiểu biết tài chính, các sinh viên sống ở Thành phố Hồ Chí Minh sẽ có điểm hiểu biết tài chính cao hơn, còn đối với các sinh viên sống ở các tỉnh hoặc các thành phố nhỏ thì thu được điểm số thấp hơn. Lý do kết quả của khảo sát ngược lại với nghiên cứu trên là bởi vì nhóm đối tượng được hỏi chỉ tập trung vào sinh viên tại thành phố Hà Nội, cho dù sinh viên có xuất thân từ nông thôn hay thành phố, sống cùng gia đình hay ở thuê thì họ đều có đủ nhận thức về kiến thức tài chính. Nói cách khác, các sinh viên được hỏi đa số đều được tiếp cận môi trường giáo dục tốt, do đó họ có nhận thức tốt về tài chính bất kể nông thôn hay thành phố. Bởi vậy, nơi cư trú và quê quán không ảnh hưởng đến hiểu biết tài chính của sinh viên tại thành phố Hà Nội.

## **5. Khuyến nghị chính sách**

Trên cơ sở các kết quả định lượng thu được từ mô hình, với mục đích tăng khả năng hiểu biết tài chính trong sinh viên và triển khai cấu phần giáo dục tài chính qua đó thực hiện hiệu quả chiến lược tài chính toàn diện quốc gia, nhóm nghiên cứu đề xuất một số khuyến nghị chính như sau:

*Thứ nhất*, cần đưa những môn học về quản lý tài chính cơ bản vào chương trình học cho học sinh cấp ba thuộc độ tuổi vị thành niên bởi vì đây là độ tuổi đã đủ lớn để bắt đầu tiếp thu những kiến thức về tiền bạc, tiết kiệm, rủi ro để làm bước nền cho tương lai của các em sau này. Để từ đó, khi lên đại học, các em sẽ có đủ những kiến thức cần thiết cho mình để đối mặt với cuộc sống sinh viên xa gia đình, tránh được những rủi ro tài chính cho bản thân. Ngoài ra, không chỉ đưa thêm môn học vào trong chương trình học cho các em học

sinh mà còn cần lồng ghép những kiến thức tài chính trong các môn học khác để các em có thể dễ dàng tiếp cận với kiến thức một cách tự nhiên.

*Thứ hai*, đối với những sinh viên không học khối ngành kinh tế, Bộ Giáo dục và nhà trường nên xem xét phương án đưa các môn học về hiểu biết tài chính như kỹ năng đầu tư cơ bản, kỹ năng quản lý tiền bạc, kỹ năng lập kế hoạch tài chính vào các chương trình ngoại khoá để sinh viên có thể tiếp cận được với nguồn kiến thức tài chính một cách cơ bản nhất để làm hành trang cho tương lai sau này.

*Thứ ba*, Chính phủ cần tuyên truyền, phổ biến mạnh mẽ về tầm quan trọng của kiến thức tài chính đối với mỗi cá nhân nói riêng hay đối với việc phát triển nền kinh tế nói chung. Mỗi sinh viên cần phải có ý thức tự trang bị cho mình những hiểu biết về tài chính cơ bản nhất để từ đó tự bảo vệ mình trước những rủi ro tài chính và hơn thế nữa, điều này còn góp một phần rất lớn vào việc cải thiện nền kinh tế nước nhà.

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# THÔNG LỆ CHUNG, KHUÔN KHỔ PHÁP LÝ VÀ CƠ CHẾ THỰC THI BẢO VỆ NGƯỜI TIÊU DÙNG TÀI CHÍNH: KHẢO LƯỢC THỰC TIỄN QUỐC TẾ

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## **Tóm tắt**

Bảo vệ người tiêu dùng tài chính có vai trò hết sức quan trọng trong thúc đẩy sự phát triển hệ thống tài chính nói riêng cũng như tăng trưởng kinh tế và mục tiêu tài chính toàn diện nói chung tại mỗi quốc gia. Do đó, nhiều tổ chức lớn trên thế giới đã phát triển các bộ nguyên tắc hoặc đưa ra các khuyến nghị làm cơ sở tham chiếu để thực hành việc bảo vệ người tiêu dùng tài chính, trong đó nổi bật hơn cả là “39 thực tiễn tốt về bảo vệ người tiêu dùng tài chính” của World Bank và “10 nguyên tắc bảo vệ người tiêu dùng tài chính” của G20/OECD. Tuy không mang tính chất bắt buộc nhưng các nguyên tắc này được xem là căn cứ quan trọng để các quốc gia tham khảo cho việc xây dựng, hoàn thiện khuôn khổ pháp lý và thể chế của mình. Dựa trên cơ sở đó, bài viết trình bày cụ thể các thông lệ quốc tế, khuôn khổ pháp lý và cơ chế thực thi bảo vệ người tiêu dùng tài chính được World Bank và G20/OECD đề xuất với mục tiêu giúp các nhà hoạch định chính sách hoàn thiện khuôn khổ pháp lý bảo vệ người tiêu dùng tài chính.

**Từ khóa:** Bảo vệ người tiêu dùng tài chính, khuôn khổ pháp lý, thông lệ quốc tế, cơ chế thực thi

## **Abstract**

*Financial consumer protection plays a very important role in promoting the development of the financial system in particular as well as economic growth and the goal of financial inclusion in general in each country. As a result, many major organizations around the world have developed sets of principles or recommendations as a basis of reference for practicing financial consumer protection, of which the most prominent are the “39 good practices of financial consumer protection” of the World Bank and the “10 principles of financial consumer protection” of the G20/OECD. Although not mandatory, these principles are considered an important basis for countries to refer to for the development and improvement of their legal and institutional frameworks. On that basis, this paper specifically presents international practices, legislative frameworks and enforcement mechanisms for financial consumer protection proposed by the World Bank and the G20/OECD with the aim of helping policymakers to complete the legislative framework for financial consumer protection.*

**Keywords:** *Financial consumer protection, legislative framework, international practice, enforcement mechanism*



## 1. Giới thiệu

Tới nay, chưa có một định nghĩa chính thống nào về bảo vệ người tiêu dùng tài chính. Hội đồng Thanh toán châu Âu (2021) định nghĩa, bảo vệ người tiêu dùng tài chính là việc một hệ thống luật pháp và tổ chức của chính phủ và nhà nước được thiết lập để đảm bảo quyền lợi hợp pháp của người tiêu dùng tài chính; cũng như người tiêu dùng tài chính có đầy đủ kiến thức, kỹ năng, sự hiểu biết để tự bảo vệ chính mình khi sử dụng các dịch vụ tài chính. Ngân hàng Trung ương Uganda (2011) định nghĩa bảo vệ người tiêu dùng tài chính là sự đối xử công bằng của các nhà cung cấp dịch vụ tài chính đối với khách hàng hiện tại và tiềm năng của họ. Theo World Bank (2012), bảo vệ người tiêu dùng tài chính là việc hệ thống luật pháp và tổ chức chính phủ được thiết lập vận hành để đảm bảo quyền lợi hợp pháp của người tiêu dùng tài chính. Theo Tổ chức Tài chính Quốc tế - IFC (2015), bảo vệ người tiêu dùng tài chính được hiểu là bất kỳ hoạt động, hành động hoặc bộ quy tắc nào tìm cách giảm thiểu các rủi ro và tác hại cho người tiêu dùng liên quan đến việc sử dụng bất kỳ sản phẩm hoặc dịch vụ tài chính nào.

Ngày nay, bảo vệ người tiêu dùng tài chính nhận được sự quan tâm ngày càng nhiều của cả giới học giả và các nhà hoạch định chính sách. Mỗi năm, có khoảng 150 triệu người tiêu dùng tài chính mới và hầu hết những người tiêu dùng tài chính mới này đến từ các quốc gia đang phát triển, nơi mà tầm quan trọng của việc bảo vệ người tiêu dùng tài chính không được chú trọng (Rutledge, 2010). Không chỉ vậy, sự ra đời của các Fintech mang lại cho người tiêu dùng tài chính rất nhiều lựa chọn sản phẩm tài chính và các lựa chọn mới, đi kèm với lượng thông tin khổng lồ (Ryan và cộng sự, 2010). Tuy nhiên, việc có quá nhiều các sản phẩm tài chính mới với nhiều thông tin phức tạp có thể khiến người tiêu dùng tài chính gặp phải các bất lợi như bất cân xứng thông tin, gian lận tài chính... Do đó, việc xây dựng, hoàn thiện khuôn khổ pháp lý bảo vệ người tiêu dùng tài chính không chỉ giúp bảo vệ người tiêu dùng tài chính khỏi các rủi ro và bất lợi trên thị trường tài chính mà còn có ý nghĩa quan trọng góp phần thúc đẩy tài chính toàn diện của quốc gia. Mục tiêu về tài chính toàn diện chỉ có thể đạt được khi người tiêu dùng tài chính được bảo vệ bằng một khung khổ pháp lý và thể chế toàn diện, vững chắc.

Bài nghiên cứu khảo lược thực tiễn quốc tế về các thông lệ chung, khuôn khổ pháp lý và cơ chế thực thi bảo vệ người tiêu dùng tài chính để rút ra được những điểm nổi bật, qua đó giúp nhà hoạch định hoàn thiện khuôn khổ pháp lý và cơ chế thực thi bảo vệ người tiêu dùng tài chính tại quốc gia của mình.

## 2. Thông lệ quốc tế về bảo vệ người tiêu dùng tài chính

### 2.1. Thực tiễn tốt về bảo vệ người tiêu dùng tài chính của Ngân hàng Thế giới

Ngân hàng Thế giới (World Bank) đã tiến hành điều tra nghiên cứu kinh nghiệm của 35 quốc gia về việc triển khai thực thi bảo vệ người tiêu dùng tài chính hiệu quả từ năm 2006, và công bố ấn bản Các thực tiễn tốt về bảo vệ người tiêu dùng tài chính (Good Practices for Financial Consumer Protection) vào năm 2012 và 2017. Các ấn bản bao gồm các vấn đề chính nảy sinh trong quá trình bảo vệ người tiêu dùng với các chương riêng cho các lĩnh vực như ngân hàng, chứng khoán và bảo hiểm. Ấn bản bao gồm ba phần: Phần 1 đề xuất 39 thực tiễn tốt phổ biến về bảo vệ người tiêu dùng; Phần 2 tập hợp thực tiễn tốt liên quan

đến các lĩnh vực tài chính chủ đạo như ngân hàng, chứng khoán, bảo hiểm và tín dụng phi ngân hàng; Phần 3 trình bày thực tiễn tốt về quỹ hưu trí và báo cáo thông tin tín dụng.

Các ấn bản cũng giải quyết các vấn đề mới phát sinh, chủ yếu liên quan đến kênh kỹ thuật số, sản phẩm sáng tạo và mô hình kinh doanh và các loại nhà cung cấp dịch vụ tài chính mới. Cho đến nay, 39 thực tiễn tốt phổ biến mà World Bank đề ra đối với một cơ chế bảo vệ người tiêu dùng tài chính hiệu quả vẫn được nhiều nước tham chiếu để so sánh, đánh giá nhằm hoàn thiện khuôn khổ bảo vệ người tiêu dùng tài chính của nước mình. Các thực tiễn tốt trên được phân loại vào 8 nhóm chủ điểm chính: (i) Cơ quan bảo vệ người tiêu dùng; (ii) Minh bạch thông tin và thực tiễn bán hàng; (iii) Quản lý tài khoản khách hàng; (iv) Bảo mật dữ liệu và quyền riêng tư; (v) Giải quyết tranh chấp; (vi) Bảo hiểm tiền gửi và bồi thường; (vii) Hiểu biết tài chính và trao quyền cho người tiêu dùng; (viii) Cơ chế cạnh tranh.

**Bảng 1. 39 thực tiễn tốt về bảo vệ người tiêu dùng tài chính của World Bank**

<b>Phân loại</b>		<b>Thực tiễn tốt bảo vệ người tiêu dùng tài chính</b>
Cơ quan bảo vệ người tiêu dùng tài chính	1	Luật pháp cần ban hành rõ các quy định về bảo vệ người tiêu dùng tài chính liên quan đến các sản phẩm, dịch vụ tài chính. Đồng thời, cần có hướng dẫn rõ ràng về cách thức tổ chức triển khai quy định bảo vệ người tiêu dùng tài chính một cách kịp thời.
	2	Xây dựng một bộ quy tắc ứng xử cho các tổ chức tài chính theo từng lĩnh vực và được giám sát bởi một cơ quan theo luật định. Các tổ chức tài chính có liên quan phải cam kết tuân theo bộ quy tắc ứng xử này.
	3	Cơ quan giám sát bảo vệ người tiêu dùng có thể được trao cả trách nhiệm giám sát hoạt động của các tổ chức tài chính. Tuy nhiên, dù ở bất kỳ cơ cấu tổ chức nào, cơ quan giám sát bảo vệ người tiêu dùng phải đảm bảo đầy đủ năng lực để triển khai và giám sát hiệu quả việc bảo vệ người tiêu dùng tài chính.
	4	Hệ thống tư pháp cần thiết lập sẵn các giải pháp giải quyết tối ưu cho bất kỳ tranh chấp của người tiêu dùng tài chính với giá cả hợp lý, kịp thời và chuyên nghiệp.
	5	Tất cả các pháp nhân cung cấp dịch vụ tài chính cho người tiêu dùng đều phải được cấp phép và giám sát bởi cơ quan giám sát thích hợp.
	6	Các phương tiện truyền thông và hiệp hội người tiêu dùng tích cực thúc đẩy bảo vệ người tiêu dùng tài chính.
Công khai thông tin và thực tiễn bán hàng	7	Trước khi một tổ chức tài chính đưa ra khuyến nghị cho người tiêu dùng về một sản phẩm hoặc dịch vụ tài chính cụ thể, tổ chức tài chính đó thu thập đầy đủ thông tin từ khách hàng để đảm bảo rằng sản phẩm hoặc dịch vụ đó có khả năng đáp ứng nhu cầu và khả năng của người tiêu dùng đó.
	8	Đối với tất cả các sản phẩm hoặc dịch vụ tài chính, người tiêu dùng sẽ nhận được một Điều khoản sử dụng, được viết bằng ngôn ngữ đơn giản, mô tả các điều khoản và điều kiện chính và dựa trên các tiêu chuẩn đã được ngành thống nhất về các loại thông tin tối thiểu để được công bố cho từng loại sản phẩm hoặc dịch vụ tài chính.

Phân loại	<b>Thực tiễn tốt bảo vệ người tiêu dùng tài chính</b>	
	9	Trước khi người tiêu dùng mua một sản phẩm hoặc dịch vụ tài chính, tổ chức tài chính cung cấp một bản sao bằng văn bản của các điều khoản và điều kiện chung của tổ chức đó, cũng như những điều khoản và điều kiện áp dụng cho sản phẩm hoặc dịch vụ.
	10	Các sản phẩm, dịch vụ tài chính có tính tiết kiệm dài hoặc chịu áp lực doanh số bán hàng cao thì phải có quy định khoảng thời gian khách hàng hủy hợp đồng mà không bị phạt.
	11	Người đi vay được tự do lựa chọn sản phẩm hoặc nhà cung cấp dịch vụ trong điều kiện bắt buộc phải mua hoặc sử dụng bất kỳ sản phẩm nào đó để có thể nhận được một sản phẩm hoặc dịch vụ khác từ tổ chức tài chính.
	12	Trong quảng cáo của mình, các tổ chức tài chính phải công bố rằng họ được quản lý và xác định cơ quan quản lý có liên quan.
	13	Nhân viên của các tổ chức tài chính giao dịch trực tiếp với người tiêu dùng tài chính phải được đào tạo đầy đủ, phù hợp với mức độ phức tạp của sản phẩm hoặc dịch vụ mà họ bán.
Quản lý và bảo trì tài khoản khách hàng	14	Các tổ chức tài chính chuẩn bị xác nhận bằng văn bản hoặc điện tử về các điều khoản giao dịch của mỗi khách hàng và báo cáo thường xuyên cho mỗi tài khoản khách hàng về các chi tiết chính của các giao dịch tài chính của khách hàng. Đối với các sản phẩm đầu tư, khách hàng nhận được báo cáo định kỳ về giá trị của tài sản trong tài khoản của họ.
	15	Khách hàng được thông báo riêng bằng văn bản (hoặc bằng phương tiện điện tử) về những thay đổi của lãi suất, phí và lệ phí trong thời gian sớm nhất.
	16	Các tổ chức tài chính duy trì hồ sơ khách hàng cập nhật và cung cấp cho khách hàng quyền truy cập sẵn sàng vào hồ sơ của họ mà không tính phí hoặc với một khoản phí hợp lý.
	17	Việc hoàn tất các giao dịch của khách hàng dựa trên các quy tắc pháp lý và quy định rõ ràng - hoặc tùy thuộc vào các thỏa thuận tự điều chỉnh hiệu quả.
	18	Nghiêm cấm các tổ chức tài chính sử dụng các biện pháp đòi nợ hoặc thu hồi nợ khắc nghiệt đối với khách hàng.
Bảo mật dữ liệu và quyền riêng tư	19	Luật đưa ra các quy tắc cơ bản về chia sẻ thông tin giữa các bên tham gia hệ thống báo cáo tín dụng, bao gồm cơ quan đăng ký tín dụng, tổ chức báo cáo và người sử dụng báo cáo tín dụng.
	20	Đối với cơ quan đăng ký tín dụng, luật quy định các quyền của người tiêu dùng liên quan đến việc chia sẻ thông tin, bao gồm quyền truy cập, cải chính, chặn và xóa các lỗi và thông tin cá nhân đã lỗi thời.
	21	Riêng đối với cơ quan thông tin tín dụng, luật phải quy định mức định kỳ cập nhật thông tin khách hàng tín dụng, cơ chế truy cập miễn phí đến báo cáo thông tin tín dụng của khách hàng (ít nhất một lần một năm) và quy định thủ tục sửa chữa những sai sót trong báo cáo thông tin tín dụng. Các tổ chức thông tin tín dụng đều phải chịu sự giám sát phù hợp của cơ quan chính phủ (hoặc phi chính phủ).
	22	Tổ chức tài chính phải bảo đảm dữ liệu khách hàng bảo mật và an toàn. Mọi tổ chức tài chính phải thông báo khách hàng về chính sách bảo mật, sử dụng và chia sẻ thông tin cá nhân của khách hàng.

<b>Phân loại</b>		<b>Thực tiễn tốt bảo vệ người tiêu dùng tài chính</b>
	23	Các tổ chức tài chính được yêu cầu bảo vệ tính bí mật và an toàn kỹ thuật của dữ liệu khách hàng.
	24	Các văn phòng tín dụng phải chịu sự giám sát của cơ quan có thẩm quyền của chính phủ (hoặc phi chính phủ) thích hợp.
Cơ chế giải quyết tranh chấp	25	Tổ chức tài chính phải thiết lập một đơn vị đầu mối chịu trách nhiệm tiếp nhận, xử lý khiếu nại của khách hàng. Đồng thời, các tổ chức tài chính phải liên tục cập nhật, tổng hợp hồ sơ khiếu nại tiếp nhận và trên cơ sở đó, phát triển chính sách, thông lệ giải quyết khiếu nại phù hợp như thời hạn xử lý, mẫu phản hồi khiếu nại và các phương thức giúp khách hàng tiếp cận quy trình khiếu nại của tổ chức tài chính.
	26	Người tiêu dùng được tiếp cận với một cơ chế giải quyết tranh chấp với giá cả phải chăng, hiệu quả và đủ điều kiện chuyên nghiệp và được tôn trọng, chẳng hạn như một thanh tra tài chính độc lập hoặc tổ chức tương đương có năng lực thực thi hiệu quả. Tổ chức hành động một cách công bằng và độc lập với cơ quan chỉ định, ngành, cơ quan mà đơn khiếu nại đã được gửi đến, cũng như bất kỳ người tiêu dùng hoặc nhóm người tiêu dùng nào. Các quyết định của cơ quan thanh tra tài chính hoặc tổ chức tương đương có giá trị ràng buộc đối với tổ chức tài chính.
	27	Thống kê các khiếu nại của khách hàng, bao gồm cả những khiếu nại liên quan đến vi phạm các quy tắc ứng xử, được biên soạn và công bố định kỳ bởi thanh tra viên hoặc cơ quan giám sát tài chính.
	28	Các cơ quan quản lý có nghĩa vụ pháp lý phải công bố các số liệu thống kê và phân tích liên quan đến các hoạt động của họ liên quan đến bảo vệ người tiêu dùng - và đề xuất các thay đổi về quy định hoặc các biện pháp giáo dục tài chính để tránh các nguồn khiếu nại có hệ thống của người tiêu dùng. Các hiệp hội cũng đóng vai trò phân tích các số liệu thống kê về khiếu nại và đề xuất các biện pháp để tránh tái diễn các khiếu nại có hệ thống của người tiêu dùng.
Cơ chế bảo hiểm tiền gửi và bồi thường	29	Luật pháp đảm bảo rằng cơ quan quản lý có thể thực hiện các biện pháp thích hợp trong trường hợp tổ chức tài chính gặp khó khăn về tài chính.
	30	Bất kỳ luật nào về bảo hiểm tài chính hoặc quỹ bảo lãnh đều quy định rõ ràng về công ty bảo hiểm, phân loại người gửi tiền được bảo hiểm, mức độ bảo hiểm, (những) người đóng góp vào quỹ, mỗi trường hợp sẽ kích hoạt khoản thanh toán, và cơ chế đảm bảo chi trả kịp thời cho tất cả người gửi tiền được bảo hiểm.
	31	Người gửi tiền, chủ hợp đồng bảo hiểm nhân thọ và thành viên quỹ hưu trí được hưởng quyền ưu tiên cao hơn so với các chủ nợ không có bảo đảm khác trong quá trình thanh lý của một tổ chức tài chính có liên quan.
Hiểu biết tài chính và trao quyền cho người tiêu dùng tài chính	32	Chính phủ phải triển khai chương trình giáo dục tài chính toàn diện để nâng cao hiểu biết tài chính của người dân. Ngoài chính phủ thì tổ chức phi chính phủ, khu vực tư nhân phải tham gia vào việc xây dựng và triển khai chương trình giáo dục tài chính.
	33	Chính phủ cần chỉ định một bộ ngành cụ thể để lãnh đạo, điều phối việc phát triển và triển khai chương trình giáo dục tài chính toàn diện.
	34	Khuyến khích thực hiện các sáng kiến để cải thiện khả năng tài chính của mọi người bao gồm việc khuyến khích các phương tiện thông tin đại chúng cung cấp thông tin và hướng dẫn về tài chính.

<b>Phân loại</b>		<b>Thực tiễn tốt bảo vệ người tiêu dùng tài chính</b>
	35	Chính phủ và các cơ quan nhà nước tham khảo ý kiến của người tiêu dùng, các hiệp hội ngành hàng và các tổ chức tài chính để phát triển các đề xuất đáp ứng nhu cầu và mong đợi của người tiêu dùng. Họ cũng thực hiện thử nghiệm của người tiêu dùng để cố gắng đảm bảo rằng các sáng kiến được đề xuất, bao gồm cả những sáng kiến liên quan đến việc tiết lộ thông tin của người tiêu dùng và giải quyết tranh chấp, có khả năng mang lại kết quả như mong đợi.
	36	Khả năng tài chính của người tiêu dùng và tác động của các biện pháp nâng cao vị thế người tiêu dùng được đo lường thông qua một cuộc khảo sát hộ gia đình trên diện rộng được lặp lại theo thời gian.
Cơ chế cạnh tranh	37	Các cơ quan quản lý tài chính và cơ quan quản lý cạnh tranh tham khảo ý kiến của nhau để đưa ra cơ chế cạnh tranh phù hợp.
	38	Chính phủ cần xây dựng chính sách cạnh tranh trong lĩnh vực tài chính và cân nhắc những tác động của chính sách cạnh tranh này đối với quyền lợi và lợi ích của người tiêu dùng tài chính.
	39	Cơ quan quản lý cạnh tranh định kỳ công bố báo cáo đánh giá tình hình cạnh tranh giữa các tổ chức tài chính bán lẻ và đưa ra khuyến nghị phù hợp về cạnh tranh giữa các tổ chức tài chính bán lẻ.

*Nguồn: World Bank (2012)*

## **2.2. Nguyên tắc bảo vệ người tiêu dùng tài chính của G20/OECD**

Để đảm bảo chính sách và quy định nhằm bảo vệ người tiêu dùng tài chính được xây dựng phù hợp với mức độ phát triển vũ bão của thị trường tài chính, Tổ chức Hợp tác và Phát triển kinh tế - OECD phối hợp với nhóm nền kinh tế lớn G20 cùng xây dựng các nguyên tắc bảo vệ người tiêu dùng tài chính vào năm 2011. Đây là những nguyên tắc có tính tự nguyện. G20 yêu cầu các nước thành viên cũng như các nước quan tâm nên lấy nguyên tắc này làm cơ sở để đánh giá khuôn khổ bảo vệ người tiêu dùng tài chính hiện có của quốc gia mình và bổ sung những hành động, quy định cần thiết dựa trên các nguyên tắc này. 10 nguyên tắc của G20/OECD đề cập toàn diện các nội dung, từ khuôn khổ pháp lý, quản lý, giám sát, vai trò của cơ quan giám sát đến các vấn đề liên quan đến đối xử công bằng, minh bạch, cạnh tranh... (OECD, 2011). Các nguyên tắc này đến nay vẫn được nhiều quốc gia tham chiếu, áp dụng.

### ***Nguyên tắc 1: Khuôn khổ pháp lý và giám sát***

Bảo vệ người tiêu dùng tài chính phải là một bộ phận không tách rời trong khuôn khổ quản lý giám sát và phải phản ánh sự đa dạng của hoàn cảnh cụ thể mỗi quốc gia, thị trường thế giới và các phát triển về mặt quản lý trong lĩnh vực tài chính. Quy định bảo vệ người tiêu dùng tài chính phải thể hiện và phù hợp với đặc điểm, loại hình và sự khác nhau của các sản phẩm tài chính cũng như của người tiêu dùng tài chính, quyền và trách nhiệm của họ và phải đáp ứng được các sản phẩm, thiết kế, công nghệ và cơ chế phân phối mới. Cần phải có được những cơ chế luật pháp hay giám sát đủ mạnh và hiệu quả để bảo vệ người tiêu dùng và xử phạt những hành vi sai trái, lạm dụng và gian lận tài chính.

## ***Nguyên tắc 2: Vai trò của cơ quan giám sát***

Cần có cơ quan giám sát (chuyên biệt hoặc không) chịu trách nhiệm cụ thể về bảo vệ người tiêu dùng tài chính cùng các thẩm quyền cần thiết để thực hiện nhiệm vụ của mình. Cơ quan đó cần hoạt động độc lập, khách quan, có quyền hạn đầy đủ, có bộ máy quản trị phù hợp, có nhân sự và nguồn lực cần thiết, có trách nhiệm trước những quyết định của mình; có một khuôn khổ thực thi rõ ràng minh bạch và quy trình quản lý thống nhất. Cơ quan giám sát cần tuân thủ tiêu chuẩn chuyên môn cao, bao gồm các tiêu chuẩn phù hợp về bảo mật thông tin người tiêu dùng, quyền sở hữu thông tin và tránh xung đột lợi ích.

Cần thúc đẩy hợp tác với các cơ quan giám sát dịch vụ tài chính khác và giữa các cơ quan hoặc bộ phụ trách các vấn đề theo lĩnh vực. Một sân chơi bình đẳng cho các dịch vụ tài chính nên được khuyến khích ở mức độ phù hợp nhất. Hợp tác quốc tế giữa các cơ quan giám sát cũng nên được khuyến khích, trong đó cần chú ý cụ thể đến các vấn đề bảo vệ người tiêu dùng tài chính phát sinh từ các giao dịch quốc tế và hoạt động bán hàng xuyên biên giới.

## ***Nguyên tắc 3: Đối xử công bằng với người tiêu dùng tài chính***

Tất cả người tiêu dùng tài chính nên được đối xử bình đẳng, khách quan và công bằng ở tất cả các khâu trong mối quan hệ với nhà cung cấp dịch vụ tài chính. Đối xử công bằng với người tiêu dùng tài chính là một phần không thể thiếu trong quản trị tốt và văn hóa doanh nghiệp của tất cả các nhà cung cấp dịch vụ tài chính và đại lý được cấp phép. Cần đặc biệt chú ý đến nhu cầu của nhóm người dễ bị tổn thương.

## ***Nguyên tắc 4: Công khai và minh bạch***

Các nhà cung cấp dịch vụ tài chính và đại lý được cấp phép phải cung cấp cho khách hàng thông tin quan trọng về những lợi ích, rủi ro và điều khoản cơ bản của sản phẩm. Họ cũng cần cung cấp thông tin về xung đột lợi ích liên quan đến đại lý được cấp phép mà sản phẩm được bán thông qua đó. Đặc biệt là phải cung cấp những thông tin quan trọng về sản phẩm tài chính. Thông tin phù hợp cần được cung cấp ở tất cả các giai đoạn quan hệ với khách hàng. Tất cả các tài liệu quảng cáo phải chính xác, trung thực, dễ hiểu và không gây hiểu lầm. Các thông lệ công bố thông tin trước hợp đồng đã được chuẩn hóa (ví dụ: các biểu mẫu) cần được áp dụng và cho phép so sánh giữa các sản phẩm và dịch vụ có cùng bản chất. Cần xây dựng các cơ chế công bố cụ thể, bao gồm các cảnh báo để cung cấp thông tin tương ứng với mức độ phức tạp và các rủi ro của sản phẩm và dịch vụ. Nếu có thể, cần thực hiện nghiên cứu hành vi tiêu dùng để giúp xác định và cải thiện hiệu quả của các yêu cầu công bố thông tin.

