

# sigma

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## **Insurance: adding value to development in emerging markets**

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# Executive summary

Insurance has grown rapidly in emerging markets but there are still significant protection gaps.

Emerging markets have been a major driver of global insurance premium growth over the last two decades. In 2016, emerging markets accounted for 20% of global premiums, up from 5% two decades ago. Nevertheless, many individuals and enterprises in emerging markets remain under- or uninsured, and therefore unprotected against external shocks arising from illnesses, natural disasters and accidents. These shocks can have lasting negative consequences for both economic growth and human development.

Risk transfer solutions play an important role in emerging market growth and development, but the value of insurance is often under-appreciated.

Insurance is widely acknowledged as a stabiliser to smooth financial volatility for households and businesses. Beyond this, insurance plays an important role in supporting overall emerging market growth and development, including by helping to reduce poverty and facilitating inclusive growth. However, insurance is often under-appreciated because it is challenging to quantify and articulate its values, such as enabling risk-taking and offering peace of mind. The common metric for insurance value is the penetration rate (premiums as a share of gross domestic product (GDP)), but this measure provides limited insight into how insurance actually works. Today, a growing body of empirical research investigates the contributions of insurance to economic growth and a country's overall development.

Knowledge of how insurance works is important for making well-informed decisions and bolstering stakeholder cooperation.

Insurance, through ex-ante risk management, enables entrepreneurship, more efficient resource allocation, trade and commerce, and encourages risk mitigation and prevention. Through ex-post financial protection, insurance allows societies to recover more quickly from a shock event. At the same time, it acts as an intermediary to funnel savings into productive investment. These functions of insurance apply broadly in both the advanced and emerging markets. This report focusses on the latter. A better understanding of the channels by which insurance contributes to economic development in emerging markets, complemented with empirical evidence, is important to incentivise different stakeholders to work together to make societies more resilient. Also, with such knowledge, government and regulators can make better-informed decisions on insurance regulations and the costs and benefits of providing insurance, compared to funding other poverty reduction and risk management strategies.

Scrutiny of existing barriers to insurance can reveal new ways to extend the reach of insurance.

Numerous supply and demand barriers preclude insurance from fully contributing to development in emerging markets. Empirical studies provide useful insights on these barriers. For instance, affordability is a major demand-side barrier, but in some emerging markets, even subsidies do not lead to improved take up of insurance. Risk averse individuals in emerging markets can be less likely to buy cover, in stark contrast to observations in advanced markets, because of lack of trust in the industry. Different approaches to insurance such as microinsurance, public-private partnerships, Sharia-compliant risk transfer solutions, and harnessing the opportunities offered by digital technology, can better align insurance offerings with the needs of consumers and businesses, and so help overcome these barriers.

Different stakeholders must work together to ensure that insurance ultimately contributes to a country's development.

To fully benefit from insurance, emerging markets need to have a regulatory framework in place that fosters trust in the industry. In addition, governments and other stakeholders, including insurers themselves, need to raise risk awareness through education and outreach programmes. Sometimes mandatory insurance, not just for motor third-party liability, can support market growth. Governments and other bodies also need to build their data collection capabilities, to better understand the impacts that insurance can have. This knowledge can inform policy and insurance solution design to sustain the financial stability of households and businesses and, ultimately, progress human development.

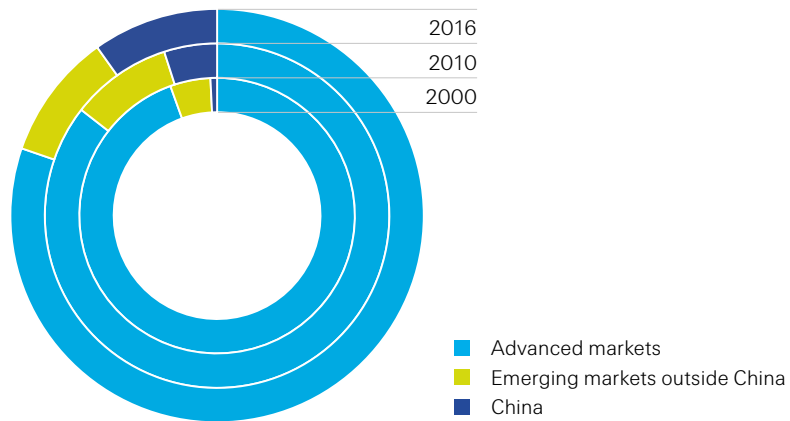
# Introduction

Insurance premiums in emerging markets have grown robustly in recent years.