## ***- Nguyên tắc 5: Nhận thức và giáo dục tài chính***

Tất cả các bên liên quan đều cần đẩy mạnh nâng cao nhận thức và giáo dục tài chính và người tiêu dùng tài chính cần dễ dàng tiếp cận được các thông tin về bảo vệ người tiêu dùng, quyền và trách nhiệm của mình. Cần xây dựng cơ chế phù hợp để giúp người tiêu dùng tài chính hiện tại và tương lai phát triển kiến thức, kỹ năng và niềm tin để hiểu rõ các rủi ro, bao gồm cơ hội và rủi ro tài chính, đưa ra lựa chọn sáng suốt, biết rõ đến đâu để được giúp đỡ và hành động đúng đắn để cải thiện tình trạng tài chính của chính mình.

Cần phổ cập giáo dục và thông tin tài chính để nâng cao kiến thức và năng lực tài chính của người tiêu dùng tài chính, đặc biệt là đối với các nhóm dễ bị tổn thương. Với điều kiện

cụ thể của mỗi quốc gia, giáo dục tài chính nên được triển khai như là một phần của chiến lược giáo dục và bảo vệ người tiêu dùng tài chính, được thực hiện thông qua nhiều kênh phù hợp, nên bắt đầu từ độ tuổi còn trẻ và có thể dễ dàng tiếp cận với mọi độ tuổi. Các chương trình và phương pháp cụ thể liên quan đến giáo dục tài chính nên được xây dựng riêng cho các nhóm người tiêu dùng tài chính dễ bị tổn thương.

***Nguyên tắc 6: Kinh doanh có trách nhiệm của nhà cung cấp dịch vụ tài chính và đại lý được cấp phép***

Các nhà cung cấp dịch vụ tài chính và đại lý được cấp phép nên có mục tiêu vì lợi ích cao nhất của khách hàng và chịu trách nhiệm bảo vệ người tiêu dùng tài chính. Các nhà cung cấp dịch vụ tài chính cũng phải chịu trách nhiệm về hành động của các đại lý được cấp phép của họ. Tùy thuộc vào bản chất của giao dịch và thông tin chủ yếu mà khách hàng cung cấp, các nhà cung cấp dịch vụ tài chính cần đánh giá khả năng, tình hình và nhu cầu tài chính của khách hàng trước khi đồng ý cung cấp tư vấn, sản phẩm hoặc dịch vụ.

Nhân viên (đặc biệt là nhân viên làm việc trực tiếp với khách hàng) cần được đào tạo và có trình độ phù hợp. Khi có khả năng xảy ra xung đột lợi ích, các nhà cung cấp dịch vụ tài chính và đại lý được cấp phép nên nỗ lực để tránh xung đột xảy ra. Khi không thể tránh được những xung đột đó, các nhà cung cấp dịch vụ tài chính và đại lý được cấp phép cần đảm bảo công bố thông tin chính xác, có cơ chế nội bộ để xử lý xung đột hoặc từ chối cung cấp tư vấn, sản phẩm hoặc dịch vụ. Cơ cấu thù lao cho nhân viên của cả nhà cung cấp dịch vụ tài chính và đại lý được cấp phép nên được thiết kế để khuyến khích hành vi kinh doanh có trách nhiệm, đối xử công bằng với người tiêu dùng tài chính và tránh xung đột lợi ích. Cơ cấu thù lao nên được tiết lộ cho khách hàng khi thích hợp, chẳng hạn như khi xung đột lợi ích tiềm năng ngoài tầm quản lý hoặc không thể tránh.

***Nguyên tắc 7: Bảo vệ tài sản của người tiêu dùng tài chính khỏi lừa đảo và lạm dụng***

Những thông tin liên quan, cơ chế bảo vệ và kiểm soát phải bảo vệ tối đa tiền gửi, tiền tiết kiệm và các tài sản tài chính tương tự khác của người tiêu dùng tài chính trước các hành vi lừa đảo, chiếm dụng hoặc lạm dụng khác.

***Nguyên tắc 8: Bảo vệ thông tin cá nhân và quyền riêng tư của người tiêu dùng tài chính***

Thông tin cá nhân và thông tin tài chính của khách hàng nên được bảo vệ thông qua các cơ chế kiểm soát và bảo vệ thích hợp. Các cơ chế này phải xác định rõ mục đích dữ liệu được thu thập, xử lý, lưu trữ, sử dụng và cung cấp để làm gì (đặc biệt là cho các bên thứ ba). Các cơ chế cũng phải thừa nhận quyền của người tiêu dùng tài chính trong việc được thông báo về việc chia sẻ dữ liệu thông tin cá nhân, truy cập dữ liệu và yêu cầu điều chỉnh kịp thời và/hoặc xóa dữ liệu không chính xác hoặc bất hợp pháp.

***Nguyên tắc 9: Cơ chế xử lý khiếu nại và khắc phục***

Cơ quan quản lý cần đảm bảo rằng người tiêu dùng tài chính có quyền sử dụng cơ chế xử lý khiếu nại và giải quyết khiếu nại đầy đủ, dễ tiếp cận, giá cả hợp lý, độc lập, công bằng, có trách nhiệm, kịp thời và hiệu quả. Cơ chế như vậy không nên áp đặt phí vô lý, chậm trễ hoặc tạo gánh nặng cho người tiêu dùng tài chính. Với nguyên tắc này, các nhà cung cấp dịch vụ tài chính và đại lý được cấp phép phải có cơ chế xử lý khiếu nại và khắc phục. Phải có một quy trình giải quyết độc lập để xử lý các khiếu nại mà không được giải

quyết hiệu quả thông qua các cơ chế xử lý tranh chấp nội bộ của nhà cung cấp dịch vụ tài chính và của đại lý được ủy thác. Ít nhất thì thông tin tổng hợp liên quan đến khiếu nại và giải pháp xử lý khiếu nại phải được công khai.

### ***Nguyên tắc 10: Cạnh tranh***

Cần thúc đẩy thị trường cạnh tranh trong nước và quốc tế để cung cấp cho người tiêu dùng nhiều lựa chọn hơn trong số các dịch vụ tài chính và tạo áp lực cạnh tranh cho các nhà cung cấp để cung cấp các sản phẩm cạnh tranh, tăng cường đổi mới và duy trì chất lượng dịch vụ cao. Người tiêu dùng có thể tìm kiếm, so sánh và, khi thích hợp, chuyển đổi giữa các sản phẩm và nhà cung cấp một cách dễ dàng với chi phí hợp lý và công khai.

### **3. Khuôn khổ pháp lý bảo vệ người tiêu dùng tài chính tại các quốc gia**

Theo khảo sát của World Bank (2018), khuôn khổ pháp lý về bảo vệ người tiêu dùng tài chính đã xuất hiện ở 124 quốc gia được khảo sát với 03 cách tiếp cận phổ biến:

(1) Các quy định về bảo vệ người tiêu dùng nằm trong các luật tài chính chuyên ngành (như Luật Ngân hàng, Luật Chứng khoán, Luật Bảo hiểm...). Đa phần các quốc gia được khảo sát áp dụng cách tiếp cận này (chiếm hơn 70%).

Cách tiếp cận này đòi hỏi sự phối hợp chặt chẽ của các cơ quan quản lý do một số loại hình cung ứng dịch vụ có thể nằm ngoài các quy định bảo vệ người tiêu dùng tài chính. Đặc biệt, sẽ là thách thức lớn với các cơ quan quản lý trong bối cảnh khoa học công nghệ phát triển nhanh chóng với rất nhiều loại hình dịch vụ tài chính mới, ứng dụng công nghệ, liên kết đa ngành, đa lĩnh vực (như huy động vốn cộng đồng, cho vay ngang hàng, bảo hiểm ngân hàng...).

(2) Các quy định về bảo vệ người tiêu dùng nằm trong luật bảo vệ người tiêu dùng nói chung (có các điều khoản tham chiếu riêng cho người tiêu dùng trong lĩnh vực tài chính).

(3) Có luật/quy định riêng về bảo vệ người tiêu dùng trong lĩnh vực tài chính. Việc xây dựng một luật riêng giúp tránh được khoảng trống hoặc sự xung đột giữa các luật khác nhau. Và cách tiếp cận này thường được các nước có thị trường tài chính phát triển ở mức độ cao áp dụng.

Mặc dù có nhiều cách tiếp cận khác nhau nhưng hầu hết các luật bảo vệ người tiêu dùng tài chính của các quốc gia trên thế giới đều bao gồm hai quy định: (i) Quy định về việc cấp phép/đăng ký; và (ii) Quy định về cơ quan chịu trách nhiệm giám sát.

#### ***Quy định về việc cấp phép/đăng ký:***

Quy định về cấp phép/đăng ký không chỉ là bước đầu tiên, trọng yếu trong trách nhiệm giám sát hoạt động tài chính của nhà nước mà còn đóng vai trò quan trọng hỗ trợ nhà nước thực thi cơ chế bảo vệ người tiêu dùng tài chính. Các quy định về tước giấy phép hoạt động tạm thời hoặc vĩnh viễn có thể là một giải pháp răn đe hiệu quả đối với các tổ chức tài chính có hành vi sai trái trong thực thi các quy định về bảo vệ người tiêu dùng tài chính. Bên cạnh đó, việc quản lý cấp phép/đăng ký cũng giúp cơ quan quản lý có thông tin cơ bản và cập nhật về các nhà cung cấp dịch vụ tài chính để hỗ trợ giám sát thực thi bảo vệ người tiêu dùng tài chính hiệu quả hơn. Tùy quy định của mỗi quốc gia và mức độ phát triển thị trường tài chính mà có các cấp độ cấp phép khác nhau. Tại các quốc gia có thị trường tài chính rộng lớn và sôi động, việc cấp phép được xem xét theo nhiều cấp độ:



+ Cấp độ 1: Các ngân hàng và một số tổ chức phi ngân hàng phải xin giấy phép trước khi hoạt động, bất kể quy mô, với các tiêu chí tối thiểu phải đáp ứng. Hoạt động cũng sẽ không được ngừng lại khi chưa được sự chấp thuận của cơ quan thẩm quyền.

+ Cấp độ 2: Một số định chế tài chính phi ngân hàng và các công ty phi tài chính phải xin cấp phép nếu như hoạt động của họ vượt ngưỡng nào đó, xét về quy mô hoặc tính chất phức tạp. Cấp độ này cũng đòi hỏi các yêu cầu tối thiểu, tuy có thể thấp hơn yêu cầu áp dụng cấp độ 1.

+ Cấp độ 3: Một số định chế tài chính phi ngân hàng và các định chế phi tài chính chỉ cần đăng ký. Họ có thể bắt đầu hoạt động mà không cần sự chấp thuận trước của cơ quan chức năng, chỉ cần đăng ký hoạt động trong một khung thời gian quy định. Cấp độ này không yêu cầu các tiêu thức tối thiểu, nhưng có kèm theo yêu cầu báo cáo các thông tin cơ bản cho cơ quan chức năng. Việc ngưng hoạt động chỉ cần thông báo với cơ quan chức năng.

#### *Quy định về cơ quan chịu trách nhiệm giám sát:*

Một khi đã thực hiện việc cấp phép, luật cần xác định cơ quan cấp phép và cơ quan này phải đủ thẩm quyền và năng lực để thiết lập và giám sát các tiêu thức tối thiểu đối với một tổ chức được cấp phép, bao gồm: (i) Tiêu chuẩn tối thiểu về năng lực của các chủ sở hữu, các thành viên hội đồng quản trị, quản lý cấp cao và những người kiểm soát doanh nghiệp; (ii) Tiêu chuẩn tối thiểu về quản trị và kiểm soát nội bộ tương ứng, bao gồm cả kiểm soát đặc biệt nhằm giảm thiểu những rủi ro bảo vệ người tiêu dùng.

#### **4. Cơ chế thực thi bảo vệ người tiêu dùng tài chính tại các quốc gia**

Liên quan chặt chẽ tới khuôn khổ pháp lý và quy định để bảo vệ người tiêu dùng tài chính là cơ cấu tổ chức của các cơ quan chịu trách nhiệm về việc ban hành quy định bảo vệ người tiêu dùng tài chính và giám sát thực hiện. Các nguyên tắc và hướng dẫn quốc tế luôn nhấn mạnh tầm quan trọng về cấu trúc thể chế để quản lý và giám sát, bảo đảm thực thi các quy định bảo vệ người tiêu dùng. Các nguyên tắc của nhóm G20 khuyến nghị rằng phải có một cơ quan giám sát chịu trách nhiệm chính thống bảo vệ người tiêu dùng tài chính, với quy định rõ ràng về trách nhiệm và thẩm quyền, có cơ chế quản trị phù hợp, độc lập và minh bạch trong hoạt động, có đủ nguồn lực và năng lực để thực hiện nhiệm vụ. Theo World Bank, cấu trúc thể chế phải bảo đảm việc thực thi các quy tắc quy định một cách đầy đủ, có mục đích, kịp thời và công bằng, cho dù việc giám sát thận trọng và giám sát bảo vệ người tiêu dùng tài chính do hai cơ quan khác nhau thực hiện, hay thuộc nhiệm vụ của một cơ quan duy nhất.

Việc xem xét và giao trách nhiệm cho cơ quan chức năng bảo đảm thực thi khuôn khổ pháp luật bảo vệ người tiêu dùng cần những yếu tố sau:

#### *Cấu trúc thể chế:*

Không có một mô hình nào có thể áp dụng cho mọi quốc gia. Thông thường, cơ quan nào chịu trách nhiệm bảo vệ người tiêu dùng dịch vụ ngân hàng sẽ xác định theo mục tiêu và hiệu lực bảo đảm thực hiện các điều luật bảo vệ người tiêu dùng, bao gồm các chức năng: ban hành quy định cho cả các ngân hàng lẫn các phi ngân hàng một cách nhất quán, kịp thời, đầy đủ.

Một khung khổ pháp lý tiếp cận dựa trên hành vi sẽ là cơ sở cho một cơ quan có thẩm quyền bao trùm lên tất cả các loại hình nhà cung ứng dịch vụ ngân hàng. Mô hình này sẽ giúp loại bỏ các khoảng trống pháp lý, bảo đảm sự nhất quán và giảm thiểu rủi ro xung đột lợi ích khi việc bảo vệ người tiêu dùng tài chính được nhiều cơ quan chức năng cùng thực thi. Tuy vậy việc một cơ quan chức năng hoàn toàn tập trung và việc thực thi khuôn khổ bảo vệ người tiêu dùng cũng không khả thi đối với nhiều quốc gia. Có thể tồn tại nhiều cơ quan chức năng cùng chịu trách nhiệm bảo vệ người tiêu dùng (như ngân hàng trung ương và cơ quan khác) đối với dịch vụ ngân hàng và các tổ chức phi ngân hàng cùng với đó sẽ cần một cơ chế phối hợp hiệu quả.

*- Phạm vi và trách nhiệm của cơ quan giám sát bảo vệ người tiêu dùng:*

Để bảo vệ người tiêu dùng hiệu quả, các nhà cung cấp dịch vụ tài chính như tiền gửi, tiết kiệm hay thanh toán hay các phi ngân hàng cần nằm dưới sự quản lý của cơ quan có đủ thẩm quyền và có trách nhiệm thực thi các điều luật về bảo vệ người tiêu dùng tài chính. Nếu không thể quản lý tất cả các phi ngân hàng, thì tối thiểu những phi ngân hàng có rủi ro cao đối với người tiêu dùng như các tổ chức tín dụng tiêu dùng hay các hợp tác xã tài chính lớn phải nằm dưới thẩm quyền quản lý của cơ quan giám sát ngân hàng có nhiệm vụ bảo vệ người tiêu dùng tài chính.

*Trách nhiệm của cơ quan giám sát:*

Trong hầu hết các khu vực pháp lý, chức năng giám sát thận trọng và bảo vệ người tiêu dùng được giao cho một cơ quan thực hiện. Các nước theo mô hình này đã thành lập một đơn vị chuyên môn cho bảo vệ người tiêu dùng tài chính. Các cơ quan không có đơn vị chuyên trách cũng được ghi nhận là chức năng bảo vệ người tiêu dùng được thực hiện như một phần của các hoạt động giám sát thận trọng.

Bất kể cơ quan nào được chọn để bảo đảm thực thi pháp luật bảo vệ người tiêu dùng tài chính, thì điều quan trọng vẫn là nhiệm vụ phải được quy định rõ ràng, cụ thể. Quy định về thẩm quyền ban hành quy định, giám sát, quản lý, thanh tra và cưỡng chế thực hiện phải gắn với mục tiêu hoạt động của các cơ quan này, và bảo đảm thẩm quyền phải bao trùm lên các nhà cung cấp dịch vụ tín dụng, tiền gửi, tiết kiệm, thanh toán, bất kể là ngân hàng hay phi ngân hàng, là đối tượng được cấp phép hay đăng ký dịch vụ.

*Công cụ, thẩm quyền và nguồn lực giám sát:*

Các cơ quan có bộ phận chuyên trách về bảo vệ người tiêu dùng tài chính thường sử dụng nhiều công cụ giám sát hơn, bao gồm thu thập thông tin thống kê về các khiếu nại, vận hành đường dây nóng để tiếp nhận các khiếu nại và tra cứu thông tin, trang thông tin điện tử, so sánh phí và lãi suất do các định chế tài chính báo cáo. Thẩm quyền của các cơ quan giám sát trong lĩnh vực này cũng mở rộng hơn. Hiệu lực của văn bản quy định là yếu tố then chốt cho cách tiếp cận toàn diện và hiệu quả đối với việc bảo vệ người tiêu dùng tài chính. Hầu hết các cơ quan giám sát có thể cảnh báo các tổ chức cung ứng dịch vụ tài chính, hoặc quyết định áp đặt các biện pháp trừng phạt, yêu cầu các tổ chức cung ứng dịch vụ rút các quảng cáo gây hiểu lầm, yêu cầu nhà cung ứng dịch vụ hoàn trả lại phí, thông báo công khai các hành vi vi phạm, hoặc đưa ra các biện pháp trừng phạt đối với các quản lý cấp cao, thu hồi giấy phép của tổ chức vi phạm.

### *Phối hợp nội ngành và liên ngành:*

Một cơ chế phối hợp hiệu quả giữa các đơn vị khác nhau trong cùng một cơ quan, hoặc liên ngành giữa các cơ quan là điều đặc biệt quan trọng bảo đảm hiệu lực thực thi quy định bảo vệ người tiêu dùng tài chính. Trong bối cảnh các nhà mạng đóng vai trò ngày càng lớn trong việc cung cấp các sản phẩm dịch vụ tài chính số, với sự kết nối ngày càng chặt chẽ giữa công nghệ viễn thông và thông tin với khu vực tài chính, đặc biệt là khi các dịch vụ tài chính số phát triển mạnh, nhiều vấn đề mới nổi lên liên quan tới sự cạnh tranh giữa các nhà mạng khi cung cấp dịch vụ cho người dùng, yêu cầu phối hợp ngày nay còn được đặt ra giữa cơ quan giám sát tài chính với các cơ quan quản lý công nghệ viễn thông và thông tin.

## **5. Kết luận**

Thị trường tài chính ngày càng phát triển nhờ vào những tiến bộ vượt bậc của khoa học công nghệ, cung cấp cho người tiêu dùng tài chính nhiều sản phẩm và dịch vụ tài chính tiện lợi hơn. Tuy nhiên, việc có quá nhiều các sản phẩm tài chính mới với nhiều thông tin phức tạp có thể khiến người tiêu dùng tài chính gặp phải các bất lợi như bất cân xứng thông tin, gian lận tài chính... Điều này đòi hỏi các quốc gia cần xây dựng, hoàn thiện khuôn khổ pháp lý bảo vệ người tiêu dùng tài chính, góp phần thúc đẩy tài chính toàn diện của quốc gia. Bài nghiên cứu đã trình bày thông lệ quốc tế về bảo vệ người tiêu dùng tài chính, trong đó nổi bật là “39 thực tiễn tốt bảo vệ người tiêu dùng tài chính” của World Bank và “10 nguyên tắc bảo vệ người tiêu dùng tài chính” của G20/OECD. Không chỉ vậy, bài viết cũng nêu ra các khuôn khổ pháp lý cũng như các cơ chế thực thi bảo vệ người tiêu dùng tài chính được các tổ chức lớn và uy tín đề xuất với mục tiêu giúp các nhà hoạch định chính sách hoàn thiện khuôn khổ pháp lý bảo vệ người tiêu dùng tài chính tại quốc gia của mình.

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# CHIẾN LƯỢC GIÁO DỤC TÀI CHÍNH QUỐC GIA TẠI HỒNG KÔNG - BÀI HỌC KINH NGHIỆM CHO VIỆT NAM

*Đào Bích Ngọc - Nguyễn Nhật Minh - Lê Thị Hương Trà  
Học viện Ngân hàng*

## **Tóm tắt**

Hiện nay, Việt Nam vẫn chưa xây dựng được chiến lược, chính sách riêng về giáo dục tài chính cho người dân, tách khỏi chiến lược quốc gia về tài chính toàn diện. Mặt khác, các chương trình giáo dục tài chính đang được triển khai bởi các ngân hàng, các đơn vị tư nhân thường có quy mô nhỏ, tiếp cận ít người, mang tính nhỏ lẻ, tầm ảnh hưởng còn rất hạn chế. Chính vì vậy bài nghiên cứu này nghiên cứu chiến lược giáo dục tài chính quốc gia tại Hồng Kông và rút ra bài học kinh nghiệm cho Việt Nam.

**Từ khóa:** Chiến lược, giáo dục, tài chính, bài học kinh nghiệm

## **Abstract**

*Currently, Vietnam has not yet developed a strategy and policy on financial education for its people, separate from the national strategy on financial inclusion. On the other hand, financial education programs being implemented by banks and private entities are often small, low in accessibility and influence. Therefore, this paper examines the national strategy of financial education in Hong Kong and draws lessons for Vietnam.*

**Keywords:** Strategy, education, financial, experience

## **1. Đặt vấn đề**

Ngày 22/01/2020, Thủ tướng Chính phủ đã ký Quyết định số 149/QĐ-TTg phê duyệt Chiến lược tài chính toàn diện quốc gia đến năm 2025, định hướng đến năm 2030 với mục tiêu là “mọi người dân và doanh nghiệp đều được tiếp cận và sử dụng an toàn, thuận tiện các sản phẩm, dịch vụ tài chính phù hợp nhu cầu, với chi phí hợp lý, do các tổ chức được cấp phép cung ứng một cách có trách nhiệm và bền vững... trong đó chú trọng đến nhóm người nghèo, người thu nhập thấp, người yếu thế, doanh nghiệp nhỏ và vừa, doanh nghiệp siêu nhỏ”. Để đạt được mục tiêu, người dân cần phải có nhận thức đúng đắn về các sản phẩm dịch vụ tài chính, đồng thời, phải có ý thức trong các hành vi và ứng xử tài chính. Vì vậy, giáo dục tài chính cho người dân là một trong những giải pháp cốt lõi, đặc biệt quan trọng trong quá trình thực hiện Chiến lược quốc gia tài chính toàn diện.

Bắt đầu từ năm 2016, Chính phủ đã chỉ đạo quyết liệt, yêu cầu ngành ngân hàng quan tâm, chú trọng công tác truyền thông về tiền tệ và hoạt động ngân hàng, các chương trình giáo dục tài chính để góp phần nâng cao nhận thức công chúng về tài chính ngân hàng. Do đó, Ngân hàng Nhà nước Việt Nam đã chủ động, tích cực phối hợp với các đơn vị liên quan triển khai nhiều hoạt động truyền thông giáo dục tài chính thông qua việc tổ chức các chương trình “Tiền khéo, tiền khôn”, “Đồng tiền thông thái”, “Trẻ em thông minh” và

cuộc thi “Hiểu đúng về tiền”. Những chương trình giáo dục tài chính kể trên đã có hiệu ứng tốt, được đông đảo người dân đón nhận, đánh giá cao vì tính thiết thực, độ hấp dẫn và sáng tạo. Bên cạnh các chương trình được tổ chức bởi các cơ quan quản lý, hiện nay cũng có một số chương trình giáo dục tài chính được tổ chức độc lập bởi các trường học, các ngân hàng, các đơn vị tư nhân. Ví dụ: Khóa đào tạo tài chính ngắn hạn cho học sinh lớp 1-12 của Trường Đại học Quốc gia Hà Nội, Giáo dục tư duy tài chính của Vinschool dành cho học sinh từ lớp 4-8, Giáo dục tài chính dành cho người nghèo của Ngân hàng chính sách xã hội, Dự án giáo dục tài chính Cha-ping của Prudential Việt Nam, Chương trình giáo dục tài chính dành cho các em học sinh tiểu học của Ngân hàng HSBC Việt Nam, Chương trình tiết kiệm Phù Đổng của Ngân hàng Sacombank... Mỗi chương trình đều được thiết kế hướng tới độ tuổi riêng biệt, nội dung đa dạng. Như vậy, có thể thấy, giáo dục tài chính tại Việt Nam đã bắt đầu nhận được sự quan tâm của mọi người, tuy nhiên các chương trình giáo dục tài chính lại thiếu sự đồng bộ, nhất quán về nội dung, phương thức triển khai. Các chương trình thường diễn ra ở quy mô nhỏ và vừa, tầm ảnh hưởng bị hạn chế. Đặc biệt, các chương trình giáo dục tài chính khi được thực hiện bởi các ngân hàng và công ty tư vấn tài chính thường có các mục tiêu riêng biệt, chủ yếu tập trung vào mục đích thương mại, tiếp thị. Nguyên nhân của các hạn chế nêu trên là do ở Việt Nam hiện nay vẫn chưa có một chiến lược giáo dục tài chính cấp quốc gia. Do đó, bài nghiên cứu lựa chọn chủ đề nghiên cứu về chiến lược giáo dục tài chính tại Hồng Kông và bài học kinh nghiệm cho Việt Nam.

## **2. Chiến lược giáo dục tài chính quốc gia tại Hồng Kông**

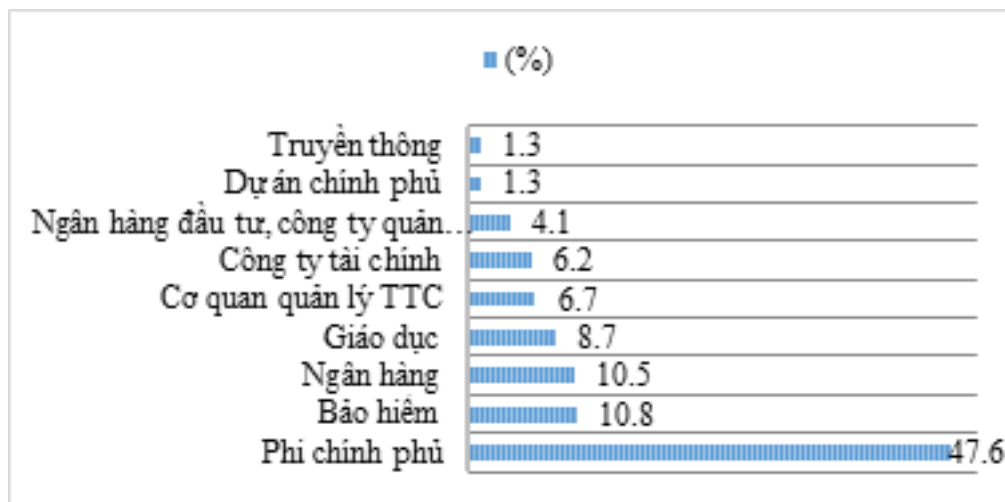
### **2.1. Sự cần thiết của Chiến lược giáo dục tài chính quốc gia tại Hồng Kông**

Với sự phát triển ổn định của hệ thống tài chính, Hồng Kông là một trong những trung tâm tài chính lớn nhất thế giới đã thu hút được dòng vốn đầu tư trên toàn thế giới. Giá trị vốn hóa của thị trường Hồng Kông đứng thứ 6 trên thế giới từ năm 2014 và đứng thứ 4 năm 2020. Mặc dù đạt được những thành tựu to lớn trong việc phát triển thị trường tài chính, tuy nhiên khác với các quốc gia phát triển khác như là Mỹ, Úc hay Singapore, Hồng Kông đến hết năm 2014 vẫn chưa có một chương trình hay chiến lược giáo dục tài chính toàn diện để nâng cao kiến thức tài chính cho người dân. Bên cạnh đó, đánh giá về dân trí tài chính của người dân Hồng Kông, báo cáo của trung tâm giáo dục đầu tư (IEC, 2018) đánh giá trên 4 phương diện: tiết kiệm, kế hoạch tài chính, vay nợ và đầu tư. *Thứ nhất*, về tiết kiệm, chỉ có khoảng 50% dân số Hồng Kông thực hiện tiết kiệm hàng tháng, đồng thời, cũng chỉ có khoảng 50% người Hồng Kông có khoản tiền dự phòng cho những trường hợp khẩn cấp. *Thứ hai*, phần lớn người dân không lập kế hoạch về tài chính hoặc chỉ có dự định. Họ cho rằng việc lập kế hoạch tài chính chỉ dành cho triệu phú. *Thứ ba*, khoảng 1/5 dân số Hồng Kông có vay tiền trong vòng 12 tháng trước cuộc khảo sát diễn ra vào cuối năm 2014. Lý do vay phổ biến nhất là chi trả cho giải trí, du lịch và mua sắm hàng hiệu. Cuối cùng, có khoảng 45% dân số nắm giữ hoặc có các giao dịch đầu tư chứng khoán, phái sinh. Hơn 1/3 tổng số các nhà đầu tư hy vọng sẽ đạt được lợi nhuận lớn hơn 20% cho khoản đầu tư hàng năm. Điều này dẫn đến nguy cơ tiềm tàng rủi ro cao. Như vậy có thể thấy, mặc dù Hồng Kông là một quốc gia giàu có, với hệ thống tài chính phát triển hiện đại, nhưng nhận thức về tài chính của người dân vẫn chưa thực sự tương xứng. Vì vậy, Chính phủ Hồng Kông nhận thấy cần phải có một chiến lược quốc gia về giáo dục tài chính, xóa đói giảm nghèo. Đồng thời,

các nhà quản lý cũng xác định chiến lược phải xuất phát từ những đòi hỏi thực tiễn, được xây dựng dựa trên kết quả của các cuộc khảo sát.

## 2.2. Các chương trình giáo dục tài chính tại Hồng Kông trước sự ra đời của Chiến lược giáo dục tài chính quốc gia

Hình 1. Tỷ lệ các chương trình giáo dục tài chính được triển khai bởi các tổ chức

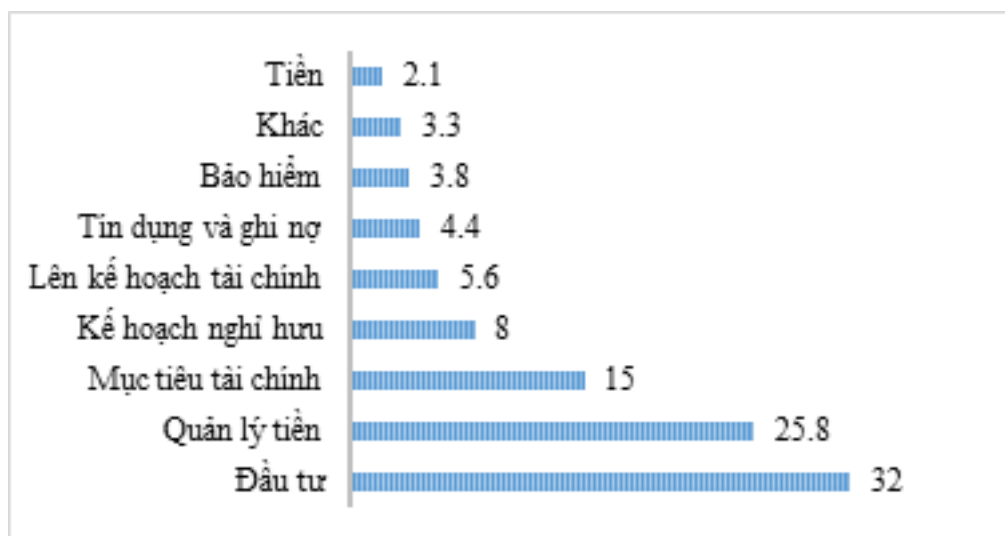


Nguồn: Investor Education Centre, 2014

Theo báo cáo “Giáo dục tài chính Hồng Kông - Nghiên cứu tổng quan” của IEC năm 2014, trước khi Chiến lược giáo dục tài chính quốc gia được đề xuất, tổng cộng có 389 dự án, chương trình giáo dục tài chính từ tháng 1/2008 đến tháng 8/2015. Các chương trình giáo dục tài chính được triển khai và thực hiện bởi các tổ chức phi chính phủ (47.6%), khu vực kinh doanh (35.0%), trường học (8.2%), cơ quan quản lý thị trường tài chính (6.7%), truyền thông (1.3%).

Nội dung của các chương trình giáo dục này thường tập trung nâng cao kiến thức của người dân về: (i) khái niệm đầu tư, kinh nghiệm đầu tư và kế hoạch đầu tư (32.0%); (ii) quản lý tiền về tiết kiệm, chi tiêu (25.8%); (iii) lập kế hoạch tài chính (15.0%).

Hình 2. Tỷ lệ nội dung các chương trình, dự án giáo dục tài chính



Nguồn: Investor Education Centre, 2014

Khoảng 30% các chương trình được triển khai rộng rãi cho tất cả mọi người, 28% dành cho nhóm đối tượng có thu nhập thấp và 17,5% dành cho nhóm khách hàng của các tổ chức doanh nghiệp. Tuy có thể thấy có gần 1/3 số lượng các chương trình giáo dục tài chính dành cho những người có thu nhập thấp, nhưng thực tế chủ yếu do dự án Quỹ phát triển (CDF) của chính phủ. Nếu không tính các chương trình của CDF, chỉ có khoảng 5,4% số lượng chương trình dành cho nhóm thu nhập thấp.

Phương pháp truyền đạt: 35% số lượng các chương trình sử dụng đa dạng các phương pháp, trong khi sử dụng website và các công cụ online chiếm 27,5% và chỉ có khoảng 16,7% sử dụng các buổi thuyết trình hay hội thảo.

### ***2.3. Chiến lược giáo dục tài chính quốc gia tại Hồng Kông***

#### ***2.3.1. Chiến lược giáo dục tài chính quốc gia giai đoạn 1 (2015-2018)***

Tháng 9/2015 Trung tâm giáo dục đầu tư (IEC) đã đưa ra chiến lược phát triển giáo dục tài chính quốc gia giai đoạn 2015-2018. Đây là chương trình chiến lược cấp quốc gia nhằm nâng cao nhận thức tài chính cho người dân Hồng Kông đầu tiên được triển khai. Chiến lược đưa ra các giải pháp nâng cao dân trí tài chính, mục tiêu trong ba năm. Trong giai đoạn ba năm, chiến lược tập trung vào việc tạo đòn bẩy, xây dựng các mối liên kết giữa các bên liên quan. Sau ba năm lần thứ nhất, một chiến lược mới sẽ được thiết kế, công bố dựa trên các đánh giá kết quả và hạn chế của giai đoạn trước.

*Bộ máy quản lý chiến lược tài chính quốc gia* bao gồm: (i) Ban chỉ đạo chiến lược (bao gồm các đại diện từ các ban ngành lĩnh vực sẽ đóng vai trò là cơ quan hướng dẫn, chịu trách nhiệm chỉ đạo các tiểu ban, hướng dẫn và rà soát việc thực hiện); IEC (làm nhiệm vụ cố vấn, tham mưu cho ban chỉ đạo chiến lược).

*Tầm nhìn của chiến lược:* Chiến lược giúp người dân Hồng Kông có những quyết định tài chính tốt hơn cho bản thân và cho cả gia đình.

*Mục tiêu của chiến lược:* Góp phần vào sự thịnh vượng về tài chính (finance wellbeing) của người dân. Chiến lược cũng định nghĩa sự thịnh vượng về tài chính nghĩa là: người dân có thể kiểm soát các vấn đề tài chính của bản thân, trả nợ đầy đủ đúng hạn; tiết kiệm; đồng thời trang trải được chi phí sinh hoạt; có khoản dự phòng cho những biến cố bất ngờ rủi ro (ví dụ: mất việc, bệnh tật...); được tự do lựa chọn; chuẩn bị khoản tiết kiệm dành cho nghỉ hưu.

*Đối tượng của chiến lược:*

(i) Thanh niên: theo điều tra thanh niên là nhóm đối tượng ít có kế hoạch tài chính dài hạn.

(ii) Người thu nhập thấp và trình độ học vấn thấp: là nhóm đối tượng theo điều tra có mức độ hiểu biết về tài chính tương đối thấp.

(iii) Người già: là nhóm đối tượng theo điều tra có mức độ hiểu biết về tài chính thấp. Đặc biệt, họ là những người dễ bị lừa gạt, do họ không quen thuộc với công nghệ và các sản phẩm tài chính hiện đại.

(iv) Người nhập cư và dân tộc thiểu số: số lượng người di dân từ Trung Quốc đại lục đến Hồng Kông càng ngày càng tăng, bên cạnh đó theo ước tính có khoảng 400.000 người

nước ngoài đang định cư tại đây. Họ thường có những nhu cầu tài chính đặc biệt, đồng thời sự khác biệt về văn hóa, ngôn ngữ cũng là rào cản đối với họ trong việc tiếp cận các sản phẩm, dịch vụ tài chính.

*Nội dung của chiến lược:*

- (i) Nâng cao nhận thức của người dân về lợi ích của giáo dục tài chính.
- (ii) Tạo cơ hội để người dân được học về giáo dục tài chính.
- (iii) Tổ chức phối hợp giữa các bên.

Chiến lược cũng đưa ra Khung năng lực tài chính sẽ xác định tiêu chuẩn năng lực dự kiến cho một số vấn đề về tài chính, chẳng hạn như ngân sách hoặc đầu tư, được sắp xếp từ cơ bản lên đến nâng cao. Khung được sử dụng một cách linh hoạt, có thể được áp dụng cho nhiều chủ đề tài chính và không giới hạn đối tượng sử dụng (các cơ quan chính phủ, tổ chức tài chính và trường học). Khung năng lực đưa ra các tiêu chí về kiến thức, kỹ năng mềm của một cá nhân ở các lĩnh vực và mức độ khác nhau. Khung được xây dựng phù hợp cho cả đối tượng trẻ em và thanh thiếu niên. Bộ khung năng lực có 4 phần chính:

(i) Kiến thức - kỹ năng bao gồm việc hiểu khái niệm cơ bản và kỹ năng thực tế (có thể sử dụng trong hiện tại và tương lai) với 7 chủ đề chính: tiền tệ và ngân hàng (định nghĩa, cơ chế hoạt động của ngân hàng); thu nhập và thuế (hiểu biết về cách kiếm tiền và nghĩa vụ đóng thuế đối với xã hội; tiết kiệm và đầu tư; tiêu dùng và tín dụng; quyền lợi của người tiêu dùng; kế hoạch tài chính (kế hoạch sử dụng tiền trong tương lai); rủi ro.

(ii) Thái độ đối với các vấn đề tài chính: suy nghĩ, niềm tin và xu hướng giải quyết đối với các vấn đề liên quan đến tài chính.

(iii) Động lực: các yếu tố khuyến khích các hành vi tài chính

(iv) Hành vi tài chính.

*Vai trò của các bên tham gia chiến lược:*

(i) Chính phủ và các cơ quan điều hành: ban hành các chính sách hỗ trợ cho việc nâng cao dân trí tài chính của người dân, hỗ trợ cho các dự án, sáng kiến đổi mới trong lĩnh vực giáo dục tài chính.

(ii) Các tổ chức tài chính: đóng vai trò triển khai chiến lược. Với chuyên môn và nguồn lực, các tổ chức tài chính chịu trách nhiệm phối hợp với các trường học, các tổ chức phi lợi nhuận để phát triển, cung cấp các chương trình giáo dục tài chính cho các nhóm mục tiêu khác nhau. Đồng thời, các tổ chức phải có trách nhiệm hỗ trợ giáo dục tài chính, nâng cao nhận thức cho nhân viên của mình.

(iii) Trường học: sẽ hợp tác với các đối tác khác để phát triển tài liệu đào tạo và triển khai các hoạt động đào tạo tại trường. Đồng thời, các đơn vị tiếp tục nghiên cứu và phát triển thêm nhiều phương thức giảng dạy, truyền đạt kiến thức khác nhau.

(iv) Các tổ chức phi chính phủ: đóng vai trò là người thực hiện và liên lạc với người dân.

(v) Truyền thông: cung cấp thông tin.



### 2.3.2. Chiến lược giáo dục tài chính quốc gia giai đoạn 2 (2019)

Chiến lược giáo dục tài chính quốc gia 2019 được xây dựng sau khi kết thúc giai đoạn 1 từ năm 2015 đến năm 2018. Sau khi chiến lược lần thứ nhất được triển khai và kết thúc, IEC rút ra các bài học sau:

(i) Để nâng cao nhận thức của người dân về lợi ích của giáo dục tài chính cần có phương thức tuyên truyền, truyền thông tới mọi người một cách rõ ràng, dễ hiểu.

(ii) Bên cạnh việc nâng cao dân trí tài chính, cần phải cải thiện thái độ tài chính và hành vi tài chính.

(iii) Giới trẻ và người cao tuổi cần được ưu tiên nhiều hơn.

(iv) Cần xác định các nội dung trọng tâm trong giáo dục tài chính.

(v) Cách tiếp cận và truyền đạt cần có sự khác biệt giữa những nhóm đối tượng khác nhau.

(vi) Việc tăng số lượng các sáng kiến, chương trình giáo dục tài chính phải đi cùng với tăng chất lượng.

(vii) Đánh giá kết quả của các sáng kiến, chương trình giáo dục tài chính không chỉ dựa vào kiến thức, kỹ năng đạt được mà còn dựa vào sự thay đổi về thái độ và hành vi tài chính của người tham gia.

*Tầm nhìn của chiến lược:* Chiến lược giúp người dân Hồng Kông có những quyết định tài chính tốt hơn cho bản thân và cho cả gia đình, mang lại sự thịnh vượng về tài chính.

*Mục tiêu của chiến lược:* Tạo môi trường thuận lợi cho các tổ chức chịu trách nhiệm cung cấp các chương trình giáo dục tài chính, từ đó nâng cao dân trí tài chính cho người dân.

*Đối tượng của chiến lược:*

(i) Thanh niên từ độ tuổi 18-25 bao gồm sinh viên đại học, người lao động, thất nghiệp. Đây là nhóm đối tượng có trách nhiệm với các hành vi tài chính của mình khi họ được độc lập về tài chính. Tuy nhiên, những người trong độ tuổi này lại có ít kiến thức về tài chính, do đó họ thường xuyên chi tiêu không hợp lý và lạm dụng thẻ tín dụng.

(ii) Người già: Người dân Hồng Kông có tuổi thọ trung bình cao nhất thế giới. Họ thường gặp phải các khó khăn về tài chính trong việc trang trải các chi phí sinh hoạt, y tế do tiết kiệm ít và không có thu nhập. Bên cạnh đó, người già lại có mức độ hiểu biết về tài chính tương đối thấp, cùng với mong muốn gia tăng tài sản tích lũy, họ rất dễ bị lừa gạt.

(iii) Người trong độ tuổi lao động: Đây là một trong những đối tượng mới được đưa vào chiến lược lần thứ 2 bởi nhóm đối tượng này là những người tạo ra nguồn thu nhập chính cho gia đình. Họ thường đặt ra mục tiêu dài hạn như là mua nhà, mua xe, cưới xin, chăm sóc người phụ thuộc. Tuy nhiên, họ có xu hướng chuẩn bị tích lũy cho những điều tích cực cho cuộc sống mà bỏ qua những biến cố không may khác như là tai nạn, bệnh tật, hay mất việc làm.

(iv) Nhóm người yếu thế: Bao gồm người thu nhập thấp, người nhập cư, dân tộc thiểu số, người khuyết tật. Đây là nhóm người có thu nhập thấp và thường xuyên gặp khó khăn về tài chính, thường tách biệt với cộng đồng.

(v) Trẻ em: Với sự phát triển của công nghệ, hiện nay, rất nhiều trẻ em được bố mẹ cho phép sử dụng các dịch vụ thanh toán điện tử, tiền ảo thay vì tiền mặt. Do đó, cơ hội cho các em học cách quản lý tiền bạc đang ít đi, thay vào đó là chi tiêu. Điều này đã ảnh hưởng tiêu cực đến thái độ, hành vi của các em với tiền bạc trong tương lai. Do đó, trẻ em cần được học về tài chính càng sớm càng tốt.

*Nội dung của chiến lược:*

(i) Nâng cao nhận thức của người dân về mối quan hệ giữa giáo dục tài chính và sự thịnh vượng tài chính.

(ii) Nâng cao nhận thức của các cơ quan quản lý và các tổ chức, cá nhân về sự quan trọng của giáo dục tài chính trong việc hoạch định chính sách cũng như trong công việc.

(iii) Tổ chức phối hợp giữa các bên hướng tới mục tiêu tổ chức thực hiện được nhiều chương trình giáo dục tài chính với chất lượng cao hơn.

*Kết quả cần đạt được:*

	<b>Giáo dục tài chính</b>	<b>Thanh niên</b>	<b>Người lao động</b>	<b>Người già</b>	<b>Người yếu thế</b>	<b>Trẻ em</b>
Tích lũy về tài chính cho các kế hoạch trong tương lai	<ul style="list-style-type: none"> <li>- Khuyến khích tiết kiệm</li> <li>- Xây dựng mục tiêu cá nhân</li> <li>- Xác định số tài sản, tiền cần tích lũy để đạt được mục tiêu</li> <li>- Kế hoạch thực hiện các mục tiêu tài chính</li> </ul>	<ul style="list-style-type: none"> <li>- Định hướng cho giới trẻ tin rằng nếu họ bắt đầu lên kế hoạch một cách rõ ràng, họ sẽ dễ dàng đạt được những gì họ muốn trong cuộc sống.</li> <li>- Đặt ra được kế hoạch tài chính ngắn hạn, trung, dài hạn</li> </ul>				<ul style="list-style-type: none"> <li>- Hiểu khái niệm, sự cần thiết của việc lập kế hoạch tài chính</li> </ul>
Tiết kiệm cho nghỉ hưu	<ul style="list-style-type: none"> <li>- Các khó khăn về tài chính khi nghỉ hưu</li> <li>- Ước tính các chi phí sinh hoạt, chi phí cần thiết khi nghỉ hưu</li> <li>- Các phương thức tiết kiệm phù hợp với từng độ tuổi, giai đoạn</li> </ul>	<ul style="list-style-type: none"> <li>- Hiểu được sự cần thiết của tiết kiệm hưu trí ngay khi mới tham gia thị trường lao động</li> </ul>	<ul style="list-style-type: none"> <li>- Nhận thức được nhu cầu cấp thiết của việc tiết kiệm</li> <li>- Bắt đầu các khoản tiết kiệm hưu trí</li> </ul>			<ul style="list-style-type: none"> <li>- Khuyến khích thói quen tiết kiệm</li> </ul>

	<b>Giáo dục tài chính</b>	<b>Thanh niên</b>	<b>Người lao động</b>	<b>Người già</b>	<b>Người yếu thế</b>	<b>Trẻ em</b>
Thu nhập	<ul style="list-style-type: none"> <li>- Theo dõi chi tiêu hàng ngày</li> <li>- Tiết kiệm trước khi chi tiêu</li> <li>- Đặt ngân sách cố định cho các khoản chi</li> <li>- Xác định các khoản mục đầu tư tốt</li> </ul>	<ul style="list-style-type: none"> <li>- Trang bị thêm kiến thức để thăng tiến trong công việc</li> <li>- Chi tiêu hợp lý, tránh các khoản chi lãng phí, xa xỉ</li> </ul>		<ul style="list-style-type: none"> <li>- Dự tính được mức thu nhập, tiền tiết kiệm cho hưu trí</li> </ul>	<ul style="list-style-type: none"> <li>- Chi tiêu hợp lý</li> </ul>	<ul style="list-style-type: none"> <li>- Trách nhiệm đối với tiền</li> <li>- Kiến thức về quản lý tiền</li> </ul>
Khả năng phòng ngừa rủi ro	<ul style="list-style-type: none"> <li>- Xác định, đánh giá các sự kiện, rủi ro gây ra tổn thất tài chính</li> <li>- Các cách giảm thiểu, tránh thất thoát về tài chính</li> <li>- Giảm vay</li> </ul>			<ul style="list-style-type: none"> <li>- Nhận thức được các vấn đề rủi ro trong đầu tư</li> <li>- Xác định được các chiến thuật lừa đảo từ các cơ hội đầu tư được quảng cáo “rủi ro thấp, lợi nhuận cao”</li> </ul>	<ul style="list-style-type: none"> <li>- Có khoản tích lũy cho các trường hợp khẩn cấp</li> </ul>	<ul style="list-style-type: none"> <li>- Kiến thức về rủi ro giữa việc sử dụng tiền mặt và các loại thẻ, tiền ảo</li> </ul>
Lựa chọn các sản phẩm tài chính phù hợp		<ul style="list-style-type: none"> <li>- Định hướng giới trẻ “tiết kiệm để mua” thay vì “vay để mua”</li> <li>- Giảm các khoản vay cá nhân, tín dụng</li> </ul>	<ul style="list-style-type: none"> <li>- Chủ động quản lý tiền</li> <li>- Lựa chọn các sản phẩm phù hợp</li> </ul>	<ul style="list-style-type: none"> <li>- Lựa chọn các sản phẩm phù hợp với từng giai đoạn</li> </ul>	<ul style="list-style-type: none"> <li>- Sử dụng các sản phẩm bảo hiểm</li> </ul>	<ul style="list-style-type: none"> <li>- Kiến thức về các sản phẩm tài chính</li> </ul>

Nguồn: IEC (2018)

#### **2.4. Kết quả của chiến lược giáo dục tài chính quốc gia Hồng Kông**

Kết quả của chiến lược giáo dục tài chính quốc gia Hồng Kông được báo cáo bởi IEC (2020). Việc đánh giá được dựa trên điểm số hiểu biết về tài chính do OECD phát triển bao gồm các điểm số về kiến thức, thái độ và hành vi tài chính. Một cá nhân có thể đạt mức cao nhất là 7 điểm kiến thức, 9 điểm hành vi và 5 điểm thái độ. Tổng điểm tối đa cho hiểu biết

về tài chính là 21 điểm. Điểm số hiểu biết về tài chính của Hồng Kông tăng nhẹ từ 14,4 điểm năm 2015 lên 14,8 điểm năm 2019. Cụ thể các câu phần như sau:

Điểm số về kiến thức tài chính, có 7 câu hỏi lớn về các chủ đề: lạm phát, lãi vay, lãi suất đơn, lãi suất kép, rủi ro, lợi nhuận và phân tán rủi ro. Trung bình năm 2019 người dân có thể trả lời đúng 6.2/7 câu hỏi, so với 5.8 câu hỏi vào năm 2015. Đặc biệt, sự hiểu biết về lãi suất đã được cải thiện một cách rõ rệt ở nhóm độ tuổi dưới 30, nhưng lại có sự giảm nhẹ đối với hiểu biết về rủi ro và lợi nhuận.

**Bảng 1. Điểm số về kiến thức tài chính của Hồng Kông**

	Tổng	
	2015	2019
Số câu trả lời đúng	5.8	6.2
% trả lời đúng	%	%
Lạm phát - Khái niệm	83	84
Lạm phát - Tác động	97	94
Lãi vay	95	99
Lãi đơn	79	96
Lãi kép	58	71
Rủi ro và lợi nhuận	96	93
Phân tán rủi ro	74	79

*Nguồn: IEC (2020)*

Điểm số về thái độ đối với tài chính dùng để đo lường thái độ của cá nhân đối với tiền và các kế hoạch tài chính dài hạn trong tương lai. Cá nhân tự đánh giá các thái độ tài chính theo thang điểm từ 1 đến 5 (từ hoàn toàn đồng ý tới hoàn toàn không đồng ý). Điểm càng cao cho thấy cá nhân có trách nhiệm với việc chi tiêu tiền, có kế hoạch tài chính dài hạn. Kết quả cho thấy, người dân Hồng Kông vẫn chưa có cải thiện nhiều thái độ đối với tiền (tài chính), đặc biệt những người trẻ tuổi vẫn có xu hướng chi tiêu ngắn hạn, ít tích lũy. Thậm chí những người đã đi làm cũng đồng ý với quan điểm tiền là để tiêu, trong khi những người nghỉ hưu hoặc sắp nghỉ hưu lại cẩn thận với chi tiêu của mình hơn.

**Bảng 2. Thái độ tài chính của Hồng Kông**

	Điểm số		% đồng ý				
	2015	2019	Sinh viên	Người lao động <30 tuổi	Người lao động 30-49 tuổi	Trước khi nghỉ hưu >50 tuổi	Nghỉ hưu
	2.7	2.9					
Tôi cảm thấy thỏa mãn khi tiêu tiền hơn là tiết kiệm cho tương lai	3.1	3.2	74	70	64	49	57
Tiền là để tiêu	2.1	2.3	55	44	30	26	23
Tôi muốn sống cho hiện tại, tương lai để sau	2.9	3.3	55	48	19	19	31

*Nguồn: IEC (2020)*

**Bảng 3: Điểm số về hành vi tài chính của Hồng Kông**

	Tổng	
	2015	2019
<b>Điểm</b>	6.0	5.8
	%	%
Chịu trách nhiệm chi tiêu gia đình, có quỹ gia đình - 1 điểm	55	64
Tiết kiệm - 1 điểm	73	84
Cân nhắc trước khi mua - 1 điểm	90	63
Thanh toán hóa đơn đúng hạn - 1 điểm	89	84
Theo dõi các vấn đề tài chính - 1 điểm	82	75
Đặt mục tiêu tài chính dài hạn - 1 điểm	58	54
Không vay nợ - 1 điểm	91	94
Lựa chọn các sản phẩm tài chính (tham khảo thông tin/tư vấn) - 1 điểm	21	18
Lựa chọn các sản phẩm tài chính (tìm hiểu, so sánh) - 2 điểm	17	21

Nguồn: IEC (2020)

Điểm số về hành vi tài chính được chấm theo thang điểm từ 0 - 9. Điểm được tính dựa trên các hành vi quản lý tiền và lập kế hoạch tài chính như tiết kiệm, cân nhắc trước khi mua sắm, thiết lập các mục tiêu tài chính dài hạn, kế hoạch mua sắm. Kết quả cho thấy, điểm hành vi tài chính của người dân Hồng Kông đã sụt giảm từ 6.0 năm 2015 còn 5.8 năm 2020. Trong đó, vấn đề lớn nhất người dân Hồng Kông đang gặp phải là không cân nhắc trước khi quyết định mua hàng hóa.

Như vậy có thể thấy rằng trải qua khoảng thời gian 5 năm thực thi chiến lược tài chính quốc gia tại Hồng Kông, nhận thức về giáo dục tài chính có sự thay đổi rõ rệt tuy nhiên thái độ và hành vi tài chính chưa có sự cải thiện lớn. Lý giải cho kết quả này, nghiên cứu cho rằng để thay đổi hành vi và nhận thức của con người cần khoảng thời gian dài hơn, đồng thời phải có những định hướng, giáo dục kiến thức tài chính ngay từ nhỏ.

### 3. Bài học kinh nghiệm cho Việt Nam

Từ việc nghiên cứu kinh nghiệm chiến lược giáo dục tài chính quốc gia tại Hồng Kông, nghiên cứu rút ra bài học kinh nghiệm đối với Việt Nam nhằm thúc đẩy sự phát triển của giáo dục tài chính toàn diện. Cụ thể như sau:

*Thứ nhất*, xây dựng một chiến lược giáo dục tài chính với mục tiêu, kế hoạch hành động, các bên tham gia một cách đầy đủ và rõ ràng. Chiến lược giáo dục tài chính quốc gia nên được coi là một trụ cột của quá trình nâng cao khả năng tiếp cận dịch vụ tài chính.

*Thứ hai*, thiết kế chính sách của chương trình giáo dục tài chính quốc gia nhằm cải thiện dân trí về tài chính một cách toàn diện, có chiều sâu đối với các thế hệ dân chúng gồm: giáo dục tài chính cơ bản và giáo dục tài chính tập trung ngành. Đưa ra các nội dung phù hợp, cụ thể đối với từng bậc học trong Chương trình giáo dục tài chính. Cụ thể: i) đối với bậc tiểu học và mẫu giáo: tập trung vào việc hiểu biết về tiền; ii) Đối với từ bậc tiểu học tới bậc trung học tập trung vào giáo dục tài chính cá nhân; iii) Đối với bậc trung học trở lên tập trung vào tài chính cá nhân; iv) Đối với bậc đại học trở lên tập trung vào nội dung quản

lý tài chính. Đặc biệt đổi mới, sáng tạo chương trình giáo dục cho người mù chữ bằng các phương pháp trực quan sinh động.

*Thứ ba*, thành lập ủy ban bao gồm các chuyên gia về tài chính cá nhân để tạo thuận lợi trong quá trình triển khai sau này. Ủy ban này sẽ thiết kế một chương trình quốc gia chuyên nghiệp về đào tạo giáo viên các cấp nhằm nâng cao hiểu biết của giáo viên các cấp, đặc biệt là giáo viên tiểu học và trung học về giáo dục tài chính toàn diện.

*Thứ tư*, đa dạng hóa các kênh truyền tải thông điệp liên quan tới giáo dục tài chính, không chỉ thông qua các chương trình giáo dục tại trường học mà mở rộng hơn thông qua kênh phát thanh, truyền hình, các khóa học trực tuyến...

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# ẢNH HƯỞNG CỦA KOLS ĐẾN HÀNH VI MUA MỸ PHẨM

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## **Tóm tắt**

Nhóm tác giả tập trung nghiên cứu 07 nhân tố tác động đến hành vi mua mỹ phẩm của sinh viên Đại học Quốc gia Hà Nội (ĐHQGHN), bao gồm: Sự tin cậy của KOLs, tính chuyên môn của KOLs, tính chân thật trong thông điệp của KOLs, sự thu hút của KOLs, sự tương đồng với sinh viên của KOLs, sự quen thuộc với KOLs và tính hữu ích trong thông điệp của KOLs. Kết quả khảo sát của nhóm tác giả dựa trên 173 sinh viên đang theo học tại các trường, khoa, viện thuộc Đại học Quốc gia Hà Nội. Kết quả chạy mô hình cho thấy có 06 nhân tố được chấp nhận trong phương trình hồi quy và có tác động dương đến hành vi mua mỹ phẩm của sinh viên ĐHQGHN: thứ nhất là Sự chân thật (CT); thứ hai là Tính hữu ích của các bài đăng và video (HI); thứ ba là Tính chuyên môn (CM); thứ tư là Sự tin cậy (TC); thứ năm là Sự thu hút (TH), và cuối cùng là Sự quen thuộc (QT).