**Figure 1**  
Share in total global insurance premiums, 2000, 2010 and 2016

## Entering the emerging market era

The rise of emerging markets has been a central theme in insurance over the last two decades. The share of emerging market premiums of the global total accelerated after the financial crisis in 2008, when advanced economies were mired in recession and global insurance sector growth stagnated. By 2016, emerging markets accounted for about 20% of global life and non-life premiums, up from 5% in 2000 (see Figure 1). The same trajectory will likely continue in the coming years, as the middle-income class in emerging markets expands further, there is greater urbanisation and an increase in risk awareness.



Source: Swiss Re Institute.

However, large unprotected risk exposures remain.

Despite these trends, insurance coverage remains inaccessible or unaffordable to many people in emerging markets, and the reality is that many households and businesses remain exposed to a variety of risk scenarios. Natural catastrophes (natcat), for instance, continue to leave a trail of destruction and uninsured losses. In 2016, only around 11% of total economic losses from natcat events in emerging markets were covered by insurance. In advanced markets, the corresponding cover ratio was 42%.<sup>1</sup> The number and value of economic/wealth assets in emerging markets is growing rapidly, and insurance markets are not developing fast enough to close existing protection gaps.

Uninsured risk hampers inclusive growth.

Uninsured risk can aggravate poverty and hinder progress towards inclusive growth.<sup>2</sup> Despite good progress in reducing poverty, 56% of the world's population who live on low-incomes remain vulnerable to falling back into poverty.<sup>3</sup> Every year, 100 million people around the world fall into poverty due to medical costs and 150 million suffer financial catastrophe because of out-of-pocket expenditure on health services.<sup>4</sup> In addition, it is estimated that only 27% of the world population, mostly living in advanced markets, have access to comprehensive social protection.<sup>5</sup>

<sup>1</sup> Source: Swiss Re Institute natcat database.

<sup>2</sup> Inclusive growth goes beyond traditional economic growth models, which tend to focus on increasing the market value of goods and services produced, to adopt a wider perspective combining economic growth with an improvement in the equality of living standards, including labour market participation, human capital, health, environment quality, food security etc. R. Hasmath (ed.), *Inclusive Growth, Development and Welfare Policy: A Critical Assessment*, Routledge, 2015, pp 2–3.

<sup>3</sup> R. Kochhar, *A Global Middle Class Is More Promise than Reality: From 2001 to 2011, Nearly 700 Million Step Out Of Poverty, but Most Only Barely*, Pew Research Center, 2015, [http://www.pewglobal.org/files/2015/07/Global-Middle-Class-Report\\_FINAL\\_7-8-15.pdf](http://www.pewglobal.org/files/2015/07/Global-Middle-Class-Report_FINAL_7-8-15.pdf)

<sup>4</sup> *Universal health coverage (UHC), fact sheet*, World Health Organization, 2016, <http://www.who.int/mediacentre/factsheets/fs395/en/>

<sup>5</sup> *World Social Protection Report 2014-15: Building economic recovery, inclusive development and social justice*, International Labour Organization, June 2014.

The contribution of insurance to development is under-articulated and under-appreciated, but empirical-based study can help.

Earlier studies on the role of insurance focused narrowly on its contribution to GDP growth.

This *sigma* takes a broader view of development, and the associated contribution of insurance.

There is increasing empirical research evaluating the importance of insurance to the growth and development of emerging markets. These studies help clarify the role of insurance in development, but more information is needed to facilitate the dialogue necessary to increase the availability of insurance. A related – though more technical – issue is how the contribution of insurance to development should be measured. The ability to capture the full impact of insurance on societies, from encouraging entrepreneurship to better health outcomes, can help build greater appreciation of the industry’s contribution. On these lines, the International Association of Insurance Supervisors (IAIS) and the Access to Insurance Initiative (A2ii) are calling for better measurement of insurance’s contribution to development through comprehensive data collection (see *Measuring economic and insurance development*).<sup>6</sup> At the same time, increasing adoption of integrated reporting can facilitate concise communication of how insurers create value in the short, medium and long terms, thus helping business better articulate value creation.<sup>7</sup>

Early studies on the contribution of insurance focused mainly on economic growth, as measured by GDP. A review of 85 empirical papers shows mixed findings on how insurance supports growth in GDP.<sup>8</sup> More pertinent, however, is that a sole focus on GDP limits understanding of “inclusive growth”. For example, the health and well-being of a population, education and environmental quality, among others, as facilitated by insurance, are all important determinants of quality of life. However, improvements of these kinds are not expressed in GDP data.

This *sigma* reviews the contribution of insurance to economic growth and a broader definition of development in emerging markets, including quality of life parameters. The report will also examine the various barriers to insurance from the demand and supply sides, and at different approaches (including tech-enabled), being leveraged in different markets to mitigate those barriers. The *sigma* concludes with a synopsis of multi-stakeholder engagement to create a space in which insurers can operate effectively and efficiently.

<sup>6</sup> *Measuring insurance development: beyond the insurance penetration rate, Report of the 21st A2ii-IAIS Consultation Call*, Access to Insurance Initiative, 23 March 2017, [https://a2ii.org/sites/default/files/field/uploads/21\\_consultation\\_call\\_engl\\_web\\_0.pdf](https://a2ii.org/sites/default/files/field/uploads/21_consultation_call_engl_web_0.pdf)

<sup>7</sup> *International Integrated Reporting Framework*, International Integrated Reporting Council, 2013, <https://integratedreporting.org/>

<sup>8</sup> Of the 85 studies, only 14 test causality links i.e., whether insurance growth causes GDP growth, with 8 studies including emerging markets. Five studies find that insurance growth contributes to GDP growth, and the remaining three find mixed results. J. Outreville, “The Relationship Between Insurance and Economic Development: 85 Empirical Papers for a Review of the Literature”, *Risk Management and Insurance Review*, vol 16, no 1, 2012, pp 71–122.

New measures as indicators of social well-being have been proposed, but none have been adopted as a universal standard.

Measuring insurance development is equally challenging ...

...and concerted efforts to collect more data for greater insights are now being made.

### Measuring economic and insurance development

The Stiglitz-Sen-Fitoussi Commission Report of 2009 raises fundamental questions about GDP as a measure of economic and social well-being and progress.<sup>9</sup> As a result of documented drawbacks, various attempts have been made to provide useful alternatives to GDP as a means to measure “progress”. For example, the Human Development Index, which examines three criteria (life expectancy, education and income levels), has been advanced as a more comprehensive indicator of development. But it has also been criticised for aggregating indicators arbitrarily and not taking into account environmental sustainability. Other alternatives include the Genuine Progress Indicator (GPI), Green GDP, Genuine Savings, Subjective Well-being, Gross National Happiness, and Inclusive Wealth Index, among others.<sup>10</sup> These present different challenges. For instance, the GPI, which comprises development variables like income inequality and environment degradation, shows the US economy has stagnated since the late 1970s, rather than having been on the path of steady improvement as suggested by conventional GDP measures.<sup>11</sup>

Insurance faces similar challenges. The value of risk transfer solutions is widely under-appreciated because it is difficult to quantify the outcomes of insurance, such as enabling risk-taking and offering peace of mind. The standard measure to gauge the development of a country’s insurance market is the insurance penetration rate, defined as a country’s total insurance premiums as a percentage of GDP. It provides a numerical basis for international comparison, but it does not show how many people have insurance and nor how valuable that cover is to them. Another insurance value measure is percent of households and businesses with insurance, but this is not widely available. Comparing the insured losses, post event, with the uninsured economic losses is also useful.