**Từ khóa:** KOLs, hành vi mua mỹ phẩm, sinh viên

## **Abstract**

*The authors focus on researching 07 factors affecting the cosmetic purchase behavior of VNU students, including: KOLs' trustworthiness, KOLs' expertise, KOLs' message authenticity, and attractiveness. of KOLs, similarity with students of KOLs, familiarity with KOLs, and usefulness of KOLs' messages. The survey results of the author group are based on 173 students studying at schools, faculties and institutes of Vietnam National University, Hanoi. The results of running the model show that there are 06 factors that are accepted in the regression equation and have a positive impact on the cosmetic purchase behavior of VNU students. The order of influence on the cosmetic purchase behavior of VNU students: the first is Truthfulness (CT); the second is the Helpfulness of Posts and Videos (HI); the third is Professionalism (CM); fourth is Reliability (TC); fifth is Attraction (TH), and last is Familiarity (QT).*

**Keywords:** KOLs, cosmetic buying behavior, students

## **1. Giới thiệu chung**

Khi mức sống được cải thiện, phụ nữ có điều kiện quan tâm hơn tới hình thức, thói quen sử dụng các sản phẩm làm đẹp (hay còn gọi là mỹ phẩm) trở nên quen thuộc và dần trở thành nhu cầu thiết yếu. Những thay đổi này xuất phát từ nhận thức của người Việt Nam về giữ gìn thanh xuân, từ đó tác động đến kỳ vọng của họ về hiệu quả sử dụng mỹ phẩm.

Nhu cầu sử dụng mỹ phẩm tăng cao trong sự phát triển của công nghệ, internet, các trang mạng xã hội cùng với tác động của dịch bệnh Covid-19 và sự bùng nổ Digital Marketing, các sản phẩm mỹ phẩm được quảng cáo và bán tràn lan khó phân loại chất lượng. Do đó, người tiêu dùng cần được nâng cao kiến thức về các sản phẩm làm đẹp, cần thận trọng trong việc lựa chọn sản phẩm, kênh mua sắm, cảnh giác trước những thông tin quảng cáo nhận được. Một trong những biện pháp bảo vệ người tiêu dùng khá tích cực là tiếng nói của những “người ảnh hưởng” (KOLs) như người nổi tiếng, các chuyên gia trong lĩnh vực có kiến thức sâu rộng về ngành hàng trở thành nơi “chọn mặt gửi vàng”, điểm tiếp nhận thông tin đáng tin cậy.

Nhận thấy được tầm ảnh hưởng của KOLs đối với lựa chọn mua mỹ phẩm của người Việt Nam nói chung và thế hệ trẻ thuộc gen Z nói riêng, nhóm nghiên cứu đã lựa chọn sinh viên ĐHQGHN để tiến hành khảo sát thu thập dữ liệu phục vụ bài nghiên cứu. Kết quả của nhóm tác giả dựa trên 173 sinh viên đang theo học tại các trường thuộc ĐHQGHN. Trên cơ sở tổng quan tài liệu, dựa trên những lý luận liên quan, nhóm tác giả đã xây dựng hệ thống thang đo gồm 07 nhóm nhân tố đảm bảo chất lượng với 26 biến quan sát đạt điều kiện tốt. H1: Sự tin cậy; H2: Tính chuyên môn; H3: Tính chân thật; H4: Sự thu hút ; H5: Sự tương đồng; H6: Sự quen thuộc; H7: Tính hữu ích của các bài đăng và video của KOLs ảnh hưởng đến hành vi mua mỹ phẩm của sinh viên ĐHQGHN. Bên cạnh đó, nhóm nghiên cứu cũng đề cập đến 5 biến thể hiện đánh giá hành vi mua mỹ phẩm của sinh viên.

Kết quả chạy mô hình cho thấy có 06 nhân tố được chấp nhận trong phương trình hồi quy và có tác động dương đến hành vi mua mỹ phẩm của sinh viên ĐHQGHN. Thứ tự ảnh hưởng đến hành vi mua mỹ phẩm của sinh viên ĐHQGHN: thứ nhất là Sự chân thật (CT); thứ hai là Tính hữu ích của các bài đăng và video (HI); thứ ba là Tính chuyên môn (CM); thứ tư là Sự tin cậy (TC); thứ năm là Sự thu hút (TH), và cuối cùng là Sự quen thuộc (QT).

Nghiên cứu bao gồm các phần như sau, Phần 1: Giới thiệu chung, Phần 2: Tổng quan nghiên cứu, Phần 3: Mô hình nghiên cứu, Phần 4: Kết quả nghiên cứu và thảo luận, Phần 5: Kết luận.

## **2. Tổng quan nghiên cứu**

Nghiên cứu “Nhận thức của người tiêu dùng về đại diện thương hiệu là người nổi tiếng” do Nguyễn Thị Hương Giang và Phan Thùy Dương thực hiện đưa ra 3 yếu tố (1) Sự tin cậy, (2) Chuyên môn, (3) Sự thu hút và cả 3 yếu tố đều có ảnh hưởng tích cực đến hành vi mua sắm của người tiêu dùng.[7]

Nghiên cứu “Tác động của bảo chứng thương hiệu dùng người nổi tiếng lên thái độ đối với thương hiệu và ý định mua sắm của khách hàng - một nghiên cứu trong ngành hàng tiêu dùng nhanh tại Thành phố Hồ Chí Minh” của Phạm Xuân Kiên và Quách Nữ Phúc Vương đã mở rộng đề xuất 7 yếu tố của người bảo chứng thương hiệu ảnh hưởng tới quyết định mua sắm các sản phẩm tiêu dùng nhanh là: (1) Sự đáng tin của người nổi tiếng, (2) Tính chuyên môn của người nổi tiếng, (3) Sự hấp dẫn của người nổi tiếng, (4) Sự tương đồng với người nổi tiếng, (5) Sự yêu thích đối với người nổi tiếng, (6) Sự quen thuộc với người nổi tiếng, (7) Sự phù hợp của người nổi tiếng đối với thương hiệu/sản phẩm. Kết quả nghiên cứu cho thấy, cả 7 yếu tố đều tác động đến quyết định mua sắm của người tiêu dùng. Trong đó, yếu tố sự hấp dẫn của người nổi tiếng có tác động tích cực nhất, tiếp đến



là sự đáng tin, sự quen thuộc, sự tương đồng, tính chuyên môn, kể đến là sự yêu thích với người nổi tiếng và tác động tích cực thấp nhất là yếu tố sự phù hợp của người nổi tiếng đối với thương hiệu/sản phẩm.[23]

Nhóm nghiên cứu của Nguyễn Quốc Cường, Võ Thị Xuân Quỳnh và Nguyễn Anh Phúc cũng đưa ra 6 yếu tố của đại sứ thương hiệu ảnh hưởng đến ý định mua của khách hàng trong bài “Tác động của đại sứ thương hiệu lên đến ý định mua của khách hàng tại Thành phố Hồ Chí Minh”, bao gồm (1) Sự tin cậy, (2) Sự thu hút, (3) Chuyên môn, (4) Sự quen thuộc, (5) Sự phù hợp giữa đại sứ thương hiệu với thương hiệu/sản phẩm, (6) Các thông tin tiêu cực. Mức độ tác động của các yếu tố đến ý định mua được sắp xếp theo thứ tự từ cao đến thấp như sau: Sự phù hợp giữa đại sứ thương hiệu với thương hiệu và sản phẩm; sự tin cậy; chuyên môn; sự quen thuộc; các thông tin tiêu cực và cuối cùng là sự thu hút; trong đó yếu tố các thông tin tiêu cực có sự ảnh hưởng ngược chiều (-) đến đến ý định mua của khách hàng, còn 5 yếu tố còn lại có ảnh hưởng thuận chiều.[20]

Như vậy, đã có nhiều nghiên cứu về các nhân tố ảnh hưởng đến hành vi mua mỹ phẩm của khách hàng ở Việt Nam. Tuy nhiên, chưa có nghiên cứu nào giúp đánh giá toàn diện về sự hài lòng của sinh viên trên 07 mặt như trong nghiên cứu của nhóm tác giả được đề cập ở bài viết này. Trên cơ sở tổng quan tài liệu, dựa trên những lý luận liên quan, nhóm tác giả xác định các nhân tố ảnh hưởng đến sự hài lòng của sinh viên bao gồm: Sự tin cậy của KOLs, tính chuyên môn của KOLs, tính chân thật trong thông điệp của KOLs, sự thu hút của KOLs, sự tương đồng với sinh viên của KOLs, sự quen thuộc với KOLs và tính hữu ích trong thông điệp của KOLs. Từ đó, nghiên cứu đề xuất các giả thuyết nghiên cứu sau:

Giả thuyết H1: Sự tin cậy của KOLs có tác động cùng chiều đến hành vi mua mỹ phẩm của sinh viên ĐHQGHN;

Giả thuyết H2: Tính chuyên môn của KOLs có tác động cùng chiều đến hành vi mua mỹ phẩm của sinh viên ĐHQGHN;

Giả thuyết H3: Tính chân thật trong thông điệp của KOLs có tác động cùng chiều đến hành vi mua mỹ phẩm của sinh viên ĐHQGHN;

Giả thuyết H4: Sự thu hút của KOLs có tác động cùng chiều đến hành vi mua mỹ phẩm của sinh viên ĐHQGHN;

Giả thuyết H5: Sự tương đồng với sinh viên của KOLs có tác động cùng chiều đến hành vi mua mỹ phẩm của sinh viên ĐHQGHN;

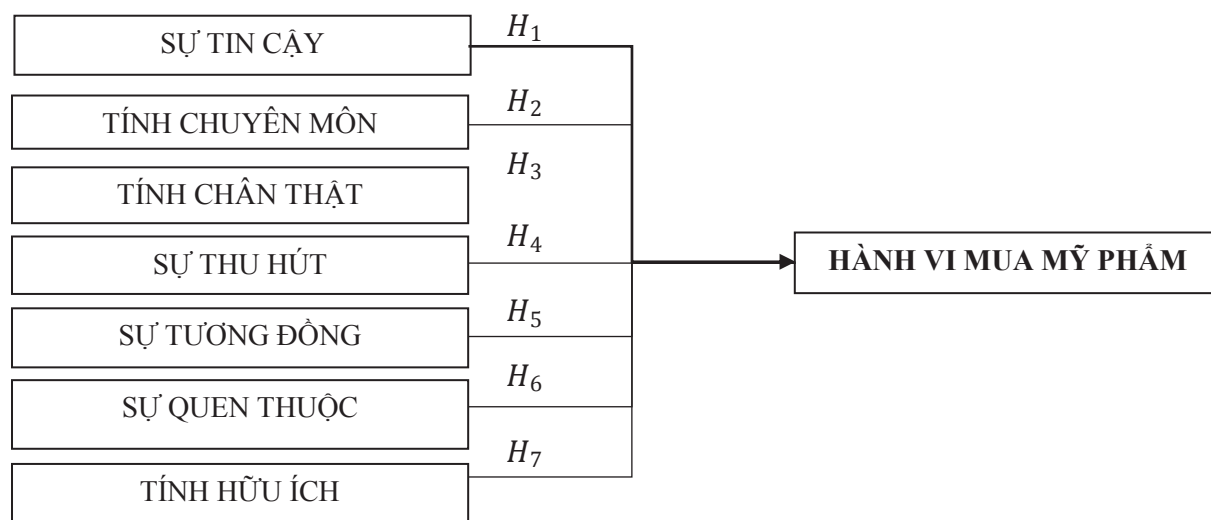
Giả thuyết H6: Sự quen thuộc với KOLs có tác động cùng chiều đến hành vi mua mỹ phẩm của sinh viên ĐHQGHN.

Giả thuyết H7: Tính hữu ích trong thông điệp của KOLs có tác động cùng chiều đến hành vi mua mỹ phẩm của sinh viên ĐHQGHN.

### **3. Mô hình nghiên cứu**

Sau khi nghiên cứu tổng quan về tình hình nghiên cứu liên quan ảnh hưởng của KOLs đến hành vi mua mỹ phẩm nói chung cũng như đối với sinh viên nói riêng, chúng tôi đưa ra khung phân tích sau:

**Hình 1. Mô hình nghiên cứu**



**Sự tin cậy:** Tin cậy vào một người khác là có thể tin rằng người này sẽ có những phản ứng mà mình mong đợi. Do đó, KOLs càng được coi là đáng tin thì thông điệp họ truyền tải càng có sức lan truyền, ảnh hưởng.

**Tính chuyên môn:** Chuyên môn của KOLs là nhận thức của người tiêu dùng về kiến thức, kinh nghiệm hoặc khả năng của KOLs về sản phẩm do họ đại diện. KOLs có chuyên môn càng cao sẽ càng tạo được sức thuyết phục khách hàng có cái nhìn lạc quan về thương hiệu.

**Tính chân thật:** Mức độ chân thật thể hiện qua nhận thức của khách hàng về độ liên quan giữa người nổi tiếng và sản phẩm. Nếu sản phẩm được KOLs có nhiều liên quan về đặc điểm quảng cáo thì sự tin tưởng vào quảng cáo đó sẽ cao hơn so với hình ảnh sản phẩm được quảng bá bởi KOLs ít liên quan hơn.

**Sự thu hút:** Những quảng cáo có hình thức đẹp tạo ra cảm giác hấp dẫn và tăng thái độ tích cực, thu hút sự chú ý mua hàng của người xem. Do đó, ngoại hình và sự hấp dẫn về thể chất là một yếu tố đặc biệt để kiểm tra hiệu quả của KOLs do khách hàng kỳ vọng có được đặc điểm giống như KOLs.

**Sự tương đồng:** Sự tương đồng xuất hiện khi khách hàng có một, một số hoặc nhiều điểm chung về tính cách, phong cách, lối sống, ngoại hình với KOLs. Khách hàng cảm thấy KOLs tương tự như họ sẽ hấp dẫn và đáng tin cậy hơn, vì vậy họ dễ dàng chấp nhận và tin tưởng các thông điệp được đăng bởi KOLs.

**Sự quen thuộc:** Sự quen thuộc của khách hàng đối với KOLs phản ánh mức độ nhận thức KOLs hay độ nổi tiếng của người nổi tiếng. Thông qua việc tương tác giữa KOLs và khách hàng trên các phương tiện truyền thông (tivi, mạng xã hội...) hay trực tiếp trong cuộc sống, khách hàng càng có cái nhìn chi tiết về KOLs. Sự quen thuộc của KOLs sẽ có nhiều tác động tích cực hơn khi chính khách hàng tìm thấy được rằng bản thân họ có sự đồng điệu với KOLs.

**Tính hữu ích:** Người tiêu dùng cảm thấy thông điệp do KOLs truyền tải trên các phương tiện truyền thông là hữu ích khi thông điệp giúp họ tiếp thu được kiến thức mới chưa được biết đến, mang tới các thông tin liên quan đến đặc điểm khách hàng.

Bảng hỏi khảo sát ảnh hưởng của KOLs đến hành vi mua mỹ phẩm của sinh viên ĐHQGHN được xây dựng như sau:

**Bảng 1. Kết cấu bảng câu hỏi**

Phần	Nội dung	Số câu
A	Thông tin cơ bản	7
B	Đánh giá các nhân tố ảnh hưởng	
B1.	Sự tin cậy	3
B2.	Tính chuyên môn	3
B3.	Tính chân thật	5
B4.	Sự thu hút	5
B5.	Sự tương đồng	3
B6.	Sự quen thuộc	3
B7.	Tính hữu ích của các bài đăng và video của KOLs	4
B8.	Đánh giá hành vi mua	4
B9.	Sự giới thiệu	1
<b>Tổng</b>		<b>38</b>

Bảng hỏi gồm 38 câu hỏi tập trung vào các yếu tố ảnh hưởng tới hành vi mua mỹ phẩm của sinh viên ĐHQGHN. Các câu hỏi được thiết kế theo thang Likert 5 mức độ để đánh giá mức ảnh hưởng của các nhân tố. Mức độ diễn giải: 1. Ảnh hưởng ít nhất; 2. Ảnh hưởng ít; 3. Bình thường; 4. Ảnh hưởng nhiều; 5. Ảnh hưởng nhiều nhất.

Theo Hair và cộng sự (2008), số lượng mẫu tối thiểu khi thực hiện khảo khi sử dụng các thang đo Likert là  $5 \cdot N$ , trong đó  $N$  là số biến quan sát. Do đó với số biến quan sát mà nhóm đưa ra là 26 biến, số mẫu tối thiểu sử dụng trong nghiên cứu này là  $5 \cdot 26 = 130$  mẫu. Nhóm tác giả đã khảo sát hơn 200 sinh viên đang theo học tại các trường, khoa, viện thuộc ĐHQGHN và thu về 173 phiếu khảo sát hợp lệ có thể sử dụng cho nghiên cứu, và đã đáp ứng được số lượng mẫu tối thiểu.

#### 4. Kết quả nghiên cứu và thảo luận

Để đánh giá thang đo các khái niệm trong nghiên cứu cần kiểm tra độ thiết kế, độ giá trị của thang đo. Dựa trên các hệ số Cronbach's Alpha, hệ số tương quan biến – tổng (Corrected Item-Total Correlation) giúp loại ra những biến quan sát không đóng góp vào việc mô tả khái niệm cần đo, hệ số Cronbach's Alpha if item deleted để giúp đánh giá loại bỏ bớt biến quan sát nhằm nâng cao hệ số thiết kế cho khái niệm cần đo và phương pháp phân tích nhân tố khám phá (EFA) nhằm kiểm tra độ giá trị của thang đo các khái niệm nghiên cứu.

Theo Hoàng Trọng và Chu Nguyễn Mộng Ngọc (2008), thang đo có hệ số Cronbach's alpha  $\geq 0.6$  là thang đo đủ điều kiện để phân tích; thang đo có hệ số Cronbach's alpha  $\geq 0.7$  là thang đo lường tốt; và thang đo có hệ số Cronbach's alpha  $\geq 0.8$  là thang đo lường rất tốt. Các biến quan sát có hệ số tương quan biến - tổng  $< 0.3$  hoặc chỉ số Cronbach's alpha khi loại biến lớn hơn hệ số Cronbach's alpha hiện tại sẽ bị loại khỏi thang đo.

**Bảng 2. Kết quả kiểm định độ tin cậy của các thang đo**

STT	Ký hiệu	Biến quan sát	Hệ số tương quan biến - tổng	Hệ số Cronbach's Alpha nếu loại bỏ biến	Biến bị loại
<b>Sự tin cậy</b> Cronbach's Alpha: 0.763					
1	TC1	Tôi nhận thấy KOLs là người nổi tiếng đáng tin cậy	0.593	0.683	
2	TC2	Tôi nhận thấy KOLs là người nổi tiếng thành thật khi đưa ra các nhận định về thương hiệu/sản phẩm	0.600	0.676	
3	TC3	Tôi nhận thấy KOLs có nhân cách đạo đức tốt	0.590	0.687	
<b>Tính chuyên môn</b> Cronbach's Alpha: 0.779					
4	CM1	KOLs là người có nhiều trải nghiệm trong sử dụng sản phẩm	0.602	0.717	
5	CM2	KOLs là người kiến thức và kinh nghiệm để đánh giá cho sản phẩm/thương hiệu	0.616	0.702	
6	CM3	KOLs sử dụng sản phẩm một cách thành thạo	0.630	0.686	
<b>Tính chân thật</b> Cronbach's Alpha: 0.789					
7	CT1	Tôi có thể nhìn thấy KOLs sử dụng sản phẩm	0.574	0.749	CT5
8	CT2	Tôi có thể chắc chắn rằng KOLs đã sử dụng sản phẩm trong một khoảng thời gian nhất định	0.611	0.730	
9	CT3	Tôi có thể thấy KOLs chụp cùng sản phẩm trong cùng 1 bức ảnh	0.625	0.723	
10	CT4	Những sản phẩm được giới thiệu cần phải liên quan đến phong cách của KOLs	0.579	0.746	
<b>Sự thu hút</b> Cronbach's Alpha: 0.816					
11	TH1	KOLs có ngoại hình đẹp, hấp dẫn	0.628	0.773	
12	TH2	KOLs có phong thái ứng xử thanh lịch	0.632	0.773	
13	TH3	KOLs có nhiều cống hiến cho nghề và xã hội	0.574	0.789	
14	TH4	KOLs là một người tài giỏi	0.668	0.760	
15	TH5	KOLs có phong cách khác biệt, cá tính	0.535	0.802	

STT	Ký hiệu	Biến quan sát	Hệ số tương quan biến - tổng	Hệ số Cronbach's Alpha nếu loại bỏ biến	Biến bị loại
<b>Sự tương đồng</b> Cronbach's Alpha: 0.752					
16	TD1	KOLs có cùng phong cách sống	0.588	0.660	
17	TD2	KOLs có điểm tương đồng về ngoại hình (đặc điểm da, tóc,..)	0.556	0.696	
18	TD3	KOLs có cùng sở thích và các mối quan tâm	0.596	0.651	
<b>Sự quen thuộc</b> Cronbach's Alpha: 0.767					
19	QT1	Tôi thường thấy KOLs trên phương tiện truyền thông	0.623	0.671	
20	QT2	Tôi thường thấy KOLs trên MXH	0.637	0.687	
21	QT3	Tôi có cơ hội tiếp xúc với KOLs trong thực tế	0.630	0.713	
<b>Tính hữu ích</b> Cronbach's Alpha: 0.777					
22	HI1	Có tính truyền tải thông điệp	0.585	0.723	
23	HI2	Có nhiều tip về chăm sóc da, trang điểm,..	0.610	0.708	
24	HI3	Review về sản phẩm mỹ phẩm	0.605	0.711	
25	HI4	Có nhiều thông tin liên quan mà tôi chưa biết về mỹ phẩm	0.528	0.752	
<b>Biến phụ thuộc: Hành vi mua</b> Cronbach's Alpha: 0.804					
26	HV1	Tôi sẽ chủ động tìm hiểu thông tin về mỹ phẩm mà KOLs giới thiệu	0.586	0.767	
27	HV2	Tôi sẽ mua thử mỹ phẩm mà KOLs giới thiệu	0.621	0.756	
28	HV3	Tôi sẽ sử dụng mỹ phẩm mà KOLs giới thiệu	0.584	0.767	
29	HV4	Nhìn chung, tôi sẵn lòng mua mỹ phẩm mà KOLs giới thiệu	0.608	0.760	
30	HV5	Tôi sẵn lòng giới thiệu cho những người khác mua mỹ phẩm mà KOLs giới thiệu	0.549	0.780	

*Nguồn: Kết quả chạy mô hình của nhóm tác giả*

Đánh giá độ tin cậy 7 tiêu chí độc lập có hệ số Cronbach's alpha từ 0.752 đến 0.816 (>0.6), hệ số tương quan biến - tổng hiệu chỉnh của 25 biến quan sát từ 0.528 đến 0.668 (> 0.3), riêng biến CT5 có hệ số tương quan biến - tổng là 0.248 < 0.3 nên bị loại khỏi

thang đo Tính chân thật. Đối với thang đo Đánh giá chung về sự hài lòng của sinh viên: hệ số Cronbach's alpha = 0.804 (>0.6), hệ số tương quan biến - tổng hiệu chỉnh của các biến quan sát từ 0.549 đến 0.621 (>0.3), khẳng định các thang đo lường tốt và các biến quan sát đảm bảo độ tin cậy.

#### 4.1. Phân tích nhân tố khám phá (EFA)

Ở bước này, toàn bộ 25 biến thu được thông qua kiểm định hệ số Cronbach's Alpha chạy phân tích EFA, kết quả phân tích nhân tố khám phá (Exploratory Factor Analysis - EFA) trải qua một số vòng loại biến, kết quả thu được như sau:

Từ 25 biến quan sát ở lần phân tích EFA thứ nhất, loại bỏ HI3 và TH4 là do:

Biến HI3 tải lên ở cả hai nhân tố là Component 1 và Component 4 với hệ số tải lần lượt là 0.583 và 0.581, mức chênh lệch hệ số tải bằng  $0.583 - 0.581 = 0.002 < 0.2$ .

Biến TH4 tải lên ở cả hai nhân tố là Component 2 và Component 3 với hệ số tải lần lượt là 0.597 và 0.592, mức chênh lệch hệ số tải bằng  $0.597 - 0.592 = 0.005 < 0.2$ .

Như vậy, cần tiếp tục đưa 23 biến quan sát còn lại vào phân tích EFA lần thứ hai.

**Bảng 3. KMO and Bartlett's Test lần 2**

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.834
Bartlett's Test of Sphericity	Approx. Chi-Square	239.925
	df	10
	Sig.	.000

*Nguồn: Kết quả chạy mô hình của nhóm tác giả*

Hệ số KMO = 0.834 > 0.5, sig Bartlett's Test = 0.000 < 0.05, như vậy phân tích nhân tố là phù hợp.

Có 7 nhân tố được trích dựa vào tiêu chí eigenvalue lớn hơn 1, như vậy 7 nhân tố này tóm tắt thông tin của 23 biến quan sát đưa vào EFA một cách tốt nhất. Tổng phương sai mà 6 nhân tố này trích được là 66.465% > 50%, như vậy, 6 nhân tố được trích giải thích được 66.465% biến thiên dữ liệu của 23 biến quan sát tham gia vào EFA.

**Bảng 4. Rotated Component Matrix<sup>a</sup> lần 2**

Rotated Component Matrix <sup>a</sup>							
	Component						
	1	2	3	4	5	6	7
CT4	.756						
CT3	.740						
CT2	.713						
CT1	.663						

Rotated Component Matrix <sup>a</sup>							
TH3		.798					
TH1		.774					
TH5		.624					
TH2		.621					
QT1			.829				
QT3			.796				
QT2			.770				
CM2				.792			
CM1				.790			
CM3				.773			
TD1					.796		
TD3					.764		
TD2					.763		
TC3						.782	
TC1						.768	
TC2						.739	
HI1							.792
HI4							.741
HI2							.655

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 6 iterations.

*Nguồn: Kết quả chạy mô hình của nhóm tác giả*

Kết quả ma trận xoay cho thấy, 23 biến quan sát được phân thành 7 nhân tố, tất cả các biến quan sát đều có hệ số tải nhân tố Factor Loading lớn hơn 0.5 và không còn các biến xấu.

Lần phân tích thứ hai (lần cuối cùng), 23 biến quan sát hội tụ và phân biệt thành 7 nhân tố.

Các nhân tố bao gồm:

Nhân tố “Tính chân thật” (CT) gồm 4 biến quan sát: CT1, CT2, CT3, CT4

Nhân tố “Sự thu hút” (TH) gồm 4 biến quan sát: TH1, TH3, TH2, TH5.

Nhân tố “Sự quen thuộc” (QT) gồm 3 biến quan sát: QT1, QT2, QT3.

Nhân tố “Tính chuyên môn” (CM) gồm 3 biến quan sát: CM1, CM2, CM3.

Nhân tố “Sự tương đồng” (TD) gồm 3 biến quan sát: TD1, TD3, TD2.

Nhân tố “Sự tin cậy” (TC) gồm 3 biến quan sát: TC1, TC2, TC3.

Nhân tố “Tính hữu ích” (HI) gồm 3 biến quan sát: HI1, TC2, HI4.

#### **4.2. Hệ số tự tương quan**

Trong nghiên cứu này, nhóm tác giả sử dụng hệ số tự tương quan để kiểm định mối quan hệ giữa biến phụ thuộc và các biến độc lập, cũng như đánh giá mối tương quan giữa các biến độc lập với nhau. Kết quả phân tích để đánh giá tương quan bằng hệ số Pearson cho thấy:

Tất cả các nhân tố độc lập đều có tương quan với biến phụ thuộc ở mức ý nghĩa 1% (tương đương với độ tin cậy là 99%). Trong đó, biến CT có hệ số tương quan cao nhất ( $r = 0.605$ ) và biến TD có hệ số tương quan thấp nhất ( $r = 0.313$ ).

Các biến quan độc lập có mối liên hệ tuyến tính với nhau nhưng mức độ tương quan không đáng kể.

**Bảng 5. Ma trận tương quan Pearson**

		Correlations							
		HV	TC	CM	CT	TH	TD	QT	HI
HV	Pearson Correlation	1	.514**	.537**	.605**	.511**	.313**	.442**	.549**
	Sig. (2-tailed)		.000	.000	.000	.000	.000	.000	.000
	N	173	173	173	173	173	173	173	173
TC	Pearson Correlation	.514**	1	.329**	.348**	.417**	.353**	.296**	.425**
	Sig. (2-tailed)	.000		.000	.000	.000	.000	.000	.000
	N	173	173	173	173	173	173	173	173
CM	Pearson Correlation	.537**	.329**	1	.410**	.379**	.249**	.291**	.322**
	Sig. (2-tailed)	.000	.000		.000	.000	.001	.000	.000
	N	173	173	173	173	173	173	173	173
CT	Pearson Correlation	.605**	.348**	.410**	1	.419**	.332**	.354**	.366**
	Sig. (2-tailed)	.000	.000	.000		.000	.000	.000	.000
	N	173	173	173	173	173	173	173	173
TH	Pearson Correlation	.511**	.417**	.379**	.419**	1	.334**	.211**	.366**
	Sig. (2-tailed)	.000	.000	.000	.000		.000	.005	.000
	N	173	173	173	173	173	173	173	173
TD	Pearson Correlation	.313**	.353**	.249**	.332**	.334**	1	.287**	.300**
	Sig. (2-tailed)	.000	.000	.001	.000	.000		.000	.000
	N	173	173	173	173	173	173	173	173
QT	Pearson Correlation	.442**	.296**	.291**	.354**	.211**	.287**	1	.383**
	Sig. (2-tailed)	.000	.000	.000	.000	.005	.000		.000
	N	173	173	173	173	173	173	173	173
HI	Pearson Correlation	.549**	.425**	.322**	.366**	.366**	.300**	.383**	1
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000	.000	
	N	173	173	173	173	173	173	173	173

\*\* . Correlation is significant at the 0.01 level (2-tailed).

*Nguồn: Kết quả chạy mô hình của nhóm tác giả*

Kết quả phân tích tương quan Pearson cho thấy cho thấy giữa các biến độc lập (TC, CM, CT, TH, TD, QT, HI và biến phụ thuộc (HV) có Sig. = 0.00 < 0.05, đủ điều kiện để tiến hành chạy phân tích hồi quy.



### 4.3. Phân tích hồi quy

Phân tích hồi quy được sử dụng để đánh giá ảnh hưởng của các biến độc lập: sự tin cậy (1), tính chuyên môn (2), tính chân thực (3), sự thu hút (4), sự tương đồng (5), sự quen thuộc (6) và tính hữu ích của các bài đăng và video của KOLs. Giá trị của các yếu tố được dùng để phân tích hồi quy là trung bình của các biến quan sát đã được kiểm định độ tin cậy của thang đo và phân tích nhân tố khám phá.

**Bảng 6. Kết quả phân tích hồi quy**

Biến độc lập	Hệ số hồi quy chưa chuẩn hóa (B)	Giá trị t	Mức ý nghĩa thống kê (Sig.)	VIF	Hệ số hồi quy chuẩn hóa (Beta)	Giá trị tuyệt đối của Beta	Mức độ đóng góp của các biến (%)	Tầm quan trọng của các biến
(Hằng số)	-0.804	-2.792	0.006					
TC	0.175	2.885	0.004	1.447	0.169	0.169	16.9	4
CM	0.214	3.770	0.000	1.347	0.212	0.212	21.2	3
CT	0.297	4.868	0.000	1.480	0.288	0.288	28.8	1
TH	0.168	2.538	0.012	1.461	0.149	0.149	14.9	5
TD	-0.048	-0.825	0.411	1.276	-0.045	0.045	4.5	7
QT	0.126	2.313	0.022	1.301	0.128	0.128	12.8	6
HI	0.224	3.671	0.000	1.442	0.214	0.214	21.4	2
Tổng							100.0	
Biến số phụ thuộc: HV- Hành vi mua của sinh viên								
Dung lượng mẫu quan sát			173					
Sig. (ANOVA)			.000					
F			36.985					
Hệ số $R^2$			0.611					
Hệ số $R^2$ hiệu chỉnh			0.594					
Durbin Watson			2.014					

*Nguồn: Kết quả chạy mô hình của nhóm tác giả*

Kết quả phân tích hồi quy cho thấy, mức ý nghĩa thống kê Sig. = 0,000 <  $\alpha$  = 0,05; vì vậy ta có cơ sở để khẳng định với độ tin cậy 95% mô hình luôn tồn tại. Ta có hệ số tương quan bình phương hiệu chỉnh (Adjusted R Square),  $R^2 = 0,594$ , có nghĩa là trong các yếu tố ảnh hưởng đến hành vi mua, thì các biến độc lập trong mô hình giải thích được 59,4%, còn lại 40.6% được giải thích bằng các yếu tố khác mà không có điều kiện đưa vào mô hình. Ngoài ra, hệ số phóng đại phương sai (VIF) đều nhỏ hơn 10, chứng tỏ mô hình hồi quy không có hiện tượng đa cộng tuyến và hệ số Durbin Watson cũng đạt tiêu chuẩn ( $1 < d = 2,014 < 3$ ), chứng minh mô hình hồi quy không có hiện tượng tự tương quan. Mức ý nghĩa thống kê (cột giá trị Sig.) ở bảng kết quả cho thấy các biến TC, CM, CT, TH, QT, HI đều có ảnh hưởng đáng kể đến biến phụ thuộc, riêng biến TD có giá trị Sig. = 0.411 > 0.05, chứng tỏ biến TD không có ảnh hưởng đến biến phụ thuộc, kết luận loại bỏ biến TD.

Nghiên cứu cũng xác định được vị trí ảnh hưởng của các biến độc lập đến biến phụ thuộc trong mô hình hồi quy, các hệ số hồi quy chuẩn hóa có thể chuyển đổi được trình bày chi tiết ở bảng 7.

**Bảng 7. Xác định tầm quan trọng của các biến độc lập theo tỷ lệ %.**

STT	Biến	Beta chuẩn hóa	%	Thứ tự ảnh hưởng
1	Sự chân thật (CT)	0.288	28.8	1
2	Tính hữu ích của các bài đăng và video (HI)	0.214	21.4	2
3	Tính chuyên môn (CM)	0.212	21.2	3
4	Sự tin cậy (TC)	0.169	16.9	4
5	Sự thu hút (TH)	0.149	14.9	5
6	Sự quen thuộc (QT)	0.128	12.8	6
	<b>Tổng</b>	1.16	100%	

*Nguồn: Kết quả chạy mô hình của nhóm tác giả*

Qua kết quả hồi quy, ta có thể thấy yếu tố Sự chân thật đóng góp 28.8%, Tính hữu ích của các bài đăng và video đóng góp 21.4%, yếu tố Tính chuyên môn chiếm 21.2%, yếu tố Sự tin cậy đóng góp 16.9%, Sự thu hút” đóng góp 14.9%, và cuối cùng là nhân tố Sự quen thuộc đóng góp 12.8%. Như vậy, thứ tự các nhân tố của KOLs ảnh hưởng đến hành vi mua mỹ phẩm của sinh viên ĐHQGHN: thứ nhất là Sự chân thật (CT); thứ nhì là Tính hữu ích của các bài đăng và video (HI); thứ ba là Tính chuyên môn (CM); thứ tư là Sự tin cậy (TC); thứ năm là Sự thu hút (TH), và cuối cùng là Sự quen thuộc (QT).

## 5. Kết luận

Nhận thấy được tầm ảnh hưởng của KOLs đối với lựa chọn mua mỹ phẩm của người Việt Nam nói chung và thế hệ trẻ - sinh viên ĐHQGHN nói riêng, nhóm đề tài nhận thấy nghiên cứu về ảnh hưởng của KOLs đến hành vi tiêu dùng mỹ phẩm của sinh viên ĐHQGHN là rất cần thiết và cấp bách.

Qua nghiên cứu, nhóm tác giả nhận thấy, có nhiều nghiên cứu về nhân tố ảnh hưởng đến hành vi tiêu dùng mỹ phẩm của sinh viên ĐHQGHN. Tuy nhiên, chưa có nghiên cứu nào giúp đánh giá toàn diện về ảnh hưởng của KOLs đến hành vi tiêu dùng mỹ phẩm của sinh viên ĐHQGHN trên các mặt như trong nghiên cứu của nhóm tác giả được đề cập ở bài viết này. Nhóm tác giả đã tổng quan tài liệu và dựa trên những lý luận liên quan, sau đó xác định các nhân tố ảnh hưởng đến hành vi tiêu dùng mỹ phẩm của sinh viên ĐHQGHN, bao gồm: Sự tin cậy của KOLs, tính chuyên môn của KOLs, tính chân thật trong thông điệp của KOLs, sự thu hút của KOLs, sự tương đồng với sinh viên của KOLs, sự quen thuộc với KOLs và tính hữu ích trong thông điệp của KOLs. Nghiên cứu này được tiến hành đã khẳng định tính độc lập trong của nhóm tác giả, giúp lấp đầy khoảng trống nghiên cứu, giải đáp một cách toàn diện hơn thắc mắc cụ thể về các nhân tố ảnh hưởng đến hành vi tiêu dùng mỹ phẩm của sinh viên ĐHQGHN.

Kết quả khảo sát của nhóm tác giả dựa trên 173 phiếu thu về từ sinh viên theo học tại các trường thuộc ĐHQGHN. Số phiếu này có đầy đủ thông tin và có thể sử dụng để tiến hành nghiên cứu, số lượng mẫu khảo sát đáp ứng được số lượng mẫu tối thiểu, do đó, số liệu bài nghiên cứu là đáng tin cậy. Kết quả chạy mô hình cho thấy 06 nhân tố được chấp

nhận trong phương trình hồi quy và có tác động dương đến hành vi tiêu dùng mỹ phẩm của sinh viên ĐHQGHN. Thứ tự ảnh hưởng đến hành vi mua mỹ phẩm của sinh viên ĐHQGHN: thứ nhất là Sự chân thật (CT); thứ hai là Tính hữu ích của các bài đăng và video (HI); thứ ba là Tính chuyên môn (CM); thứ tư là Sự tin cậy (TC); thứ năm là Sự thu hút (TH), và cuối cùng là Sự quen thuộc (QT).

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# CÁC NHÂN TỐ ẢNH HƯỞNG TỚI KHẢ NĂNG BỊ LỪA ĐẢO ĐẦU TƯ THEO MÔ HÌNH PONZI CỦA CÁC CÁ NHÂN VIỆT NAM TRÊN CÁC SÀN GIAO DỊCH TIỀN MÃ HÓA

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## **Tóm tắt**

Thông qua kết quả khảo sát 432 người dân Việt Nam, trong đó có 311 câu trả lời hợp lệ, kết hợp sử dụng mô hình hồi quy đa biến, nghiên cứu chỉ ra rằng 2 yếu tố ảnh hưởng đến khả năng bị lừa đảo đầu tư theo mô hình Ponzi của các cá nhân trên sàn giao dịch tiền mã hóa, bao gồm: mối quan hệ và sự tin tưởng, kiến thức về tiền mã hóa. Trong đó, yếu tố về mối quan hệ và sự tin tưởng có ảnh hưởng mạnh nhất đến khả năng bị lừa đảo đầu tư của các nhà đầu tư cá nhân Việt Nam. Từ đó, nghiên cứu đã đề xuất một số khuyến nghị nhằm phòng tránh các vụ lừa đảo đầu tư trong giao dịch tiền mã hóa ở góc độ cơ quan quản lý nhà nước và các cá nhân. Cụ thể, cơ quan quản lý nhà nước nên: (i) Hoàn thiện khung chính sách về tiền mã hóa; (ii) Thiết lập chế tài xử phạt nặng đối với các đối tượng cầm đầu lừa đảo (iii) Phổ cập các kiến thức về các sản phẩm tài chính mới. Về phía các cá nhân, cần phải: (i) Trang bị đầy đủ kiến thức về các loại tiền mã hóa mới, các hình thức đầu tư mới; (ii) Tạo lập tư duy đầu tư vững vàng; (iii) Luôn mang tinh thần cảnh giác cao về các lời mời gọi của các cơ hội đầu tư.

**Từ khóa:** Mô hình Ponzi, lừa đảo đầu tư, tiền mã hóa, khả năng bị lừa đảo đầu tư

## **Abstract**

Using multivariate regression model with 311 valid responses among 432 responses received from Vietnamese people, this study shows that two factors affect susceptibility to crypto-Ponzi schemes, including affinity and trust, knowledge of cryptocurrency. Besides, the first one has the greatest influence on the becoming of scheme victims. Then, this research has provided some recommendations to prevent investment fraud in cryptocurrency trading from the perspective of government agencies and individuals. To be precise, the state administration should: (i) improve the cryptocurrency policy framework, (ii) impose severe penalties on fraudsters, and (iii) disseminate knowledge about new financial products. In terms of individuals, it is necessary to: (i) be fully prepared with knowledge of cryptocurrencies; (ii) form a consistent investment mindset, and (iii) beware of solicitations of investment opportunities.

**Keywords:** Ponzi schemes; investment frauds; cryptocurrency; susceptibility scam

## 1. Đặt vấn đề

Tên gọi mô hình lừa đảo Ponzi bắt nguồn từ kế hoạch lừa đảo “tiền đổi tiền” của Charles Ponzi. Theo đó, dưới danh nghĩa công ty Giao dịch chứng khoán, Charles Ponzi cam kết trả lãi là 50% số tiền cho các nhà đầu tư trong vòng 45 ngày hoặc 100% trong 90 ngày. Nhưng thay vì thực sự đầu tư tiền, Ponzi chỉ dùng tiền của chính các nhà đầu tư để chi trả hoa hồng không lồ cho họ và nói với các nhà đầu tư rằng họ đã kiếm được lợi nhuận. Cứ như vậy, trong vòng 6 tháng, Ponzi đã thuyết phục khoảng 20.000 người với giá trị đầu tư lên tới 10 triệu USD. Cuối cùng sau khi thu hút hơn 40.000 nhà đầu tư, Ponzi đã biến mình thành một triệu phú sau chưa đầy nửa năm. Vụ việc bị vỡ lở khi chính nhà báo được Ponzi thuê để quảng bá cho công ty đã vạch trần vụ lừa đảo. Sau khi kiểm tra hồ sơ tài chính của Ponzi, nhà báo McMasters phát hiện ra rằng, số tiền duy nhất Ponzi có cho đến giờ là tiền lấy từ các nhà đầu tư và những khoản lợi nhuận không lồ mà Ponzi đưa ra chỉ là ảo. Trong suốt nhiều năm qua, các thương vụ lừa đảo theo mô hình Ponzi đã trở nên phổ biến tại nhiều quốc gia. Đặc biệt sự hưng thịnh của các sàn giao dịch tiền điện tử là mục tiêu tuyệt vời cho kẻ xấu thực hiện các kế hoạch lừa đảo để thu về lợi nhuận bất chính như vụ lừa đảo BitConnect và PlusToken.

Việt Nam cũng không phải là ngoại lệ khi trong vòng hơn 10 năm qua đã có rất nhiều cá nhân Việt Nam đã bị lôi kéo tham gia vào các sàn giao dịch tiền ảo. Có thể kể đến vụ lừa đảo đầu tư tiền ảo iFan và Pincoin vào năm 2017 hay mô hình hoạt động của các sàn: Wefinex, Raidenbo, Bitono, Pocinex, Deniex, Remitex, Ares BO, Binanex, Fxtradingmarket, GardenBO, Hitoption... Mô típ chung của các sàn này đều là phát hành mã token và đưa ra đồng tiền ảo, mời chào các nhà đầu tư bằng cách giới thiệu các dự án có nguồn gốc từ nước ngoài, liên kết với sàn giao dịch tiền điện tử lớn trên thế giới với lãi suất cực khủng nhưng thực chất chỉ do các tổ chức, cá nhân người Việt Nam thiết lập. Sau khi thu hút được một số lượng lớn các cá nhân với số tiền lên tới hàng trăm triệu USD, các sàn này sẽ biến mất. Các thương vụ lừa đảo đầu tư không chỉ trực tiếp gây ra tổn thất cho các cá nhân mà một cách gián tiếp ảnh hưởng tới thị trường tài chính cũng như nền kinh tế quốc gia.

Thực tế nêu trên đã truyền cảm hứng cho nhóm tác giả thực hiện nghiên cứu về lừa đảo đầu tư theo mô hình Ponzi trên thị trường tiền mã hóa tại Việt Nam. Tuy nhiên, việc tiếp cận với các nhà đầu tư đã từng bị lừa đảo là bất khả thi do các nhà đầu tư luôn né tránh trả lời về những thất bại của bản thân trong khi không có một cơ sở dữ liệu đầy đủ thống kê về sự việc này. Do đó, nhóm nghiên cứu tập trung vào việc đánh giá khả năng bị lừa đảo đầu tư của các cá nhân Việt Nam (bao gồm cả những người chưa bao giờ bị lừa đảo và/hoặc đã từng bị lừa đảo) và xác định các nhân tố ảnh hưởng tới khả năng bị lừa đảo đầu tư của các cá nhân Việt Nam.

Theo hiểu biết của nhóm tác giả, đây là nghiên cứu đầu tiên tiếp cận việc lừa đảo theo mô hình Ponzi trên các sàn giao dịch tiền mã hóa tại Việt Nam. Sau phần giới thiệu chung, phần 3 sẽ trình bày phương pháp nghiên cứu với việc thiết kế bảng hỏi, thu thập và phân tích dữ liệu. Kết quả nghiên cứu sẽ được trình bày ở phần 4 mà ngay sau đó là phần 5 với nội dung thảo luận kết quả nghiên cứu. Kết luận và kiến nghị sẽ được trình bày ở phần 6.

## 2. Tổng quan nghiên cứu

Trong nhiều năm qua, các nhà nghiên cứu đã dành sự quan tâm đặc biệt cho chủ đề về lừa đảo đầu tư, trong nỗ lực đi tìm lý do để giải thích tại sao các cá nhân dễ dàng tham gia vào các giao dịch tiền kỹ thuật số thông qua mô hình lừa đảo Ponzi. Tổng quan nghiên cứu và cơ sở lý luận cho thấy chủ đề nghiên cứu này thuộc về môn khoa học liên ngành, kết hợp cả lý thuyết tội phạm học, lý thuyết tài chính truyền thống, lý thuyết hành vi và tài chính hành vi.

Ở góc độ lý thuyết tội phạm học, lý thuyết về sự cả tin (Gullibility) được viện dẫn bởi Jacobs & Schain (2011), Blois & Ryan (2013), Greenspan & Woods (2016) để giải thích cho lý do mà các cá nhân tham gia vào các vụ lừa đảo Ponzi. Cụ thể, dựa vào lý thuyết mối quan hệ của Fiske (1992), Blois & Ryan (2013) đã phân tích lại vụ lừa đảo Madoff Ponzi và lập luận rằng sự tin tưởng được hình thành từ chính các mối quan hệ giữa các thành viên trong cùng cộng đồng có lợi ích chung. Điểm này cũng tương đồng với lý thuyết TPB của Ajzen (1991). Theo đó, yếu tố mối quan hệ và sự tin tưởng nằm trong chuẩn mực chủ quan của mô hình TPB, và được hiểu là nhận thức của cá nhân với những người tham khảo quan trọng của cá nhân đó cho rằng hành vi nên hay không nên thực hiện.

Kẻ chủ mưu thường cố gắng để tạo niềm tin cho con mồi (Ji, 2019). Họ có thể sử dụng các nhân vật của công chúng, những người có ảnh hưởng và người nổi tiếng để tiếp cận các nạn nhân tiềm năng ở quy mô lớn hơn. Ngoài ra, những kẻ chủ mưu thường có tài hùng biện với kỹ năng giao tiếp tốt và quan hệ công chúng xuất sắc để thực hiện hành vi lôi kéo và lừa đảo (Kasim và cộng sự, 2020). Còn ở góc độ nạn nhân, họ sẽ tham gia vào các thương vụ đầu tư mà không suy nghĩ quá nhiều bởi hoàn toàn tin vào những điều mà người thân hay người nổi tiếng đề cập.

Chung quan điểm với Blois & Ryan (2013), Obamuyi và cộng sự (2018), Amoah (2018) cũng như Deb & Sengupta (2020), Huang và cộng sự (2020) coi yếu tố “lời giới thiệu của bạn bè” và “sự cả tin của các nhà đầu tư” như là yếu tố đầu tiên dẫn tới việc tham gia vào các giao dịch tiền ảo. Mới đây nhất, Halim và cộng sự (2021) đã tiến hành một loạt các cuộc phỏng vấn trực tiếp với các nạn nhân của kế hoạch Ponzi với một loạt các câu hỏi bán cấu trúc, theo đó người được phỏng vấn vừa được lựa chọn đáp án từ các multiple choice questions cũng như trả lời trực tiếp các câu hỏi mở. Kết quả cho thấy các nạn nhân liên quan đến gian lận Ponzi đều cả tin trên cả bốn yếu tố của lý thuyết về sự cả tin, bao gồm: tình hình (situation), nhận thức (cognition), tính cách (personality) và trạng thái (state) (Greenspan, 2009b).

Ở góc độ lý thuyết tài chính truyền thống, Amoah (2018) cho rằng khẩu vị rủi ro là nhân tố quan trọng ảnh hưởng tới quyết định tham gia mô hình lừa đảo đầu tư Ponzi của nhà đầu tư. Kỳ vọng về lợi nhuận, hội chứng làm giàu là những yếu tố ảnh hưởng nhiều nhất đến việc tham gia chương trình Ponzi (Obamuyi và cộng sự, 2018; Deb & Sengupta, 2020).

Ở góc độ lý thuyết hành vi và tài chính hành vi, theo lý thuyết TPB, thái độ giúp một cá nhân quyết định có nên thực hiện một hành động cụ thể hay không bằng cách xem xét các chuỗi ý nghĩa tiêu cực và tích cực của nó. Thái độ được định nghĩa là một hành vi tâm lý và nhận thức mà các cá nhân thể hiện bằng cách đánh giá bất kỳ yếu tố cụ thể nào với mức độ ưa thích hoặc không ưa thích (Eagly & Chaiken, 1993). Thái độ đối với lừa đảo

đầu tư là thể hiện nhận thức tích cực hay tiêu cực của cá nhân về việc tham gia các khoản đầu tư, sẽ được hình thành từ những kiến thức của nhà đầu tư. Amoah (2018) chỉ ra rằng kiến thức đầu tư, nhận thức về sự thất bại khi đầu tư, hiểu biết về Ponzi có tác động làm sụt giảm tham gia đầu tư vào Ponzi.

Bên cạnh đó, Hidajat (2018) cũng đồng ý rằng hiểu biết tài chính tác động đến quyết định đầu tư vào mô hình Ponzi và Pyramid. Theo Mason & Wilson (2000), hiểu biết tài chính là khả năng của các cá nhân để có được, hiểu và đánh giá thông tin liên quan cần thiết để thực hiện các quyết định với nhận thức về những điều có thể để lại những kết quả tài chính sau này. Hiểu biết tài chính là một chuỗi các quá trình hay hoạt động nhằm nâng cao sự tự tin và kỹ năng của người tiêu dùng tài chính để họ có thể quản lý tài chính cá nhân tốt hơn (OJK, 2017). Mức độ hiểu biết về tài chính càng cao thì khả năng phát hiện các trò gian lận đầu tư càng tốt (Chariri & cộng sự, 2018). Ngoài ra, Kim & Hanna (2021) chỉ ra rằng hiểu biết đầu tư khách quan có tác động tiêu cực đến quyết định đầu tư vào tiền mã hóa. Sự hiểu biết của các nhà đầu tư về đầu tư có ảnh hưởng nhiều đến việc họ có dễ bị rơi vào các bẫy lừa đảo đầu tư. Do đó, kiến thức đầu tư và các sản phẩm tài chính có tác động ngược chiều đến việc tham gia vào các khoản đầu tư Ponzi (Amoah, 2018). Tuy nhiên, nghiên cứu của Hidajat cho rằng ngay cả những người có kiến thức về tài chính tốt (nghề nghiệp, học vấn, giới tính và thu nhập) vẫn bị mắc bẫy dưới những phương thức đầu tư này. Lý giải cho điều này, Hidajat (2018) khẳng định con người không phải lúc nào cũng đưa quyết định dựa trên lý trí và sẽ được giải thích bởi lý thuyết về tài chính hành vi.

Ngoài ra, Hidajat và cộng sự (2020) đã tiếp cận chủ đề này theo hướng tâm lý của các nhà đầu tư trong đầu tư tài chính. Sử dụng mẫu nghiên cứu thu thập được từ cuộc phỏng vấn 98 nhà đầu tư tại 11 thành phố ở Indonesia - đây là những người đã hoặc đang đầu tư vào một công ty hoặc một doanh nghiệp vận hành theo mô hình Ponzi hoặc kim tự tháp (Pyramid). Sau khi phân tích hồi quy với SPSS, tác giả đã đi đến kết luận rằng sự lạc quan (optimism), thiên kiến xác nhận (confirmation bias), thiên kiến do tính đại diện (representativeness bias), thiên kiến đóng khung (framing bias), sự quá tự tin (overconfidence) ảnh hưởng thuận chiều đến các quyết định đầu tư liên quan đến Ponzi và các mô hình kim tự tháp.

Đặc biệt, Obamuyi và cộng sự (2018), với việc sử dụng mẫu là 384 cá nhân đã bị lừa đảo đầu tư theo mô hình Ponzi ở 6 bang khác nhau của Nigeria, kết hợp phương pháp thống kê mô tả và phân tích phương sai một chiều (One-way ANOVA), đã chỉ ra rằng tất cả các yếu tố liên quan tới khẩu vị rủi ro, kiến thức về tài chính hay tâm lý hành vi đều bị ảnh hưởng đáng kể bởi các nhân tố nhân khẩu học như: nơi sinh sống, tuổi, giới tính, tình trạng hôn nhân, tình trạng việc làm và trình độ học vấn.

### **3. Phương pháp nghiên cứu**

#### **3.1. Thiết kế nghiên cứu**

Nghiên cứu dựa trên 03 lý thuyết nền tảng, bao gồm lý thuyết về sự cả tin, lý thuyết tài chính truyền thống và lý thuyết TPB, và các nghiên cứu đã thực hiện như đã phân tích tại phần Tổng quan nghiên cứu. Do đó, nghiên cứu đặt ra 07 giả thuyết như sau:

(i) Giả thuyết 1 (H1): Mối quan hệ và sự tin tưởng (AT) có ảnh hưởng cùng chiều (+) đến khả năng bị lừa đảo đầu tư theo mô hình Ponzi của các nhà đầu tư cá nhân Việt Nam trên các sàn giao dịch tiền mã hóa (IS).

(ii) Giả thuyết 2 (H2): Khẩu vị rủi ro (RA) có ảnh hưởng cùng chiều (+) đến khả năng bị lừa đảo đầu tư theo mô hình Ponzi của các nhà đầu tư cá nhân Việt Nam trên các sàn giao dịch tiền mã hóa (IS).

(iii) Giả thuyết 3 (H3): Thái độ về lừa đảo đầu tư (AI) có ảnh hưởng ngược chiều (-) đến khả năng bị lừa đảo đầu tư theo mô hình Ponzi của các nhà đầu tư cá nhân Việt Nam trên các sàn giao dịch tiền mã hóa (IS).

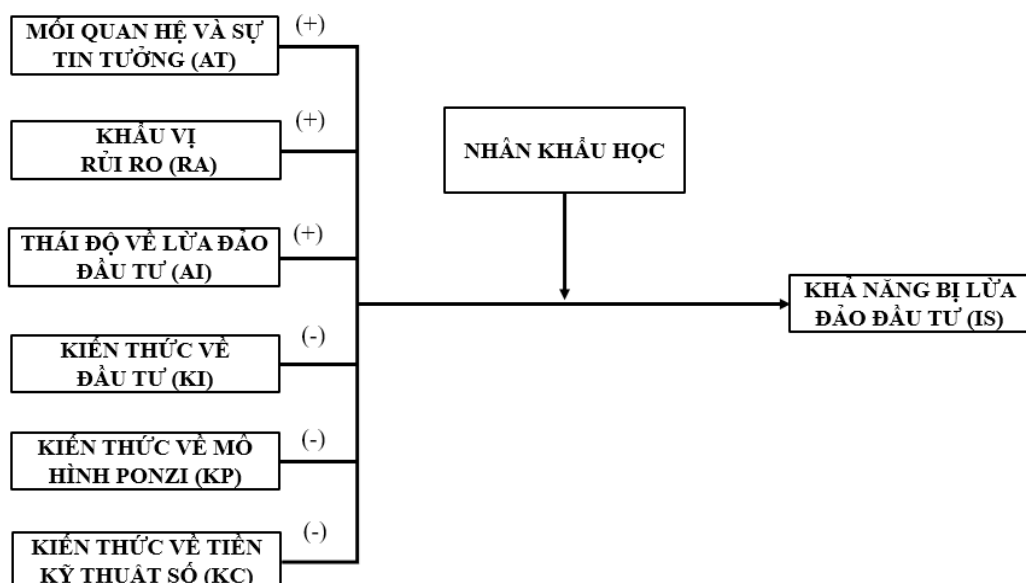
(iv) Giả thuyết 4 (H4): Hiểu biết về đầu tư (KI) có ảnh hưởng ngược chiều (-) đến khả năng bị lừa đảo đầu tư theo mô hình Ponzi của các nhà đầu tư cá nhân Việt Nam trên các sàn giao dịch tiền mã hóa (IS).

(v) Giả thuyết 5 (H5): Hiểu biết về tiền mã hóa (KC) có ảnh hưởng ngược chiều (-) đến khả năng bị lừa đảo đầu tư theo mô hình Ponzi của các nhà đầu tư cá nhân Việt Nam trên các sàn giao dịch tiền mã hóa (IS).

(vi) Giả thuyết 6 (H6): Hiểu biết về mô hình lừa đảo Ponzi (KP) có ảnh hưởng ngược chiều (-) đến khả năng bị lừa đảo đầu tư theo mô hình Ponzi của các nhà đầu tư cá nhân Việt Nam trên các sàn giao dịch tiền mã hóa (IS).

(vii) Giả thuyết 7 (H7): Tồn tại sự khác biệt về mức độ ảnh hưởng của các yếu tố nêu trên tới khả năng bị lừa đảo đầu tư theo mô hình Ponzi (IS) của các cá nhân trên sàn giao dịch tiền mã hóa theo các yếu tố nhân khẩu học.

**Hình 1. Các giả thuyết nghiên cứu**



*Nguồn: Nhóm tác giả*



### **3.2. Phát triển bảng hỏi**

Để đạt được mục tiêu nghiên cứu là xác định các nhân tố ảnh hưởng tới khả năng bị lừa đảo đầu tư theo mô hình Ponzi của các cá nhân Việt Nam trên các sàn giao dịch tiền mã hóa và mức độ ảnh hưởng của các nhân tố, nghiên cứu đã lên bảng hỏi và gửi tới các cá nhân là người Việt Nam nhằm thu thập dữ liệu sơ cấp như sau:

*Đối tượng khảo sát:* Các cá nhân là người Việt Nam

*Hình thức khảo sát:* Bảng hỏi online. Đường link như sau: <https://forms.gle/9LhiBp1iWgvEJFuf7>

*Thời gian khảo sát:* Tháng 2/2022

*Nội dung khảo sát:* Trên cơ sở thiết kế nghiên cứu nêu trên, nghiên cứu đã phát triển bảng hỏi online bao gồm hai phần chính: (i) Các thông tin chung và (ii) Nội dung bảng hỏi. Phần đầu tiên yêu cầu những người được phỏng vấn cung cấp thông tin chung về nhân khẩu học của cá nhân họ như giới tính, tuổi, trình độ giáo dục, thu nhập, tình trạng hôn nhân, khu vực địa lý đang sinh. Phần thứ hai có 07 nhóm câu hỏi chính, đại diện cho khả năng bị lừa đảo đầu tư theo mô hình Ponzi của các cá nhân Việt Nam và 06 yếu tố, bao gồm: (i) Mối quan hệ và sự tin tưởng; (ii) Thái độ về lừa đảo đầu tư; (iii) Khẩu vị rủi ro; (iv) Kiến thức về mô hình Ponzi; (v) Kiến thức về đầu tư; (vi) Kiến thức về giao dịch tiền mã hóa. Theo đó, nghiên cứu đưa ra các nhận định và yêu cầu người làm khảo sát đưa ra mức độ đồng ý của mình về các nhận định đó theo thang đo Likert từ 1 tới 5, trong đó 1 là mức đồng ý thấp nhất và 5 là mức đồng ý cao nhất.