Another challenge is lack of quality data. To tackle this, many emerging markets and development agencies now collect insurance information. For instance, the Global Partnership for Financial Inclusion is collecting data on key financial inclusion indicators, though the data can be particularly poor in less developed markets. And the proposals from IAIS and A2ii aim to collate, in three phases, data that can better reflect the value of insurance to consumers, and provide an indication of the stages of insurance market development.<sup>12</sup> These key indicators include, among others, claims ratios and promptness of claims, retention ratios, premiums per covered unit, sum insured as a share of cost of risk, premium as a share of client income, and other indicators to illustrate quality of insurance provided. At the corporate level, the International Integrated Reporting Council advocates more robust financial reporting and communications about how an organisation’s strategy, governance, performance and prospects lead to value creation. In time, all such data and reporting processes should facilitate a more complete assessment of the contribution of insurance to overall development.

<sup>9</sup> J. Stiglitz, A. Sen, J.-P. Fitoussi, *Report by the Commission on the Measurement of Economic Performance and Social Progress*, Stiglitz-Sen-Fitoussi Commission, 2009.

<sup>10</sup> A review of the different indicators and measures of progress can be found in R. Costanza, M. Hart, S. Posner et al., “Beyond GDP: The Need for New Measures of Progress”, *The Pardee Papers, no 4*, Boston University, January 2009, <https://www.bu.edu/pardee/files/documents/PP-004-GDP.pdf>

<sup>11</sup> J. Talberth, C. Cobb, N. Slattery, *The Genuine Progress Indicator 2006: A Tool for Sustainable Development*, Redefining Progress, February 2007.

<sup>12</sup> Access to Insurance Initiative, op. cit.

# How insurance contributes to development

Empirical work on the role of insurance in economic growth started to flourish in the early 2000s.

Most studies find a positive correlation between insurance and economic growth, but evidence of causality is limited.

Insurance contributes directly to economic activity and indirectly by facilitating risk-taking activities.

Recent studies are shedding light on insurance's contribution to human development.

## Insurance and economic growth

The role of insurance in economic growth and trade has long been recognised.<sup>13</sup> At its first session in 1964, the United Nations Conference on Trade and Development (UNCTAD) acknowledged that “a sound national insurance and reinsurance market is an essential characteristic of economic growth”.<sup>14</sup> Even so, empirical work on the relationship between insurance and economic growth really only started to flourish in the early 2000s.

There is a strong positive correlation between insurance and economic growth but direction of causality is ambiguous.<sup>15</sup> Researchers and academics have recently stepped up efforts to better understand the functional relationship between insurance and economic growth. The results also vary depending on country, time period and specific line of business, highlighting the importance of a robust institutional and regulatory framework for a well-functioning insurance market.

Overall, insurance is an integral part of a country's national economy and is indispensable in stabilising income growth and facilitating productive activities. Insurance also contributes directly to economic growth through its business services and employment. In the US, for example, insurance accounted for 2.7% of total economic value added in 2016, out of the financial services sector's overall contribution of 7.3%. However, the positive spill-over effect is much bigger, though difficult to quantify. Consider, for instance, that no aircraft could take off without a legally required insurance policy in place. And, as pointed out by Henry Ford in his reference to construction in New York City in the early 20th century, “this has only been made possible by the insurers. They are the ones who really built this city”.

## Insurance and human development

Many earlier studies focused on the contribution of insurance to financial markets and economic growth. However, insurance also contributes to the well-being of societies in terms of human development, such as a healthy population. Recent studies are now examining insurers' contribution to human development by evaluating the impact on people's choices and opportunities. This concentrates more on how insurance can improve individual lives, without assuming that economic growth automatically leads to greater well-being.

<sup>13</sup> J. Outreville, op. cit.

<sup>14</sup> *Proceedings of the United Nations Conference on Trade and Development, Final Act and Report*, UNCTAD, annex A.IV.23, 1964, p 55.