### **3.3. Thu thập dữ liệu sơ cấp**

Nghiên cứu tiến hành thu thập dữ liệu với kích thước mẫu là 432 quan sát. Do tiến hành khảo sát online nên rất nhiều phiếu trả lời không hợp lệ, bao gồm: một số bảng hỏi chọn tất cả các câu hỏi cùng một phương án và chọn sai các câu hỏi khả nghi (với 131 phiếu trả lời). Do vậy, nghiên cứu giữ lại số quan sát hợp lệ là 311 phiếu.

### **3.4. Phân tích dữ liệu**

Số liệu sau khi được thu thập, sẽ được nhập vào excel để loại bỏ những phiếu trả lời thiếu dữ liệu, có mức độ đánh giá, cảm nhận của các nhân tố trong mô hình chỉ là một phương án. Số phiếu sau khi sàng lọc sẽ được sử dụng phần mềm SPSS (phiên bản 20) để làm cơ sở dữ liệu để thống kê mô tả, xác định độ tin cậy của các biến, phân tích nhân tố khám phá EFA, kiểm định tương quan Person, phân tích hồi quy và phân tích One-way ANOVA.

- (i) Bước 1: Đánh giá sơ bộ thang đo - Kiểm định Cronbach's Alpha
- (ii) Bước 2: Phân tích nhân tố khám phá EFA
- (iii) Bước 3: Kiểm định tương quan Person
- (iv) Bước 4: Phân tích hồi quy
- (v) Bước 5: Phân tích One-way ANOVA

## 4. Kết quả nghiên cứu

### 4.1. Thống kê mô tả đối tượng khảo sát

Phiếu trả lời thu về sau khi kết thúc khảo sát là 432 phiếu. Tỷ lệ cá nhân phản hồi và hợp lệ cho phân tích là 311/432 (tương ứng với tỷ lệ 72%). Tỷ lệ này có thể coi là ổn và mức độ câu hỏi trong bảng hỏi là phù hợp.

Đặc điểm nhân khẩu học của đối tượng điều tra bao gồm giới tính, độ tuổi, trình độ học vấn, tình trạng hôn nhân, thu nhập hàng tháng, tình trạng hôn nhân và nơi sinh sống. Thông tin về nhân khẩu được thể hiện trên Bảng 1.

**Bảng 1. Thống kê mô tả nhân khẩu học**

		Tần số	Tỷ lệ (%)
<b>Giới tính</b>	Nam	124	39,9
	Nữ	184	59,2
	Khác	3	1
<b>Độ tuổi</b>	15 tuổi – 20 tuổi	159	51,1
	21 tuổi – 34 tuổi	121	38,9
	35 tuổi – 49 tuổi	26	8,4
	Trên 50 tuổi	5	1,6
<b>Trình độ học vấn</b>	Chưa tốt nghiệp THPT	1	0,3
	Tốt nghiệp THPT	204	65,6
	Tốt nghiệp đại học, cao đẳng	81	26
	Tốt nghiệp sau đại học, cao đẳng	25	8
<b>Tình trạng hôn nhân</b>	Đã kết hôn	49	15,8
	Độc thân hoặc đã ly hôn	262	84,2
<b>Thu nhập hàng tháng</b>	Dưới 10 triệu VNĐ	239	76,8
	10 triệu VNĐ - 20 triệu VNĐ	45	14,5
	20 triệu VNĐ - 40 triệu VNĐ	15	4,8
	Trên 40 triệu VNĐ	12	3,9
<b>Nơi sinh sống</b>	Thành phố Hà Nội	188	60,5
	Tỉnh, thành phố khác	123	39,5

*Nguồn: Nhóm nghiên cứu tổng hợp*

### 4.2. Các yếu tố ảnh hưởng tới khả năng bị lừa đảo đầu tư theo mô hình Ponzi của các cá nhân Việt Nam trên sàn giao dịch tiền mã hóa

Sau khi đã thực hiện các bước kiểm định, phần dưới đây trình bày kết quả hồi quy sau cùng của nghiên cứu. Bảng 2 thể hiện hệ số  $R^2$  hiệu chỉnh, theo đó hệ số  $R^2$  hiệu chỉnh = 0,161 có nghĩa là có khoảng 16,1% phương sai khả năng bị lừa đảo đầu tư được giải thích bởi 2 biến độc lập là: Mối quan hệ và sự tin tưởng (AT), và Kiến thức về tiền mã hóa (KC). Còn lại 83,9% khả năng bị lừa đảo đầu tư theo mô hình Ponzi của các cá nhân Việt Nam được giải thích bởi các yếu tố khác.

**Bảng 2. Hệ số R<sup>2</sup> hiệu chỉnh lần 2**

Mô hình	R	R <sup>2</sup>	R <sup>2</sup> hiệu chỉnh	Sai số dự đoán	Durbin-Watson
1	.407 <sup>a</sup>	.166	.161	.74607	2.012

Nguồn: Kết quả tính toán từ SPSS 20

Kiểm định F sử dụng trong bảng phân tích phương sai là phép kiểm định giả thuyết về độ phù hợp của mô hình hồi quy tuyến tính tổng thể. Trong bảng 3 phân tích ANOVA, ta thấy giá trị sig. rất nhỏ (sig. = 0.000 < 0.05), nên mô hình hồi quy phù hợp với tập dữ liệu và có thể sử dụng được.

**Bảng 3. Kết quả phân tích kiểm định F**

ANOVA <sup>a</sup>						
Mô hình		Tổng các bình phương	df	Bình phương trung bình	F	Sig.
1	Phần hồi quy	34.106	2	17.053	30.637	.000 <sup>b</sup>
	Phần dư	171.439	308	.557		
	Tổng cộng	205.545	310			

Nguồn: Kết quả phân tích từ SPSS 20

**Bảng 4. Kết quả phân tích hồi quy**

Mô hình	B	Hệ số hồi quy chưa chuẩn hóa		Hệ số hồi quy chuẩn hóa	t	Sig. Dung sai	Thống kê đa cộng tuyến	
		Sai số chuẩn	Beta				VIF	
1	(Hằng số)	1.536	.240		6.406	.000		
	AT	.361	.050	.378	7.269	.000	1.000	1.000
	KC	.161	.057	.147	2.821	.005	1.000	1.000

Nguồn: Kết quả phân tích từ SPSS 20

Bảng 4 cho thấy phương trình hồi quy tuyến tính được thể hiện như sau:

$$IS = 0,378 \times AT + 0,147 \times KC$$

Như vậy, có một số kết luận như sau:

- Về giả thuyết H1, mối quan hệ và sự tin tưởng có ảnh hưởng cùng chiều (+) đến khả năng bị lừa đảo đầu tư theo mô hình Ponzi của các nhà đầu tư cá nhân Việt Nam trên các sàn giao dịch tiền mã hóa), hệ số hồi quy chuẩn hóa  $\beta = 0.378$ , sig= 0.000. Giả thuyết H1 hỗ trợ nghiên cứu đến 99%.

- Về giả thuyết H6, kiến thức về tiền kỹ thuật số có ảnh hưởng ngược chiều (-) đến khả năng bị lừa đảo đầu tư theo mô hình Ponzi của các nhà đầu tư cá nhân Việt Nam trên các sàn giao dịch tiền mã hóa), hệ số hồi quy chuẩn hóa  $\beta = 0.147$ , sig= 0.005 và  $\beta$  mang dấu (+). Giả thuyết H6 trái ngược lại với kết quả thực nghiệm.

**Bảng 5. Kết quả kiểm định các giả thuyết của mô hình**

GT	Kết quả
H1	Giả thuyết được chấp nhận
H2	Giả thuyết bị bác bỏ
H3	Giả thuyết bị bác bỏ
H4	Giả thuyết bị bác bỏ
H5	Giả thuyết bị bác bỏ
H6	Giả thuyết bị bác bỏ, tuy nhiên kết quả thực nghiệm cho kết quả ngược chiều với giả thuyết
H7	Không có sự khác biệt ở yếu tố mối quan hệ và sự tin tưởng, kiến thức về tiền mã hóa tới khả năng bị lừa đảo đầu tư theo mô hình Ponzi của các cá nhân trên sàn giao dịch tiền mã hóa theo độ tuổi, theo giới tính, theo trình độ học vấn, theo mức thu nhập hàng tháng, theo tình trạng hôn nhân, theo khu vực địa lý

*Nguồn: Nhóm nghiên cứu tổng hợp*

### 5. Thảo luận kết quả nghiên cứu

Kết quả nghiên cứu cho thấy chỉ có nhân tố mối quan hệ và sự tin tưởng (AT), kiến thức về tiền mã hóa (KC) có ảnh hưởng đến khả năng bị lừa đảo đầu tư theo mô hình Ponzi của các cá nhân Việt Nam. Đồng thời, sau khi kiểm định sự khác biệt One-way ANOVA, kết quả cho thấy không có sự khác biệt của ảnh hưởng của mối quan hệ và sự tin tưởng, kiến thức về tiền mã hóa đến khả năng bị lừa đảo đầu tư theo mô hình Ponzi của các cá nhân Việt Nam trên các sàn giao dịch Việt Nam giữa các nhân tố nhân khẩu học.

*Thứ nhất*, kết quả phân tích hồi quy cho thấy nhóm nhân tố mối quan hệ và sự tin tưởng (AT) có hệ số hồi quy chuẩn hóa lớn nhất là  $\beta = 0,378$  và  $\text{sig.} = 0,000 < 0,05$ . Điều này thể hiện rằng mối quan hệ và sự tin tưởng là yếu tố tác động mạnh nhất đến khả năng bị lừa đảo đầu tư theo mô hình Ponzi của các cá nhân Việt Nam trên các sàn giao dịch tiền mã hóa. Về mặt lý thuyết nạn nhân học, mối quan hệ và sự tin tưởng được lý giải chính bởi lý thuyết về sự cả tin (Gullibility) của Greenspan (2009), Greenspan & Woods (2016), được bổ sung thêm bởi lý thuyết về cơ hội trở thành nạn nhân (Cohen và cộng sự, 1981) và yếu tố chuẩn chủ quan trong mô hình hành vi có kế hoạch TPB (Ajzen, 1991). Trong đó, mọi người thường dễ bị ảnh hưởng bởi những người xung quanh họ, đặc biệt là gia đình và bạn bè; việc cắt đứt mối quan hệ khi chúng ta đã phát triển mối quan hệ cá nhân với người khác là rất khó. Khi mọi người có mối quan hệ tốt với bất kỳ ai đó, họ rất khó lòng và sợ hãi khi từ chối lời đề nghị, lời khuyên vì họ không muốn làm đối phương buồn. Bên cạnh đó, kết quả nghiên cứu cũng phù hợp với nghiên cứu của Amoah (2018), Blois & Ryan (2013), Engel & McCoy (2011), Kasim và cộng sự (2020), Deb & Sengupta (2020).. Về mặt lý thuyết tài chính hành vi, việc chỉ ra mối quan hệ thuận chiều của mối quan hệ và sự tin tưởng với khả năng bị lừa đảo đầu tư theo mô hình Ponzi là hoàn toàn phù hợp với kết quả nghiên cứu của Bakar & Yi (2016) vì hai tác giả này cho rằng hiệu ứng đám đông xảy ra khi các nhà đầu tư tìm đến hành vi của các nhà đầu tư khác vì họ tin rằng những người khác sở hữu nhiều thông tin hơn.

Trên thực tế, quyết định đầu tư của các cá nhân Việt Nam hầu như đều bị chi phối hoặc tác động bởi các mối quan hệ xã hội. Mọi người có xu hướng đầu tư theo những lời tư vấn,

giới thiệu từ các mối quan hệ gần gũi như: người thân trong gia đình, họ hàng, bạn bè, đồng nghiệp... và cả những người có địa vị cao, tầm ảnh hưởng tốt, như: chính trị gia, nhà lãnh đạo tôn giáo, người nổi tiếng, người truyền cảm hứng... Người Việt Nam thường cho rằng những mối quan hệ đó đều là những mối quan hệ tích cực, uy tín và chính thống.

*Thứ hai*, thật bất ngờ khi kiến thức về tiền mã hóa có ảnh hưởng tích cực (+) đến khả năng bị lừa đảo đầu tư theo mô hình Ponzi của các cá nhân Việt Nam với hệ số hồi quy chuẩn hóa  $\beta = 0,147$  và  $\text{sig.} = 0,005$ . Kết quả nghiên cứu này cũng trái ngược lại với các kết luận của các nghiên cứu trước đó về tác động của hiểu biết tài chính nói chung và các sản phẩm tài chính nói riêng đến việc trở thành nạn nhân của các vụ lừa đảo đầu tư như nghiên cứu của Chariri và cộng sự (2018), Kim và Hanna (2021). Trong nỗ lực tìm kiếm lý do giải thích kết quả này, nghiên cứu nhận thấy một số nguyên nhân chủ yếu sau: (i) Thực trạng kiến thức về tiền kỹ thuật thông qua mẫu khảo sát. Những cá nhân tham gia khảo sát hầu hết thuộc thế hệ Z (15-20 tuổi) và thế hệ Millennials (21-34 tuổi) cho thấy kinh nghiệm đầu tư trên thị trường tiền mã hóa là chưa cao. Dù có kiến thức nhưng khi đi vào đầu tư, các cá nhân này rất có khả năng bị gài bẫy bởi các thủ đoạn tinh vi của tội phạm công nghệ cao; (ii) Thực tế những quy định pháp lý về tiền mã hóa ở Việt Nam. Khung pháp lý về đầu tư tiền mã hóa chưa chặt chẽ để can thiệp và bảo vệ quyền lợi cho các nhà đầu tư. Các cá nhân Việt Nam mãi chỉ là các nhà đầu tư có kiến thức và thiếu đi kinh nghiệm thực hành, lượng nạn nhân bị lừa đảo tiền mã hóa sẽ tiếp tục tăng cao; (iii) Hiểu biết về tài chính không phải là nhân tố duy nhất tác động đến quyết định đầu tư của các cá nhân trên thị trường tài chính. Trong quá trình đưa ra quyết định đầu tư, nhà đầu tư chịu ảnh hưởng bởi rất nhiều nhân tố như chất lượng thông tin trên báo cáo tài chính, hình ảnh công ty, ý kiến của các nhà tư vấn, tâm lý đám đông và sự tự tin thái quá (Ghosh & Ray, 1997). Bên cạnh đó, hầu hết các nhà đầu tư, đặc biệt là có kiến thức đầu tư thường quá tự tin và đánh giá cao bản thân của mình hơn những gì người khác đánh giá và thường phóng đại sự hiểu biết của mình (Fischhoff và cộng sự, 1977; Odean, 1998).

## **6. Kết luận và hàm ý chính sách**

Nhóm nghiên cứu nhận thấy đây là nghiên cứu định lượng đầu tiên về chủ đề khả năng bị lừa đảo đầu tư theo mô hình Ponzi trên các sàn giao dịch tiền mã hóa tại Việt Nam. Nghiên cứu có những đóng góp nhất định về mặt lý thuyết và thực tiễn. Về mặt lý thuyết, nghiên cứu đã hệ thống hóa những vấn đề lý luận về lừa đảo đầu tư, mô hình lừa đảo đầu tư Ponzi và khả năng bị lừa đảo đầu tư của các cá nhân Việt Nam trong lĩnh vực đầu tư nói chung và trong các giao dịch tiền mã hóa nói riêng. Về mặt thực tiễn, nghiên cứu chỉ ra nhân tố ảnh hưởng lớn nhất tới khả năng bị lừa đảo đầu tư theo mô hình Ponzi của các cá nhân Việt Nam trên các sàn giao dịch tiền mã hóa chính là yếu tố mối quan hệ và sự tin tưởng. Từ đó, nghiên cứu đề xuất 02 nhóm giải pháp như sau:

*Về phía cơ quan quản lý nhà nước*, thứ nhất là hoàn thiện chính sách và khuôn khổ pháp luật về tiền mã hóa. Thứ hai, Việt Nam cần phải thực hiện song hành với việc hoàn thiện khung pháp lý về tiền mã hóa đó là việc nhà nước cần thiết lập một chế tài xử phạt thật nặng đối với các đối tượng cầm đầu lừa đảo, lợi dụng không gian mạng để thực hiện hành vi trái pháp luật. Cuối cùng, để giúp người dân có cơ sở tránh xa các chiêu trò lừa đảo, các

cơ quan quản lý có thẩm quyền cần phổ cập, hỗ trợ cho người dân đầy đủ các kiến thức về các sản phẩm tài chính mới hình thành, những cảnh báo ban đầu về mô hình Ponzi - vốn là một mô hình còn xa lạ, chưa phổ biến tại xã hội Việt Nam.

Về phía các cá nhân Việt Nam, trước tiên cần dành khoảng thời gian nhất định học tập, nghiên cứu, bổ sung đầy đủ các kiến thức cần thiết trước khi rót vốn đầu tư vào bất kỳ loại tiền mã hóa nào. Ngoài ra, thì các nhà đầu tư cá nhân cần xây dựng một kế hoạch dài, tránh các làn sóng ngắn hạn, có nguyên tắc đầu tư riêng, đồng thời các quyết định đầu tư cần được phân tích kỹ càng dựa trên các cơ sở thông tin có sẵn. Hơn nữa, các cá nhân Việt Nam cần có tinh thần cảnh giác cao với các kế hoạch đầu tư được mời chào với lợi nhuận siêu khủng, nhận tiền theo hàng tháng mà không cần làm bất cứ điều gì.

Tuy nhiên, nghiên cứu cũng không tránh khỏi những hạn chế nhất định. Thứ nhất là những hạn chế trong việc xây dựng khung nghiên cứu và thiết kế bảng hỏi. Do đây là đề tài mới tại Việt Nam, việc xây dựng khung nghiên cứu hoàn toàn dựa trên lý thuyết nền về tài chính hành vi và tội phạm học và mất khá nhiều thời gian. Thứ hai là những hạn chế liên quan tới mẫu khảo sát, thể hiện ở chất lượng và số lượng câu trả lời cũng như sự đa dạng của đối tượng được khảo sát.

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# ĐÁNH GIÁ MỨC ĐỘ HÀI LÒNG CỦA SINH VIÊN TỚI CHẤT LƯỢNG ĐÀO TẠO TẠI KHOA KẾ TOÁN - KIỂM TOÁN, TRƯỜNG ĐẠI HỌC KINH TẾ - ĐẠI HỌC QUỐC GIA HÀ NỘI

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## Tóm tắt

Chất lượng đào tạo đại học là một vấn đề luôn được các phụ huynh, học sinh và các cơ sở giáo dục đại học quan tâm. Nhằm đánh giá mức độ hài lòng của sinh viên về chất lượng đào tạo tại Khoa Kế toán - Kiểm toán, Trường Đại học Kinh tế - Đại học Quốc gia Hà Nội, nhóm tác giả đã thực hiện nghiên cứu này. 253 sinh viên đã và đang học tập tại Khoa Kế toán - Kiểm toán đã tham gia, cung cấp dữ liệu phục vụ bài nghiên cứu. Số liệu sau đó được phân tích bằng phần mềm SPSS. Kết quả nghiên cứu chỉ ra rằng có 4 nhóm nhân tố tác động đến sự hài lòng của sinh viên về chất lượng đào tạo của khoa, đó là: chương trình đào tạo; đội ngũ giảng viên; khả năng đáp ứng, phục vụ của cán bộ, nhân viên; học phí. Từ kết quả nghiên cứu, nhóm tác giả đề xuất một số kiến nghị giúp nâng cao chất lượng đào tạo và sự hài lòng của sinh viên.

**Từ khóa:** Chất lượng đào tạo, sự hài lòng của sinh viên, Kế toán - Kiểm toán, trường Đại học Kinh tế - Đại học Quốc gia Hà Nội

## Abstract

*Quality of service in academic has been a hot topic that is always of interest to parents, students and universities. This paper is conducted to assess the satisfaction level of students in the field of Accounting - Auditing at University of Economics and Business - Vietnam National University, Hanoi. Data collected from 253 students who involved in and completed the courses of Accounting - Auditing, with the survey sampling method. Statistical Package for the Social Sciences (SPSS) method is used for advanced analytics, multivariate analysis these amount of data. Research results have only 4 factors affecting student satisfaction, including: training programs, lecturers, ability to meet staff services and tuition fees. The results of this paper lay foundation for team to propose some solutions for improving the quality of training in this university.*

**Keywords:** *Quality of service in academic, satisfaction level, Accounting - Auditing, University of Economics and Business - Vietnam National University, Hanoi*

## 1. Đặt vấn đề

Giáo dục đại học là bậc học quan trọng trong hệ thống giáo dục quốc dân, được coi là một trong những nhiệm vụ trọng tâm trong việc đào tạo các thế hệ trẻ trở thành những chủ nhân cho xã hội và đất nước trong tương lai. Quyền tự chủ trong các trường đại học



ngày nay là rất lớn, sự cạnh tranh trong giáo dục cũng ngày càng căng thẳng, uy tín của các trường đại học sẽ đảm bảo cho việc xếp hạng của các trường. Điều này đồng nghĩa với việc nâng cao chất lượng đào tạo là mục tiêu sống còn, tăng tỷ lệ việc làm và cơ hội thăng tiến. Sự gia tăng hiệu quả và đầu tư cho khoa học công nghệ, tăng cường hợp tác quốc tế, phát triển hội nhập là mục tiêu mà hầu hết các trường đại học đang hướng tới hiện nay. Vì vậy, việc đo lường sự hài lòng của sinh viên đối với chất lượng dịch vụ đào tạo của nhà trường là vô cùng quan trọng và luôn là vấn đề được các cơ sở giáo dục đại học ngày càng quan tâm và nó cũng chính là điều kiện để đảm bảo cho sự phát triển bền vững.

Khoa Kế toán - Kiểm toán thuộc Trường Đại học Kinh tế - ĐHQGHN, một trong những mục tiêu của khoa là trở thành trung tâm đào tạo và nghiên cứu khoa học chất lượng cao trong lĩnh vực kế toán - kiểm toán, tạo sự khác biệt với các cơ sở đào tạo khác theo hướng đào tạo theo chuẩn quốc tế, gắn liền với thực tiễn. Phần đầu đến năm 2030, được xếp hạng ở khu vực Đông Nam Á về đào tạo và nghiên cứu kế toán - kiểm toán, cấp bằng về kế toán - kiểm toán được các tổ chức, hiệp hội nghề nghiệp uy tín trên thế giới thừa nhận. Vì thế, dịch vụ đào tạo và chất lượng giảng dạy luôn là yếu tố được khoa quan tâm hàng đầu. Kể từ khi đề án mở mã ngành kế toán được phê duyệt và triển khai từ năm 2010 đến nay, khung chương trình đào tạo cử nhân ngành kế toán liên tục được đổi mới, hệ thống đề cương, bài giảng, giáo trình và học liệu tham khảo liên tục được cập nhật theo hướng tăng cường thực hành và tiếp cận chuẩn quốc tế. Chất lượng sinh viên tuyển sinh đầu vào chuyên ngành kế toán luôn nằm trong top sinh viên có điểm cao nhất trường, nhiều sinh viên đã được nhận học bổng vì thành tích học tập xuất sắc và tích cực tham gia các hoạt động ngoại khóa của trường. Sinh viên kế toán các khóa tốt nghiệp hàng năm đã được tuyển chọn vào thực tập tại các công ty kiểm toán lớn, được đánh giá cao về thái độ, ý thức và chất lượng thực tập, một số sinh viên xuất sắc sau đó đã được tuyển dụng vào các Big4 (Deloitte, E&Y, KPMG).

Vì vậy bài nghiên cứu muốn cung cấp những thông tin chân thực về sự hài lòng của sinh viên đối với chất lượng đào tạo của Khoa Kế toán - Kiểm toán. Đồng thời kết quả nghiên cứu cũng hy vọng giúp cho những ai quan tâm tới chất lượng đào tạo Kế toán nói chung cũng như của Khoa Kế toán - Kiểm toán, Trường Đại học Kinh tế - ĐHQGHN nói riêng có thể tham khảo hoặc có những quyết định phù hợp với mục tiêu. Bài viết được nhóm tác giả thực hiện với mong muốn xác định các yếu tố ảnh hưởng, đo lường mức độ ảnh hưởng của các nhân tố đến sự hài lòng của sinh viên về chất lượng đào tạo Khoa Kế toán - Kiểm toán, Trường Đại học Kinh tế - ĐHQGHN. Từ đó, đề xuất những kiến nghị nhằm nâng cao chất lượng đào tạo, đáp ứng tốt hơn nhu cầu và mong đợi của sinh viên, từng bước khẳng định thương hiệu của khoa, nhà trường.

## 2. Cơ sở lý luận

**Dịch vụ:** Là công việc phục vụ trực tiếp cho những nhu cầu nhất định của số đông, có tổ chức và được trả công (Từ điển tiếng Việt). Theo Parasuraman và cộng sự (1985) “Dịch vụ là tập hợp các hoạt động do người bán cung cấp cho người mua. Nó là yếu tố vô hình tạo ra giá trị sử dụng, nhằm thỏa mãn nhu cầu và mong đợi của khách hàng”. Còn theo Philip

Kotler (1967): “Dịch vụ là bất kỳ hoạt động hoặc lợi ích mà một chủ thể có thể cung cấp cho chủ thể khác. Đối tượng cung cấp phải là vô hình và không dẫn đến bất kỳ quyền sở hữu gì. Còn việc sản xuất dịch vụ có thể gắn liền hoặc không với một sản phẩm vật chất”. Như vậy, bản chất của dịch vụ là quá trình vận hành các hoạt động, hành vi dựa trên các yếu tố phi vật chất để giải quyết mối quan hệ giữa các doanh nghiệp và khách hàng. Nó được thực hiện theo một trình tự cụ thể bao gồm nhiều giai đoạn, nhiều bước khác nhau. Trong mỗi giai đoạn, đôi khi sẽ có thêm nhiều dịch vụ phụ, dịch vụ cộng thêm gắn liền với hiệu suất bởi mỗi dịch vụ đều nhằm mang lại giá trị nào đó cho người tiêu dùng.

**Chất lượng dịch vụ:** Theo Parasuraman và cộng sự (1985), chất lượng dịch vụ là khoảng cách giữa kỳ vọng của khách hàng với cảm nhận của họ sau khi sử dụng dịch vụ. Mittal và Kamakura (2001) lại định nghĩa: “Chất lượng dịch vụ là thước đo sự hài lòng của khách hàng trong quá trình nhận thức tiêu dùng dịch vụ, là dịch vụ tổng thể của doanh nghiệp mang lại chuỗi lợi ích và đáp ứng đầy đủ nhất giá trị mong đợi của khách hàng trong các hoạt động sản xuất, cung ứng và phân phối dịch vụ”. Chất lượng kỹ thuật và chất lượng chức năng là hai khía cạnh dùng để đánh giá chất lượng dịch vụ (Gronroos, 1984).

**Sự hài lòng của khách hàng:** Hiện tại, có rất nhiều định nghĩa khác nhau về sự hài lòng của khách hàng và còn tồn tại nhiều quan điểm không đồng thuận về khái niệm này. Theo Hansemark và Albinsson (2004), sự hài lòng của khách hàng là thái độ chung của khách hàng đối với nhà cung cấp dịch vụ, hoặc cảm xúc thất vọng với sự khác biệt giữa những gì họ mong đợi trước đó và những gì họ nhận được liên quan đến sự đáp ứng một số nhu cầu, mục đích hay mong muốn. Hunt (1997) & Zeitham (2000) cho rằng: sự hài lòng là tổng thể các nhận định, đánh giá và thái độ đối với một dịch vụ của khách hàng. Sự hài lòng của khách hàng = hiệu quả thực tế - kỳ vọng (Oliver, 1981). Còn theo Kotler và Keller (2006), sự hài lòng là trạng thái cảm xúc của một người, là kết quả của việc so sánh cảm nhận về sản phẩm so với mong đợi của người đó. Trên cơ sở đó, sự hài lòng được phân thành 3 cấp độ: Nếu cảm nhận của khách hàng về sản phẩm nhỏ hơn kỳ vọng thì khách hàng không thỏa mãn; Nếu cảm nhận của khách hàng bằng với kỳ vọng của họ về sản phẩm thì khách hàng thỏa mãn; và nếu cảm nhận của khách hàng lớn hơn kỳ vọng thì khách hàng vô cùng thỏa mãn về sản phẩm.