<sup>15</sup> Out of 95 studies examining the relationship between insurance growth and economic growth, only 19 look at causal impact and of these, only four are emerging market-specific. Only 9 of these studies analyse panel data that include emerging markets. The results are mixed with most finding positive, but some finding neutral or reverse causality. See R. Lester, *Insurance and Inclusive Growth, Policy Research Working Paper 6943*, World Bank, 2014, <http://documents.worldbank.org/curated/en/826921468148789534/pdf/WPS6943.pdf>

## How insurance contributes to development

Beyond immediate financial stress, uninsured risks can negatively impact human development.

Despite the heterogeneity of emerging markets, a common feature is the pervasiveness of risk. There is substantial evidence that uninsured risk hinders human development. At the household and small and medium enterprises (SME) level, risks and shocks have different ex-ante and ex-post impacts, as shown in Table 1.<sup>16</sup> For example, without insurance the risk of fire may prevent a business from investment in its factory and/or lead to bankruptcy after a fire, resulting in short- and long-term consequences. Lack of access to insurance can also aggravate poverty persistence in emerging markets: uninsured risks may, after a large financial burden, drag households back into poverty (see *Uninsured risk and poverty persistence*). Poverty is predominantly an economic issue, but it also has strong implication for human development, such as in terms of nutritional status and educational attainment.

**Table 1**

Some examples of ex ante and ex-post impacts

Ex-ante impacts	Ex-post impacts	
	Short-term	Long-term
<ul style="list-style-type: none"> <li>■ Low innovation and entrepreneurial activities</li> <li>■ High stress</li> <li>■ Less incentives for risk mitigation</li> </ul>	<ul style="list-style-type: none"> <li>■ Reduction in wage labour</li> <li>■ Damage/ destruction of productive/ household assets</li> <li>■ Increase in child labour</li> <li>■ Reduction in food consumption</li> </ul>	<ul style="list-style-type: none"> <li>■ Poor nutritional outcomes</li> <li>■ Poor educational outcomes</li> <li>■ Persistence of poverty</li> <li>■ Poor investment environment</li> </ul>

Source: Compiled from A. Oviedo and H. Moroz, *A review of the ex post and ex ante impacts of risk: World Development Report Background Paper*, World Bank, 2014.

There is growing empirical evidence that uninsured risk leads to higher incidences of poverty.

### Uninsured risk and poverty persistence

Many studies show that uninsured risks contribute to poverty. Ex-ante risk shapes the assets that households hold and the activities they undertake, which in turn affects current and future income growth. The threat of shocks undermine innovation and risk-taking, at the cost of income gains. Poor people with few insurance possibilities may appear to have more innate risk-averse preferences, “but it is the lack of insurance and credit and the set of options available to them that forces them to take less risk and therefore forego income”.<sup>17</sup> Several studies provide evidence that, absent insurance, households engage in low-return activities in order to reduce their risk to major losses, at the expense of potential income growth. For example, asset-poor households in India devote a larger share of land to traditional varieties of rice and castor than to higher-risk but also higher-return varieties.<sup>18</sup> In Tanzania, households with limited liquid assets grow proportionately more low-return, low-risk crops such as sweet potatoes.<sup>19</sup>

Shocks and risk events also have short- and long-term ex-post impacts.

After a shock occurs, there are short- and long-term consequences for household assets, activities and outcomes. In 2001, a study found that drought led to stunted growth among children in Zimbabwe.<sup>20</sup> Meanwhile a recent report on the impact on child growth of the 2004 Indian Ocean tsunami found that while there was substantial catch-up of growth for most children from reconstruction efforts, some

<sup>16</sup> A. Oviedo and H. Moroz, *A review of the ex post and ex ante impacts of risk: World Development Report Background Paper*, World Bank, 2014, provides an extensive literature review of the ex-ante and ex-post impacts of risk.