#### ***Mối quan hệ giữa chất lượng dịch vụ và sự hài lòng của khách hàng:***

Theo Parasuraman và cộng sự (1988), tuy là hai khái niệm khác nhau nhưng chất lượng dịch vụ và sự hài lòng lại có mối liên hệ chặt chẽ với nhau. Sự hài lòng của khách hàng bắt nguồn từ sự cảm nhận chất lượng dịch vụ (Cronin & Taylor, 1992). Chất lượng dịch vụ tác động tới sự hài lòng của khách hàng (Oliver, 1993). Các nghiên cứu trước đây cũng chỉ ra rằng chất lượng dịch vụ là nguyên nhân dẫn tới sự thỏa mãn (Cronin & Taylor, 1992; Spreng, 1996); là nhân tố chính ảnh hưởng đến sự thỏa mãn (Ruyter, Bloemer, 1997). Như vậy, chất lượng dịch vụ và sự hài lòng có mối quan hệ mật thiết, tác động lẫn nhau. Chất lượng dịch vụ là cái nhà cung cấp mang tới cho khách hàng; sau khi trải nghiệm dịch vụ, sự thỏa mãn đối với chất lượng dịch vụ được cung cấp chính là sự hài lòng của khách hàng.

Hay nói cách khác, chất lượng dịch vụ được cung cấp là nhân tố chính tác động đến sự hài lòng của khách hàng. Do đó, chất lượng dịch vụ cung cấp chỉ được nâng cao khi sự hài lòng của khách hàng được nâng cao.

**Chất lượng dịch vụ đào tạo:** Theo Vargo & Lusch (2004), khách hàng không phải đóng vai trò thụ động như quan niệm trước đây mà có vai trò tích cực trong việc đồng sáng tạo dịch vụ với doanh nghiệp. Khái niệm này đặc biệt phù hợp với các ngành dịch vụ như giáo dục, y tế, tư vấn... nơi mà sự tham gia của khách hàng là yếu tố bắt buộc để đảm bảo giá trị đầu ra của dịch vụ. Họ là những người tham gia tích cực vào quá trình tương tác, những người thụ hưởng và những người quyết định giá trị của dịch vụ. Nghiên cứu nhấn mạnh cho thấy sinh viên là khách hàng chính của giáo dục đại học các tổ chức thuộc mọi loại hình và của quá trình dạy và học. Chất lượng giáo dục đại học là một khái niệm được nhiều người biết đến, nhưng nó vẫn được định nghĩa theo những cách khác nhau tùy từng thời điểm và cả giữa các bên quan tâm: sinh viên, giáo viên, người sử dụng lao động, cơ quan tài trợ và cơ quan kiểm định. Trong nhiều bối cảnh, nó còn phụ thuộc vào tình trạng phát triển kinh tế - xã hội của mỗi quốc gia. Theo Costa & Vasiliki (2007), đào tạo được coi là một ngành dịch vụ bởi lẽ đào tạo có tất cả các thuộc tính của một dịch vụ, đó là vô hình, không thể lưu trữ, quá trình cung cấp dịch vụ (kiến thức, khả năng ứng dụng) của cơ sở đào tạo (giáo viên, nhân viên) và việc sử dụng dịch vụ của học viên. diễn ra đồng thời và bản thân dịch vụ không đồng nhất theo các điều kiện cụ thể của quá trình cung cấp dịch vụ. Tương tự như dịch vụ y tế có hoạt động khám bệnh, chữa bệnh, hoặc dịch vụ chuyển phát bưu kiện có dịch vụ vận chuyển thư từ và hàng hóa. Dịch vụ đào tạo là hoạt động giáo dục và đào tạo nhằm cung cấp cho sinh viên với những kiến thức và kỹ năng cần thiết.

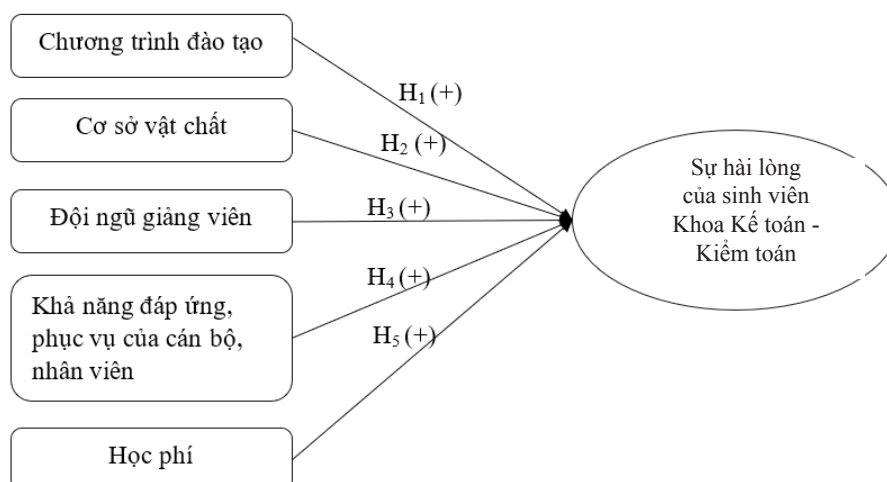
Cách tiếp cận của khách hàng đối với khái niệm chất lượng hiện nay đã thay đổi quan điểm của trường đại học về chất lượng so với cách tiếp cận truyền thống trước đây. Chất lượng sản phẩm giáo dục của trường đại học cần được khách hàng đánh giá, kết quả đánh giá là cơ sở để nhà trường xây dựng kế hoạch cải tiến nhằm không ngừng nâng cao chất lượng giáo dục. Vì vậy, để đáp ứng được nguyện vọng của học sinh, nhà trường cần có cách tiếp cận phù hợp trong quản lý chất lượng giáo dục.

### **3. Mô hình nghiên cứu và giả thuyết nghiên cứu**

#### **3.1. Mô hình nghiên cứu**

Trên cơ sở mô hình lý thuyết SERPERF (Cronin & Taylor, 1992), nhóm tác giả đã xây dựng mô hình nghiên cứu với một số điều chỉnh cho phù hợp với nội dung và hoàn cảnh của bài nghiên cứu. Theo đó, nhóm nghiên cứu sự hài lòng của sinh viên Khoa Kế toán - Kiểm toán, Trường Đại học Kinh tế - ĐHQGHN qua ảnh hưởng của 5 nhóm nhân tố: chương trình đào tạo; cơ sở vật chất; đội ngũ giảng viên; khả năng đáp ứng của cán bộ, nhân viên và học phí.

**Hình 1. Mô hình nghiên cứu đề xuất**



### **3.2. Giả thuyết nghiên cứu**

Dựa trên mô hình nghiên cứu đề xuất, nhóm nghiên cứu xây dựng các giả thuyết nghiên cứu như sau:

$H_1$ : *Chương trình đào tạo có ảnh hưởng tích cực (+) tới sự hài lòng của sinh viên về chất lượng đào tạo Khoa Kế toán - Kiểm toán.*

$H_2$ : *Cơ sở vật chất có ảnh hưởng tích cực (+) tới sự hài lòng của sinh viên về chất lượng đào tạo Khoa Kế toán - Kiểm toán.*

$H_3$ : *Đội ngũ giảng viên có ảnh hưởng tích cực (+) tới sự hài lòng của sinh viên Khoa Kế toán - Kiểm toán.*

$H_4$ : *Khả năng đáp ứng, phục vụ của cán bộ, nhân viên có ảnh hưởng tích cực (+) tới sự hài lòng của sinh viên về chất lượng đào tạo Khoa Kế toán - Kiểm toán.*

$H_5$ : *Học phí có ảnh hưởng tích cực (+) tới sự hài lòng của sinh viên về chất lượng đào tạo Khoa Kế toán - Kiểm toán.*

### **4. Phương pháp nghiên cứu**

Nhóm tác giả sử dụng đồng thời cả 2 phương pháp nghiên cứu định tính và định lượng. Nghiên cứu định tính được thực hiện thông qua nghiên cứu tài liệu, lý thuyết về vấn đề nghiên cứu; kết hợp thảo luận nhóm và lấy ý kiến chuyên gia để đưa ra mô hình nghiên cứu đề xuất, các giả thuyết và thang đo bảng hỏi hoàn thiện.

Một bảng câu hỏi gồm 2 phần (Phần 1: Thông tin cá nhân; phần 2: Các câu hỏi liên quan đến vấn đề nghiên cứu) được gửi tới các bạn sinh viên đã và đang học tập tại Khoa Kế toán - Kiểm toán thông qua biểu mẫu online. Các câu hỏi được thiết kế dựa trên thang đo Likert 5 điểm. Theo đó, người được khảo sát sẽ bày tỏ quan điểm của cá nhân đối với các nhận định được nêu ra theo mức độ: 1 - “Rất không đồng ý”, 2 - “Không đồng ý”, 3 - “Trung lập”, 4 - “Đồng ý”, 5 - “Rất đồng ý”.

**Bảng 1. Thang đo các biến trong bài nghiên cứu**

<b>Tên biến</b>	<b>Biến quan sát</b>	<b>Ký hiệu</b>
Chương trình đào tạo (CTĐT)	Chương trình đào tạo có tiêu chuẩn đầu ra rõ ràng	CTĐT1
	Chương trình đào tạo đáp ứng các yêu cầu phát triển sau này của sinh viên	CTĐT2
	Phân bổ thời lượng giữa lý thuyết và thực hành của các học phần hợp lý	CTĐT3
	Việc áp dụng Case Study cho các học phần phù hợp với kiến thức được học	CTĐT4
	Các môn học được sắp xếp hợp lý và thông báo đầy đủ cho sinh viên	CTĐT5
	Các buổi sinh hoạt ngoại khóa, hội thảo, lắng nghe ý kiến chuyên gia được thực hiện hiệu quả và thường xuyên	CTĐT6
	Nội dung và hình thức kiểm tra, đánh giá phù hợp với kiến thức của học phần	CTĐT7
	Sinh viên được thông báo đầy đủ về kế hoạch giảng dạy và tiêu chí đánh giá	CTĐT8
Cơ sở vật chất (CSVC)	Giáo trình/tài liệu học tập của mỗi môn học được thông báo đầy đủ, đa dạng	CSVC1
	Phòng học đáp ứng được nhu cầu học tập trên lớp của sinh viên	CSVC2
	Thư viện có nguồn tài liệu tham khảo phong phú, đa dạng	CSVC3
	Thư viện đảm bảo không gian, chỗ ngồi đáp ứng được nhu cầu học tập, nghiên cứu của sinh viên	CSVC4
	Lớp học có số lượng sinh viên hợp lý	CSVC5
	Các ứng dụng trực tuyến hữu ích, phục vụ hiệu quả công tác giảng dạy và học tập	CSVC6
Đội ngũ giảng viên (GV)	Giảng viên có trình độ cao, sâu rộng về chuyên môn mình giảng dạy	GV1
	Giảng viên có phương pháp truyền đạt tốt, dễ hiểu	GV2
	Giảng viên đã sử dụng và kết hợp các phương pháp giảng dạy một cách hiệu quả	GV3
	Giảng viên đảm bảo giờ lên lớp và kế hoạch giảng dạy	GV4
	Giảng viên có thái độ gần gũi và thân thiện với sinh viên	GV5
	Giảng viên sẵn sàng chia sẻ kiến thức và kinh nghiệm với sinh viên	GV6
	Giảng viên đánh giá kết quả học tập chính xác và công bằng	GV7
	Giảng viên lồng ghép ví dụ, kiến thức thực tiễn vào bài giảng một cách hiệu quả	GV8
Khả năng đáp ứng, phục vụ của cán bộ, nhân viên (DUPV)	Cán bộ quản lý (Ban giám hiệu, Ban chủ nhiệm khoa) giải quyết thỏa đáng các yêu cầu của sinh viên	DUPV1
	Nhân viên hành chính có thái độ phục vụ tốt và tôn trọng sinh viên	DUPV2
	Thông tin trên website của trường đa dạng, phong phú và cập nhật thường xuyên	DUPV3
	Hoạt động tư vấn học tập, nghề nghiệp đáp ứng tốt nhu cầu tìm hiểu, lựa chọn và học tập của sinh viên	DUPV4
	Sự hỗ trợ và giúp đỡ nhiệt tình của cố vấn học tập, chuyên viên đào tạo khi cần	DUPV5

Tên biến	Biến quan sát	Ký hiệu
Học phí (HP)	Mức học phí hiện nay phù hợp với chất lượng đào tạo nhận được	HP1
	Mức học phí thỏa đáng với chất lượng cơ sở vật chất	HP2
Đánh giá chung (DGC)	Chương trình đào tạo đáp ứng những mong đợi của sinh viên	DGC1
	Kiến thức có được từ chương trình học giúp tự tin về khả năng tìm việc làm sau khi tốt nghiệp	DGC2
	Học phí tương xứng với chất lượng đào tạo nhận được	DGC3
	Tôi hài lòng về chương trình đào tạo cũng như môi trường học tập hiện tại ở Khoa Kế toán - Kiểm toán	DGC4

*Nguồn: Tác giả tổng hợp dựa trên tham khảo các nghiên cứu trước đó*

Sau một thời gian tiến hành thu thập dữ liệu, nhóm tác giả lấy được 253 phiếu trả lời khảo sát. Sau khi loại bỏ những phiếu không hợp lệ, cuối cùng nhận được 223 câu trả lời phù hợp (cỡ mẫu đạt yêu cầu). Kết quả mô tả thống kê mẫu điều tra như sau:

**Bảng 2: Mô tả mẫu điều tra**

Đặc điểm		Tần số	Tỷ lệ (%)
<i>Giới tính</i>	Nữ	204	91.5%
	Nam	19	8.5%
	<b>Tổng</b>	<b>223</b>	<b>100%</b>
<i>Sinh viên khóa</i>	K60	1	0.4%
	K61	2	0.9%
	K62	5	2.2%
	K63	9	4.0%
	K64	35	15.7%
	K65	73	32.7%
	K66	98	43.9%
	<b>Tổng</b>	<b>223</b>	<b>100%</b>

*Nguồn: Kết quả phân tích của tác giả*

Dữ liệu sau đó được đưa vào phân tích định lượng bằng phần mềm SPSS 22.0. Các thao tác phân tích được thực hiện bao gồm:

- Kiểm tra độ tin cậy của thang đo thông qua hệ số Cronbach's Alpha nhằm phát hiện và loại bỏ những biến có hệ số Alpha nhỏ, không phù hợp.

- Phân tích nhân tố khám phá EFA thông qua kiểm định Barlett, hệ số KMO, hệ số tải nhân tố (Factors loading) và trị số Eigenvalue nhằm kiểm tra sự tương quan và rút gọn tập biến. Sau đó, các biến còn lại sẽ được đưa vào mô hình phân tích hồi quy tuyến tính bội nhằm tìm ra mối tương quan giữa các biến độc lập với sự hài lòng chung.

## 5. Kết quả nghiên cứu và hàm ý quản trị

### 5.1. Kết quả nghiên cứu

Kết quả mẫu điều tra cho thấy hơn 90% số người tham gia khảo sát là nữ. Điều này là phù hợp với thực trạng tỷ lệ giới tính của sinh viên tại Khoa Kế toán - Kiểm toán, trường Đại học Kinh tế - ĐHQGHN.

Kết quả phân tích độ tin cậy cho thấy tất cả các thang đo đều có hệ số Cronbach's Alpha ở mức tốt: Nhân tố Đội ngũ giảng viên có hệ số Cronbach's Alpha lớn nhất, đạt 0.935; hệ số Alpha của biến Khả năng đáp ứng, phục vụ của cán bộ, nhân viên là 0.902; biến Chương trình đào tạo có hệ số tin cậy Cronbach's Alpha của là 0.894; biến Cơ sở vật chất là 0.860; của biến Học phí là 0.803; ngoài ra, hệ số Alpha của biến Đánh giá chung là 0.904. Như vậy, các thang đo đều đạt yêu cầu và được đưa vào phân tích nhân tố khám phá EFA.

Kết quả phân tích nhân tố khám phá cho thấy có 4 nhân tố (CSVC6, CSVC5, CTDT1, CTDT6) không đạt yêu cầu do có hệ số tải nhân tố (Factor loadings)  $< 0.5$  (CSVC6, CSVC5, CTDT1) và khoảng cách hệ số tải nhân tố của biến quan sát CTDT6 giữa các nhân tố không lớn hơn 0.3. 25 biến còn lại được nhóm thành 3 nhóm tại trị số Eigenvalue = 1.072; tổng phương sai trích đạt 62.933% cho thấy mô hình EFA là phù hợp; đồng thời mang ý nghĩa 62.933% sự hài lòng của sinh viên về chất lượng đào tạo Khoa Kế toán - Kiểm toán, Trường Đại học Kinh tế - ĐHQGHN được giải thích bởi các biến quan sát. Hệ số KMO = 0.950 đạt yêu cầu.

Hệ số Sig. của mô hình hồi quy tuyến tính bội  $< 0.05$  cho thấy mô hình xây dựng là phù hợp. Giá trị  $R^2$  hiệu chỉnh của mô hình đạt 0.726, nghĩa là 72.6% sự thay đổi sự hài lòng của sinh viên về chất lượng đào tạo được giải thích bởi các biến độc lập của mô hình.

Kết quả chỉ ra rằng có 4 nhân tố có tác động tới sự hài lòng của sinh viên về chất lượng đào tạo của khoa, theo đó: Học phí là nhân tố có tác động mạnh mẽ nhất với hệ số chuẩn hóa  $\beta = 0.319$ ; khả năng đáp ứng, phục vụ của cán bộ, nhân viên với  $\beta = 0.271$ ; sau đó là đội ngũ giảng viên ( $\beta = 0.156$ ) và cuối cùng, nhân tố chương trình đào tạo có ít ảnh hưởng nhất tới sự hài lòng của sinh viên (hệ số  $\beta = 0.154$ ).

Biến CSVC được chỉ ra là không có ảnh hưởng tới sự hài lòng chung của sinh viên do có hệ số sig.  $> 0.05$ . Điều này có thể hiểu rằng thực trạng cơ sở vật chất của khoa Kế toán - Kiểm toán nói riêng và Trường Đại học Kinh tế - ĐHQGHN nói chung là tốt, tiện nghi, đầy đủ nên dù sinh viên có hài lòng hay chưa hài lòng về chất lượng đào tạo thì vẫn đánh giá cao về cơ sở vật chất của nhà trường. Kết quả này là phù hợp với thực tế cơ sở vật chất tại trường Trường Đại học Kinh tế - ĐHQGHN.

**Bảng 3. Kết quả phân tích hồi quy tuyến tính bội**Coefficients<sup>a</sup>

Model	B	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		Std. Error	Beta				VIF	
1	(Constant)	-.204	.179		-1.141	.255		
	CTDT	.177	.073	.154	2.428	.016	.307	3.262
	CSVC	.103	.058	.098	1.761	.080	.399	2.507
	GV	.179	.073	.156	2.462	.015	.307	3.258
	DUPV	.284	.063	.271	4.472	.000	.337	2.966
	HP	.287	.044	.319	6.561	.000	.522	1.914

Nguồn: Kết quả phân tích của tác giả

Từ kết quả nghiên cứu trên, kết luận rằng ngoại trừ giả thuyết H<sub>2</sub>, các giả thuyết còn lại đều được chấp nhận.

**Bảng 4. Kết quả kiểm định các giả thuyết**

	Giả thuyết	Hệ số hồi quy chuẩn hóa ( $\beta$ )	Sig.	Kết quả kiểm định
H <sub>1</sub>	Chương trình đào tạo có ảnh hưởng tích cực (+) tới sự hài lòng của sinh viên về chất lượng đào tạo tại Khoa Kế toán - Kiểm toán	0.154	0.016	Chấp nhận
H <sub>2</sub>	Cơ sở vật chất có ảnh hưởng tích cực (+) tới sự hài lòng của sinh viên về chất lượng đào tạo Khoa Kế toán - Kiểm toán	0.098	0.080	Không chấp nhận
H <sub>3</sub>	Đội ngũ giảng viên có ảnh hưởng tích cực (+) tới sự hài lòng của sinh viên Khoa Kế toán - Kiểm toán	0.156	0.015	Chấp nhận
H <sub>4</sub>	Khả năng đáp ứng, phục vụ của cán bộ, nhân viên có ảnh hưởng tích cực (+) tới sự hài lòng của sinh viên về chất lượng đào tạo Khoa Kế toán - Kiểm toán	0.271	0.000	Chấp nhận
H <sub>5</sub>	Học phí có ảnh hưởng tích cực (+) tới sự hài lòng của sinh viên về chất lượng đào tạo tại Khoa Kế toán - Kiểm toán.	0.319	0.000	Chấp nhận

Nguồn: Kết quả phân tích của tác giả

**5.2. Hàm ý quản trị**

Thứ nhất, đối với học phí - nhân tố có tác động mạnh mẽ nhất tới sự hài lòng của sinh viên trong khoa, nhà trường nên mở rộng các chính sách hỗ trợ chi phí học tập cho sinh viên: Hỗ trợ tiền mạng cho sinh viên trong thời gian học trực tuyến tại nhà, hỗ trợ giảm



các chi phí cơ sở vật chất không cần thiết trong thời gian sinh viên không thể tới trường học, hỗ trợ chi phí các loại bảo hiểm y tế, bảo hiểm thân thể... Đặc biệt, trong bối cảnh dịch COVID-19 vẫn diễn biến phức tạp khiến cho nhiều lao động không có việc làm trong thời gian dài, thu nhập của các gia đình bị ảnh hưởng nặng nề; việc chi trả học phí của sinh viên Trường Đại học Kinh tế - ĐHQGHN nói chung và sinh viên Khoa Kế toán - Kiểm toán nói riêng là hết sức khó khăn. Khoa và nhà trường nên xem xét lùi thời gian nộp học phí của các kỳ và xem xét việc cho sinh viên học tập trung tại một địa điểm.

*Thứ hai*, đối với khả năng đáp ứng, phục vụ của cán bộ, nhân viên. Khoa và nhà trường cần quan tâm hơn nữa tới cảm nhận của sinh viên. Để hiểu rõ được điều đó, khoa và nhà trường cần định kỳ lấy ý kiến của sinh viên về công tác hỗ trợ. Từ đó, không ngừng đào tạo, nâng cao trình độ để có thể đáp ứng và xử lý kịp thời các khó khăn, thắc mắc của sinh viên.

*Thứ ba*, đối với đội ngũ giảng viên. Dựa trên những đánh giá của sinh viên cuối mỗi học kỳ về giảng viên và học phần giảng dạy, khoa và trường cần xem xét, cân nhắc việc thay đổi cho phù hợp, đảm bảo phương pháp giảng dạy, truyền đạt kiến thức cho sinh viên. Nhà trường cũng nên giảm bớt và chuẩn hóa khối lượng giảng dạy theo quy định chung của Bộ; tăng thời gian nghiên cứu; tập trung nâng cao trình độ chuyên môn và phương pháp giảng dạy. Chế độ khen thưởng và thăng tiến cũng cần thay đổi để lương và các khoản thưởng được tính dựa trên kết quả giảng dạy, công trình nghiên cứu và hoạt động khác ngoài giảng dạy.

Cuối cùng, đối với chương trình đào tạo. Khoa cần cân đối giữa tỷ lệ lý thuyết và thực hành; giảm bớt các môn học lý thuyết chung chung, không cần thiết, thay vào đó tăng cường các môn học đáp ứng các kỹ năng cần thiết cho sinh viên khi đi làm. Bên cạnh đó, khoa cũng cần tăng cường hợp tác, liên kết chặt chẽ với doanh nghiệp, để từ đó cập nhật được nhu cầu của thị trường lao động, và có những điều chỉnh chương trình đào tạo cho phù hợp.

## **6. Hạn chế và hướng nghiên cứu tiếp theo**

Nghiên cứu này vẫn còn tồn tại một số hạn chế nhất định. *Thứ nhất*, giữa 5 biến độc lập được xem xét còn xảy ra hiện tượng đa cộng tuyến nhẹ (tuy là chấp nhận được). Đây là một hạn chế mà tác giả chưa thể khắc phục được do thời gian có hạn và cần có thêm những nghiên cứu tiếp theo để xem xét và xây dựng lại thang đo, khắc phục hạn chế. *Thứ hai*, nghiên cứu mới xem xét ảnh hưởng của 5 nhân tố, giải thích được 72.6% sự biến thiên mức độ hài lòng của sinh viên về chất lượng đào tạo. Do đó, còn có thể có nhiều nhân tố khác tác động tới sự hài lòng của sinh viên mà các nghiên cứu sau cần xem xét. *Thứ ba*, nghiên cứu chỉ thực hiện với người học tại một khoa của một cơ sở giáo dục đại học nhất định. Đây có thể là hướng nghiên cứu tiếp theo cho các bài nghiên cứu khác trong thời gian tới.

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# NGHIÊN CỨU CÁC NHÂN TỐ ẢNH HƯỞNG ĐẾN RỦI RO TÀI CHÍNH CỦA CÁC DOANH NGHIỆP NIÊM YẾT VIỆT NAM

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## **Tóm tắt**

Mục tiêu của nghiên cứu này là phân tích các nhân tố ảnh hưởng đến rủi ro tài chính của doanh nghiệp niêm yết Việt Nam. Dữ liệu sử dụng bao gồm 202 doanh nghiệp niêm yết trên hai sàn chứng khoán, đó là Sở giao dịch chứng khoán Hà Nội và Sở giao dịch chứng khoán thành phố Hồ Chí Minh, trong giai đoạn từ năm 2018 - 2020. Kết quả nghiên cứu chỉ ra rằng Hệ số khả năng thanh toán, cơ cấu vốn và cơ cấu tài chính có ảnh hưởng đáng kể đến rủi ro tài chính. Bên cạnh đó, các biến kiểm soát như tăng trưởng doanh thu, tuổi và quy mô công ty cũng có mối tương quan thuận chiều với rủi ro tài chính. Kết quả nghiên cứu là nguồn tài liệu hữu ích đối với các nhà quản trị doanh nghiệp nhằm đưa ra các quyết định tài chính đúng đắn và nâng cao hiệu quả quản lý rủi ro tài chính trong doanh nghiệp.

**Từ khóa:** Rủi ro tài chính, công ty niêm yết, các yếu tố ảnh hưởng

## **Abstract**

*The purpose of this study is to investigate the influence factors affecting financial risk of listed companies in Vietnam. Our data include 202 non-financial companies with 500 firm-year observations collecting from two main stock exchange markets in Vietnam including Hanoi Stock Exchange and Ho Chi Minh Stock Exchange, covering 3 years from 2018-2020. The finding of this study indicates that Solvency Ratio, Capital Structure and Financial Structure have significantly associated with the financial risks. Besides, control variables such as sales growth, firm age, and firm size also possibly correlated with financial risks. The findings of this paper are useful for business administrators and helping business managers to make the right financial decisions to improve the efficiency of financial risk management in enterprises.*

**Keywords:** Financial risk, listed company, influence factors

## **1. Giới thiệu chung**

Trong những năm gần đây, doanh nghiệp bị ảnh hưởng nặng nề bởi đại dịch COVID-19, mặc dù Nhà nước đã có nhiều chính sách hỗ trợ kinh tế nhằm giúp doanh nghiệp giảm thiểu

ảnh hưởng của dịch bệnh đến hoạt động sản xuất, kinh doanh của doanh nghiệp. Tuy nhiên, những quy định nghiêm ngặt về giãn cách xã hội và tạm đóng cửa thương mại quốc tế trong một khoảng thời gian dài đã để lại những hậu quả nặng nề. Có thể thấy, trong giai đoạn này, các doanh nghiệp đã phải gánh chịu rất nhiều khó khăn đặc biệt là tình hình tài chính. Nhiều doanh nghiệp buộc phải ngừng kinh doanh hoặc đóng cửa do không có đủ nguồn lực kinh tế. Rủi ro tài chính không chỉ ảnh hưởng đến hiệu quả kinh doanh, chi phí và lợi nhuận, mà còn ảnh hưởng đến giá trị doanh nghiệp. Chính vì vậy, rủi ro tài chính trở thành mối quan tâm hàng đầu của các nhà quản lý, các nhà đầu tư, cũng như toàn xã hội. Với tình hình hiện nay, có rất nhiều câu hỏi đã đặt ra liên quan đến việc xác định các nhân tố nào ảnh hưởng đến rủi ro tài chính của các doanh nghiệp ở Việt Nam.

Rủi ro tài chính là một trong những vấn đề đang được quan tâm hàng đầu của các doanh nghiệp trên toàn thế giới nói chung và Việt Nam nói riêng. Kế thừa mô hình của Alexander Bathody (1984), Amalendu (2012) đã tiến hành nghiên cứu về nhân tố ảnh hưởng đến rủi ro tài chính của các doanh nghiệp vừa và nhỏ, niêm yết trên sàn chứng khoán Bombay. Kết quả nghiên cứu chỉ ra rằng rủi ro tài chính có mối quan hệ ngược chiều với cơ cấu nợ, tỷ lệ tài sản trên nợ phải trả, vòng quay hàng tồn kho, vòng quay tài sản cố định và vòng quay các khoản phải thu, nhưng lại có mối quan hệ cùng chiều với hệ số thanh toán hiện hành, hệ số thanh toán nhanh, lợi nhuận ròng, và hệ số tài sản ròng. Cùng chung đối tượng nghiên cứu là các doanh nghiệp vừa và nhỏ, René-Pascal (2018) đã sử dụng dữ liệu của 97 doanh nghiệp Hà Lan, được thu thập trong giai đoạn 2013-2017. Kết quả nghiên cứu đã chỉ ra rằng các doanh nghiệp vừa và nhỏ rất chú trọng đến quy trình quản trị rủi ro và có kế hoạch cụ thể, cũng như thực hiện nghiêm túc các bước như xác định, đo lường, đánh giá và xử lý rủi ro. Điều này có tác động tích cực đến tình hình tài chính của doanh nghiệp, làm giảm đáng kể các rủi ro tài chính mà các doanh nghiệp vừa và nhỏ tại Hà Lan phải đối mặt. Thêm vào đó, tại đất nước Sri Lanka, tác giả Vijitha Gunarathna (2016) đã sử dụng dữ liệu được thu thập trong 10 năm, từ 2006 đến 2015 liên quan đến 15 công ty trong lĩnh vực khách sạn, du lịch, các ngành công nghiệp hóa chất và dược phẩm được niêm yết trên sàn giao dịch Colombo. Nghiên cứu chỉ ra rằng đòn bẩy tài chính có mối tương quan cùng chiều với rủi ro tài chính, hơn thế nữa các công ty khách sạn và du lịch có rủi ro tài chính cao hơn so với các công ty hóa chất và dược phẩm. Do đó, đòn bẩy tài chính và quy mô doanh nghiệp có thể được xem xét như các yếu tố then chốt quyết định rủi ro tài chính.

Ở Việt Nam, chủ đề nghiên cứu về rủi ro tài chính đã và đang nhận được nhiều sự quan tâm của nhiều đối tượng khác nhau. Qua tổng quan các công trình nghiên cứu trong nước có thể thấy kết quả nghiên cứu về chủ đề này vẫn chưa thật sự đồng nhất. Bên cạnh đó, các nghiên cứu trong nước hiện tại chỉ tập trung chủ yếu vào nhóm doanh nghiệp hoặc ngành nghề cụ thể. Ví dụ như nghiên cứu của Nguyễn (2018), Đỗ và cộng sự (2020), tác giả đã tập trung phân tích rủi ro phá sản trong các công ty bất động sản niêm yết trên 2 sàn chứng khoán Việt Nam, đó là Sở giao dịch chứng khoán Hà Nội và Sở giao dịch chứng khoán Thành phố Hồ Chí Minh. Nghiên cứu đã chỉ ra rằng rủi ro tài chính có tương quan đáng kể và cùng chiều với vòng quay hàng tồn kho, tương quan nghịch với cơ cấu nợ, tỷ suất lợi

nhuận trên tài sản, hệ số thanh toán nhanh, vòng quay các khoản phải thu, hệ số tài sản cố định và tương quan yếu với vòng quay tài sản cố định, doanh thu bán hàng. Vũ (2020) đã tiến hành nghiên cứu dựa trên dữ liệu của 28 doanh nghiệp thuộc ngành bất động sản trong giai đoạn từ năm 2012 đến 2018. Kết quả nghiên cứu đã chỉ ra rằng tỷ số sinh lời, vòng quay tài sản và tỷ số vốn cố định không có tác động đến rủi ro tài chính.

Mặc dù đã có rất nhiều nghiên cứu trong nước và quốc tế liên quan đến việc xác định nhân tố ảnh hưởng đến rủi ro tài chính. Tuy nhiên, các nghiên cứu trước vẫn còn tồn đọng một số hạn chế sau. Thứ nhất, các nghiên cứu trước đây hầu hết tập trung phân tích nhân tố ảnh hưởng đến rủi ro tài chính của một nhóm doanh nghiệp hoặc một nhóm ngành cụ thể. Dữ liệu sử dụng trong các nghiên cứu trước đây thường khá khiêm tốn và không mang tính cập nhật. Nhằm bổ sung thêm bằng chứng về các nhân tố ảnh hưởng đến rủi ro tài chính và giải quyết những tồn tại nêu trên, bài nghiên cứu này sẽ cung cấp bằng chứng thực nghiệm về một số nhân tố ảnh hưởng đến rủi ro tài chính của các doanh nghiệp niêm yết tại thị trường chứng khoán Việt Nam trong giai đoạn 2018 – 2020. Thông qua các biến như khả năng thanh toán, chỉ số cơ cấu vốn, cấu trúc tài chính và khả năng sinh lời. Để thực hiện nghiên cứu này, nhóm tác giả đã sử dụng dữ liệu của 500 công ty với 1500 quan sát được thu thập từ hai thị trường chứng khoán tại Việt Nam bao gồm: Sở giao dịch chứng khoán Hà Nội (HNX) và Sở giao dịch chứng khoán Thành phố Hồ Chí Minh (HOSE). Nhóm tác giả thực hiện bài nghiên cứu dựa trên việc sử dụng mô hình tác động cố định (FEM). Kết quả của nghiên cứu sẽ góp giúp các nhà quản lý đưa ra các quyết định phù hợp, thúc đẩy sự phát triển bền vững của doanh nghiệp. Ngoài ra, các nhà đầu tư, các nhà hoạch định chính sách cũng có thể sử dụng kết quả nghiên cứu như một tài liệu hữu ích để đưa ra các quyết định kinh tế và cải cách chính sách một cách phù hợp.

## **2. Tổng quan nghiên cứu**

Trải qua nhiều thập kỷ nền kinh tế ngày một phát triển, theo đó có không ít công ty, doanh nghiệp được thành lập. Nhưng đi kèm với đó là những rủi ro kinh tế, rủi ro cạnh tranh, hoạt động với các công ty khác, rủi ro về mặt pháp lý, thuế. Một trong những rủi ro vô cùng quan trọng ấy là rủi ro tài chính với những yếu tố: khả năng thanh toán, cơ cấu vốn, khả năng sinh lời, cấu trúc tài chính.

Theo định nghĩa của Alberta (2010), khả năng thanh toán của doanh nghiệp thể hiện năng lực tài chính mà doanh nghiệp đó có được để đáp ứng nhu cầu chi trả các khoản nợ đến hạn một cách kịp thời. Khi khả năng thanh toán của doanh nghiệp ở mức kém, điều này sẽ dẫn đến nguy cơ rủi ro tài chính và nghiêm trọng hơn đó là có thể dẫn đến nguy cơ phá sản. Ngược lại, khả năng thanh toán cao cho thấy doanh nghiệp có năng lực tài chính mạnh, có đủ nguồn lực dưới dạng tài sản để trang trải tất cả các khoản nợ của mình. Đồng quan điểm với nhận định trên, Võ Minh Long (2020) cũng đã đưa ra kết luận rằng doanh nghiệp có thể đảm bảo được khả năng thanh toán nợ ngắn hạn và góp phần giảm rủi ro tài chính khi tỷ số ngắn hạn tăng. Tương tự, nghiên cứu của Gang và Dan (2012), chỉ ra rằng khả

năng thanh toán liên quan đến khả năng chi trả cả gốc lẫn lãi của doanh nghiệp. Khi công ty thanh toán các khoản nợ đúng hạn, rủi ro tài chính sẽ ít có khả năng phát sinh. Ngược lại, nếu doanh nghiệp trong tình trạng tài chính xấu, hoạt động kinh doanh của doanh nghiệp kém hiệu quả thì doanh nghiệp không có khả năng thanh toán được các khoản nợ đúng hạn. Điều này sẽ dẫn đến mất niềm tin đối với nhà cung cấp, đối tác.

Bên cạnh đó, cấu trúc vốn cũng được xem là một trong những nhân tố quan trọng ảnh hưởng đến rủi ro tài chính. Theo nghiên cứu của Đặng Thu Hằng và cộng sự (2020), cấu trúc vốn có tác động đáng kể đến rủi ro tài chính của một doanh nghiệp, kết quả này có ý nghĩa thống kê đối với các doanh nghiệp nhà nước, cũng như doanh nghiệp tư nhân. Đặc biệt, tác động của thành phần tự tài trợ đối với rủi ro tài chính. Theo nhóm tác giả, tỷ lệ vốn chủ sở hữu trên tổng vốn càng cao đồng nghĩa với việc đòn bẩy tài chính của công ty càng thấp, khi tỷ lệ tự tài trợ cao bằng với tỷ lệ nợ trên tổng vốn, khả năng trả nợ của công ty hầu như được đảm bảo, các chủ nợ được bảo vệ vì vậy rủi ro tài chính được giảm thiểu một cách đáng kể. Giá trị tài sản cố định càng lớn thì các khoản nợ của người cho vay càng an toàn và rủi ro tài chính của doanh nghiệp càng nhỏ. Bên cạnh đó, giá trị tài sản cố định của một doanh nghiệp thể hiện năng lực sản xuất kinh doanh của doanh nghiệp đó. Gang và Dan (2012) đã chọn hai chỉ số để đo lường cấu trúc vốn là tỷ lệ tài sản ròng và tỷ lệ tài sản cố định để chứng minh rằng nếu tỷ lệ tài sản ròng trên tổng tài sản của doanh nghiệp thấp, quy mô nợ cao sẽ gây áp lực lên dòng vốn của doanh nghiệp và ảnh hưởng đến các hoạt động sản xuất khác. Khả năng tiếp tục tài trợ vốn cho một công ty có thể được phản ánh trong tỷ lệ tài sản cố định của nó, đặc biệt là khi tình hình tài chính của doanh nghiệp đang xấu đi. Nghiên cứu này cũng phù hợp với quan điểm trong nghiên cứu của Võ Minh Long (2020).

Li và cộng sự (2012) cho rằng nhân tố khả năng sinh lời có thể được đo lường thông qua tỷ suất sinh lời trên tổng tài sản (EC1) và tỷ suất lợi nhuận trên chi phí (EC3). Tỷ suất sinh lời trên tổng tài sản giúp cho doanh nghiệp đánh giá được mức độ hiệu quả trong việc sử dụng tài sản của doanh nghiệp, khi mức sinh lời tăng cao điều đó có nghĩa việc đầu tư vào tài sản của doanh nghiệp là đúng đắn và khoản lợi nhuận này sẽ là một trong những yếu tố dẫn đến giảm thiểu rủi ro tài chính của doanh nghiệp. Đồng thời, tỷ suất lợi nhuận trên chi phí sẽ phản ánh lợi nhuận của doanh nghiệp từ một đồng chi phí bỏ ra, mức doanh lợi càng lớn thì hiệu quả càng cao và khả năng tích lũy càng lớn. Bên cạnh tỷ suất lợi nhuận trên tổng tài sản và tỷ suất lợi nhuận trên chi phí, thì yếu tố tỷ suất lợi nhuận trên doanh thu cũng đóng vai trò quan trọng không kém trong việc nhận định doanh nghiệp đó có rủi ro về tài chính hay không. Tỷ suất lợi nhuận trên doanh thu phản ánh quan hệ giữa lợi nhuận ròng dành cho nhà đầu tư và doanh thu của công ty, để thấy rằng so với tổng doanh thu thu về, doanh nghiệp nhận được bao nhiêu lợi nhuận, có bị lỗ hay thất thoát tài chính hay không.

Cấu trúc tài chính của doanh nghiệp là sự kết hợp giữa nợ (bao gồm nợ ngắn hạn, nợ dài hạn) và vốn chủ sở hữu, tất cả được dùng để tài trợ cho quyết định đầu tư của doanh nghiệp. Theo nhóm tác giả Đoàn Khánh Hưng và Trần Thị Thu Hiền (2019), nhân tố cấu trúc tài chính ảnh hưởng đến hai yếu tố cân bằng tài chính và khả năng thanh toán. Nhóm tác giả cho rằng sự cân bằng tài chính phản ánh trực tiếp đến mối quan hệ giữa các nguồn tài trợ với tài sản của doanh nghiệp có cùng thời gian. Điều đó có nghĩa là nếu các doanh

ngành sử dụng phần lớn nguồn vốn ngắn hạn để tài trợ hình thành nên tài sản dài hạn, có thể gây ra việc thiếu chủ động về tài chính của doanh nghiệp, gây ra rủi ro trong tài chính. Mặt khác một trong những yếu tố được sử dụng để đánh giá rủi ro tài chính của một công ty là tỷ lệ sử dụng đòn bẩy tài chính. Việc đi vay sẽ dẫn đến một khoản lãi suất mà công ty phải trả trước so với lợi nhuận mà chủ sở hữu thu được. Hơn nữa, trong khi đi vay, doanh nghiệp có trách nhiệm thực hiện các khoản thanh toán bắt buộc, đầy đủ và đúng hạn. Nếu không sẽ ảnh hưởng đến hoạt động tài chính của công ty. Khi tình hình tài chính của công ty ổn định, rủi ro tài chính của công ty sẽ giảm xuống.

Từ tổng quan nghiên cứu, nhóm tác giả đề xuất các giả thuyết nghiên cứu dưới đây:

*Giả thuyết 1: Khả năng thanh toán tương quan nghịch với rủi ro tài chính.*

*Giả thuyết 2: Cơ cấu vốn tương quan nghịch với rủi ro tài chính.*

*Giả thuyết 3: Khả năng sinh lời tương quan nghịch với rủi ro tài chính.*

*Giả thuyết 4: Cấu trúc tài chính tương quan nghịch với rủi ro tài chính.*

### 3. Phương pháp nghiên cứu

#### 3.1. Mô hình nghiên cứu

**Biến phục thuộc:** Để kiểm tra các nhân tố ảnh hưởng tới rủi ro tài chính, nhóm nghiên cứu đã sử dụng mô hình của Alexander Bathory để đo lường rủi ro tài chính (1). Rủi ro tài chính (FR) là giá trị đo lường rủi ro tài chính sử dụng mô hình của Alexander Bathory (1984) giá trị  $FR_{it}$  càng thấp rủi ro tài chính càng lớn. Nghiên cứu của Võ Minh Long (2020), Gang Fu, Weilan Fu và Dan Liu (2012), Amalendu Bhunia và Somnath Mukhuti (2012) đã kế thừa và phát triển mô hình này để đo lường rủi ro tài chính cho doanh nghiệp.

$$FR_{it} = SZL_{it} + SY_{it} + GL_{it} + YF_{it} + YZ_{it} \quad (1)$$

Trong đó:

**Biến độc lập:**

$SZL_{it}$  = Lợi nhuận trước thuế + Khấu hao + Thuế thu nhập hoãn lại)/Nợ ngắn hạn

$SY_{it}$  = Lợi nhuận trước thuế/Tổng nguồn vốn

$GL_{it}$  = Vốn cổ phần/Nợ ngắn hạn

$YF_{it}$  = Giá trị còn lại của tài sản cố định/ Nợ phải trả

$YZ_{it}$  = Vốn lưu động/Tổng tài sản

**Biến kiểm soát:** Nhóm tác giả còn sử dụng 03 biến kiểm soát sau: tuổi, quy mô và tỷ lệ tăng trưởng của doanh nghiệp.

Từ đó, mô hình nghiên cứu được nhóm tác giả đề xuất như sau:

$$FR_{it} = \beta_0 + \beta_1 QR_{it} + \beta_2 CS_{it} + \beta_3 EC_{it} + \beta_4 FS_{it} + u_{it} \quad (2)$$

Trong đó:

Biến phụ thuộc: Được đo lường bằng cách kế thừa mô hình Alexander Bathory

Biến độc lập: Cách đo lường các biến độc lập được miêu tả chi tiết trong bảng sau

Biến kiểm soát: Nhóm tác giả còn sử dụng 03 biến kiểm soát sau: tuổi, quy mô và tỷ lệ tăng trưởng của doanh nghiệp. Bảng 1 giải thích và tóm lược công thức đo lường của các biến quan sát.

**Bảng 1. Xác định các biến của mô hình**

Variable	Related definition		Measurement
Rủi ro tài chính (Financial risks)	Bathory's model metric	FR	Giá trị hệ số rủi ro tài chính (Financial risk metric valuCS1)
Khả năng thanh toán (Solvency)	Hệ số thanh toán nhanh Quick ratio	QR	(Tài sản ngắn hạn - Hàng tồn kho)/Nợ ngắn hạn (Current assets - Inventory)/Current liabilitiesCS1
Cơ cấu vốn (Capital structure)	Tỷ lệ tài sản ròng (Net assets ratio)	CS1	Vốn chủ sở hữu/ Tổng tài sản (Equity/ Total assets)
	Tỷ lệ tài sản cố định (Fixed assets ratio)	CS2	Tài sản cố định/ Tổng tài sản (Fixed assets/Total assets)
Khả năng sinh lời (Earning capacity)	Tỷ suất sinh lời trên tổng tài sản (Return on total assets)	EC1	(Lợi nhuận trước thuế/ Trung bình tổng tài sản)* 100% (EBIT/Average total assets)*100%
	Lợi tức bán hàng (Return on salCS1)	EC2	(Thu nhập ròng/Doanh số bán hàng)* 100% (Net income/SalCS1)*100%
	Tỷ suất lợi nhuận trên chi phí (Profit to cost ratio)	EC3	(Doanh thu - Giá vốn hàng bán)/Doanh thu (Revenue - Cost of good sold)/Revenue
Cấu trúc tài chính (Financial structure)	Vốn lưu động ròng (Net working capital)	FS1	Tài sản ngắn hạn - Nợ ngắn hạn (Current assets - Current liabilitiesCS1)
	Tỷ lệ nợ (Debt ratio)	FS2	(Tổng nợ/ Tổng tài sản)* 100% (Total debt/ Total asset)
Tỷ lệ tăng trưởng doanh thu (Sale growth)	Sale growth	SG	((Doanh thu thuần kỳ hiện tại - Doanh thu thuần kỳ trước)/Doanh thu thuần kỳ trước)* 100 ((Current period net salCS1 - Previous period net salCS1)/Previous period net salCS1)*100
Số năm hoạt động (Firm age)	Firm age	AGE	Năm thực hiện nghiên cứu - Năm thành lập (Year of rCS1earch - Year of CS1tabishment)
Quy mô doanh nghiệp (Firm Size)	Firm size	SIZE	Logarit tự nhiên của tổng tài sản (Log of total assets)



### 3.2. Lựa chọn mẫu

Nghiên cứu này dựa trên dữ liệu được lấy từ các báo cáo tài chính đã được kiểm toán của các doanh nghiệp niêm yết Việt Nam, niêm yết trên 02 sàn chứng khoán, đó là Sở Giao dịch chứng khoán Hà Nội (HNX) và Sở Giao dịch chứng khoán Thành phố Hồ Chí Minh (HOSE), từ năm 2018 đến 2020, 500 doanh nghiệp niêm yết đã được lựa chọn ngẫu nhiên để tiến hành nghiên cứu, với tổng số quan sát là 1.500. Bảng 2 trình bày chi tiết thông tin về số lượng doanh nghiệp được lựa chọn nghiên cứu.

Sau đó, nhóm xây dựng mô hình hồi quy cho dữ liệu bảng bằng phương pháp ước lượng, bao gồm lựa chọn giữa ba mô hình: Mô hình hiệu ứng ngẫu nhiên (Random Effect Model), Mô hình hiệu ứng, Mô hình hiệu ứng cố định (Fixed Effect Model) và Mô hình hồi quy nhỏ nhất (OLS), sử dụng phần mềm STATA 15 để hồi quy mô hình, và cuối cùng thực hiện kiểm tra Hausman để chọn mô hình phù hợp nhất và đưa ra kết luận. Kết quả, mô hình phù hợp nhất trong nghiên cứu này đó là mô hình hiệu ứng cố định FEM.

**Bảng 2. Số lượng quan sát của bài nghiên cứu**

Năm	2018	2019	2020
Số lượng doanh nghiệp	500	500	500
Tổng số quan sát	1.500		

*Nguồn: Nhóm nghiên cứu tổng hợp*

## 4. Kết quả và thảo luận

### 4.1. Thống kê mô tả

Các số liệu thống kê về mối quan hệ giữa các nhân tố ảnh hưởng và rủi ro tài chính được mô tả trong Bảng 3, bao gồm: số quan sát, giá trị trung bình, độ lệch chuẩn, giá trị nhỏ nhất và giá trị lớn nhất.

**Bảng 3. Thống kê mô tả**

Variable	Obs	Mean	Std. Dev.	Min	Max
FR	1.500	1.285858	1.070634	-.4127016	3.388206
QR	1.500	1.064909	.5444247	.2333206	1.867706
CS1	1.500	.5017497	.2033375	.1638725	.8192707
CS2	1.500	.3940496	.2229708	.0692563	.7653587
EC1	1.500	.0512686	.0493182	-.0121201	.1444535
EC2	1.500	.0589829	.0596473	-.0598672	.1477131
EC3	1.496	.1928597	.1354537	.0179062	.4642697

<b>FS1</b>	1.500	1.59e+08	2.11e+08	-2.67e+08	4.79e+08
<b>FS2</b>	1.500	.2097096	.1659241	0	.4825937
<b>CV1</b>	1.500	-1.623226	28.02933	-57.44214	37.90852
<b>CV2</b>	1.500	22.802	11.80038	10	46
<b>CV3</b>	1.500	8.934554	.6168448	7.808873	9.91963

*Nguồn: Phân tích dữ liệu từ phần mềm STATA*

Hệ số khả năng thanh toán trung bình của các doanh nghiệp được khảo sát là 1.065. Bên cạnh đó, hệ số khả năng thanh toán cao nhất là 1.868 và thấp nhất là 0.233. Hệ số cơ cấu vốn trung bình từ kết quả phân tích dữ liệu lần lượt là CS1: 0.502, CS2 là 0.394. Ngoài ra, CS1 có giá trị cao nhất là 0.819, thấp nhất là 0.164 và CS2 có giá trị cao nhất là 0.765, thấp nhất là 0.069. Từ bảng 3, ta thấy hệ số năng lực kiếm tiền trung bình lần lượt là EC1 với 0.051, EC2 với 0.059 và EC3 với 0.193. Bên cạnh đó, ta thấy giá trị return on total assets (EC1) cao nhất là 0.144, thấp nhất là -0.012. Giá trị return on sale CS1 (EC2) cao nhất là 0.148, thấp nhất là -0.060. Giá trị profit to cost ratio (EC3) cao nhất là 0.464 và thấp nhất là 0.018. Chỉ số cấu trúc tài chính trung bình là 0.209. Giá trị cấu trúc tài chính cao nhất là 0.482 và thấp nhất là 0. Chỉ số kiểm soát và điều hành trung bình từ kết quả phân tích dữ liệu từ phần mềm Stata lần lượt là SG (Chỉ số tăng trưởng bán) -1.623, AGE (Năm hoạt động) 22.802 và SIZE (Quy mô doanh nghiệp) 8.935. Từ bảng phân tích dữ liệu ta cũng có thể thấy được hệ số SG cao nhất là 37.909 và thấp nhất là 0, hệ số AGE cao nhất là 46 và thấp nhất là 10, cuối cùng hệ số SIZE cao nhất là 9.92 và thấp nhất là 7.809.

#### **4.2. Ma trận tự tương quan**



Sau khi thực hiện mô tả các biến thì tác giả sẽ tiến hành kiểm tra khả năng xuất hiện tượng đa cộng tuyến giữa các biến độc lập thông qua ma trận hệ số tương quan được trình bày ở các bảng 4. Từ bảng 4 có thể thấy, có 4 cặp giá trị thể hiện độ mức độ tương quan cao là CS1 - QR: 0.663 và EC3 – EC2: 0.654; FS2 - CS1 0.635; EC1 - EC2: 0.572. Tuy nhiên, hệ số tương quan giữa các biến không cao, không có hệ số nào vượt 0.7 (cao nhất là 0.654). Các cặp giá trị tương quan còn lại trong mô hình cũng đều có mức tương quan tương đối thấp và đều dưới 0.5. Điều này phản ánh rủi ro xảy ra hiện tượng đa cộng tuyến là không cao trong mô hình nghiên cứu. Tuy nhiên để tăng độ tin cậy của mô hình, bài nghiên cứu sẽ tiếp tục sử dụng kiểm định VIF để làm tăng độ tin cậy của mô hình. Bảng 5 trình bày kết quả đa cộng tuyến.

**Bảng 5. Kết quả đa cộng tuyến**

Variable	VIF	1/VIF
CS1	2.80	0.356512
EC2	2.60	0.384303
FS1	2.43	0.410711
SIZE	2.38	0.419372
QR	2.26	0.442593
FS2	1.98	0.504221
EC3	1.79	0.559046
CS2	1.75	0.570080
EC1	1.61	0.619198
SG	1.09	0.921246
AGE	1.01	0.985650
Mean VIF	1.98	

*Nguồn: Phân tích dữ liệu từ phần mềm STATA*

Ta thấy giá trị trung bình của VIF <2 như vậy kết luận được không có hiện tượng đa cộng tuyến giữa các biến độc lập.

### **4.3. Kết quả hồi quy**

Bằng việc sử dụng phần mềm định lượng Stata 15.1 để hồi quy bộ dữ liệu với biến phụ thuộc là FR, 4 biến độc lập và 8 biến quan sát nhóm nghiên cứu đưa ra bảng kết quả hồi quy bên dưới (bảng 6).

**Bảng 6: Kết quả nghiên cứu**

Biến quan sát	Định nghĩa	Rủi ro Tài chính	
		$\beta$	S.E
QR	Hệ số thanh toán nhanh	0.197**	0.0956
CS1	Tỷ lệ tài sản ròng	1.611***	0.334
CS2	Tỷ lệ tài sản cố định	0.981***	0.267
EC1	Tỷ suất sinh lời trên tổng tài sản	9.847***	1.058
EC2	Lợi tức bán hàng	-0.262	0.719
EC3	Tỷ suất lợi nhuận trên chi phí	-0.855**	0.354
FS1	Vốn lưu động ròng	1.36e-09***	2.36e-10
FS2	Tỷ lệ nợ	-0.263	0.327
CV1	Tỷ lệ tăng trưởng doanh thu	-0.000118	0.000703
CV2	Số năm hoạt động	0.0254	0.0302
CV3	Quy mô doanh nghiệp	-0.777***	0.237
_cons	Constant	5.763**	2.238
	Observations	1,500	
	R-squared	0.50	

*Note:* Robust standard errors in parenthesis  
\*\*\*p < 0.01, \*\*p < 0.05, \*p < 0.1

*Nguồn: Phân tích dữ liệu từ phần mềm STATA*

## 5. Thảo luận và kết luận

Sau khi phân tích, chạy mô hình và tiến hành các kiểm định cần thiết, kết quả nghiên cứu đã xác định được các nhân tố ảnh hưởng đến rủi ro tài chính của các doanh nghiệp trên sàn chứng khoán Việt Nam. Bài nghiên cứu sử dụng dữ liệu ở nhiều nhóm ngành kinh tế trong giai đoạn năm 2018 - 2020 của các công ty niêm yết trên 2 sàn giao dịch HNX, HOSE.

Các biến độc lập như chỉ số thanh toán (QR), cơ cấu nguồn vốn (CS) có ý nghĩa thống kê ở mức nhỏ hơn 1%, điều đó có ý nghĩa rằng tỷ lệ tài sản ròng trong tổng tài sản càng cao thì khoản nợ của chủ nợ càng an toàn. Kết quả này đồng ý kiến với hai nghiên cứu của nhóm Trần Thị Thanh Nga và Trầm Thị Xuân Hương (2018) và Võ Minh Long (2020). Với bài nghiên cứu của nhóm nghiên cứu Hang Thu, Duong Thuy, Ha Thi và Le Hong Thi (2020) nhóm tác giả còn chỉ ra rõ hơn rằng cơ cấu vốn thể hiện tỷ trọng của từng loại vốn trong tổng nguồn vốn, khi tỷ lệ tự tài trợ cao tương đương với tỷ lệ nợ trên tổng nguồn vốn thì khả năng trả nợ của công ty dễ dàng được đảm bảo và các chủ nợ sẽ an toàn hơn, rủi ro tài chính của công ty sẽ giảm.

Cả 2 biến EC VÀ FS đều tác động ngược chiều lên rủi ro tài chính. Có nghĩa là doanh nghiệp có ROA càng cao thì chỉ số rủi ro tài chính càng thấp. Điều này là phù hợp với giả thuyết của tác giả Nguyễn Thị Nga (2018) - Trường Đại học Kinh tế quốc dân, tác giả cho rằng: “Các chỉ tiêu về khả năng sinh lời được dùng để đánh giá hiệu quả sử dụng các nguồn lực trong việc tạo ra lợi nhuận. Khi doanh nghiệp thu được giá trị hay lợi nhuận càng lớn thì sẽ có nhiều khả năng thanh toán các khoản nợ và do đó sẽ làm giảm thiểu khả năng có rủi ro phá sản của doanh nghiệp”. Cùng quan điểm đó là nghiên cứu của nhóm nghiên cứu Hang Thu, Duong Thuy, Ha Thi và Le Hong Thi (2020).

Bên cạnh đó các biến EC2, FS2, đều có ý nghĩa thống kê ở mức 1%. Trong thực tế, khi tỷ số thanh toán ngắn hạn trong cấu trúc tài chính tăng sẽ làm giảm rủi ro tài chính của doanh nghiệp. Elgonemy (2002) cho rằng chi phí liên quan đến vốn nợ có xu hướng lớn hơn lợi ích khi đòn bẩy tăng vượt quá mức tối ưu và sau đó giảm giá trị tổng thể của công ty. Do đó, vốn nợ ảnh hưởng đa dạng đến giá trị của công ty theo cách mà công ty sử dụng vốn nợ. Điều này đã được chứng minh ở nghiên cứu của Võ Minh Long (2020), Gang Fu, Weilan Fu và Dan Liu (2012), Bhunia và Mukhuti (2012), Simantinee và Phani (2015). Khi doanh nghiệp thu được giá trị hay lợi nhuận càng lớn thì sẽ có nhiều khả năng thanh toán các khoản nợ, do đó sẽ giảm khả năng rủi ro tài chính của doanh nghiệp.

Khả năng thanh toán nhanh QR, cơ cấu vốn CS và cấu trúc tài chính FS đều có tác động cùng chiều đến rủi ro tài chính của doanh nghiệp Việt Nam. Kết quả này là cơ sở khoa học cho các nhà quản lý lựa chọn các giải pháp phù hợp nhằm hạn chế rủi ro tài chính của doanh nghiệp, giúp doanh nghiệp phát triển trong bối cảnh nền kinh tế có nhiều thay đổi và biến động. Đồng thời, kết quả nghiên cứu cũng đã cung cấp cho các nhà đầu tư và các đối tượng liên quan có thêm các dấu hiệu nhận biết các doanh nghiệp có khả năng đối mặt với những rủi ro tài chính, từ đó có thể hoạch định chính sách phát triển kinh tế cho doanh nghiệp của mình một cách đúng đắn, phù hợp.

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