<sup>17</sup> S. Dercon, “Risk, Growth and Poverty: what do we know, what do we need to know?” *QEH Working Paper 148*, 2006, University of Oxford, <http://www3.qeh.ox.ac.uk/pdf/qehwp/qehwps148.pdf>

<sup>18</sup> J. Morduch, “Income smoothing and consumption smoothing”, *Journal of Economic Perspectives*, vol 9, no 3, 1995, pp 103-114, [https://cdn.uclouvain.be/public/Exports%20reddot/ecru/documents/%2811%29\\_Morduch\\_Income\\_Smoothing\\_JEP\\_95-1.pdf](https://cdn.uclouvain.be/public/Exports%20reddot/ecru/documents/%2811%29_Morduch_Income_Smoothing_JEP_95-1.pdf)

<sup>19</sup> S. Dercon, *Risk, Crop Choice, and Savings: Evidence from Tanzania*, Centre for the Study of African Economies, University of Oxford, 1993, <https://www.csae.ox.ac.uk/workingpapers/pdfs/csae-wps-1993-02.pdf>

<sup>20</sup> J. Hoddinott, B. Kinsey, “Child Growth in the Time of Drought”, *Oxford Bulletin of Economics and Statistics*, vol 63, no 4, 2001, pp 409–436.



were still deficient in height.<sup>21</sup> In Ethiopia, the severity of the 1984-5 famine has been shown to have caused slower growth in household consumption in the 1990s.<sup>22</sup> And several studies find that shocks significantly lower school attainment.<sup>23</sup> In Guatemala, tropical storm Agatha in 2010 had a significant negative impact, particularly among urban households.<sup>24</sup> Per capita consumption fell by 12.6%, and the poverty rate went up by 5.5 percentage points (ppt). These negative effects partly explain the increase in poverty seen in urban Guatemala between 2006 and 2011, which national authorities and analysts previously attributed solely to the collateral effects of the global financial crisis.

RCT-based field experiments provide causal evidence of the impact of insurance on human development.

## Empirical investigation into the role of insurance

The past decade has seen an emergence of field studies and experiments to better ascertain the value and contribution of insurance to development in emerging markets. Many use randomised controlled trials (RCTs) that typically divide a study population (individuals, households, villages or districts.) into treatment and control groups, administering an intervention to the treatment group to understand the causal impact of the intervention. RCTs can help to solve problems associated with causal inference, unlike non-randomised testing, which does have some drawbacks. For example, comparing households with health insurance to those without, if less healthy people are more inclined to buy insurance, worse health outcomes among the population purchasing insurance would be observed. However, it would be illogical to conclude from this relationship that insurance degrades health. The random sampling within RCTs helps avoid this potential problem. Recent RCT studies are providing a micro foundation for the strong correlation between insurance and economic growth. Further, they show that the benefits of insurance depend very much on the quality of the insurance coverage and the institutional environment around it.

The more granular insights on the role of insurance offered by empirical study can inform policy decisions.

Recent empirical studies, many using RCTs, largely supplement theoretical arguments that insurance has an important role to play in supporting and facilitating growth in emerging countries (see Table 2 for a summary.) The findings could have important implications for government policy. For example, studies have compared the benefits of insurance relative to cash transfer, and found that insurance might be more beneficial than cash transfers, both psychologically and in terms of increasing expected incomes.<sup>25,26</sup> Another indicates that providing insurance subsidies may be a more cost-effective way of altering poverty dynamics than traditional social protection policies, suggesting public-private partnership (PPP) between governments and insurance companies as a useful avenue of providing social protection.<sup>27</sup> Better understanding and utilisation of these findings could improve the outcomes of fiscal spending to alleviate poverty.

<sup>21</sup> E. Frankenberg, J. Friedman, N. Ingwersen et al., "Linear child growth after a natural disaster: a longitudinal study of the effects of the 2004 Indian Ocean tsunami". *The Lancet*, vol 389, Supplement 2, 2017, p S21.

<sup>22</sup> S. Dercon, "Growth and shocks: evidence from rural Ethiopia", *Journal of Development Economics*, vol 74, no 2, 2004, pp 309–329.

<sup>23</sup> Glick et al. provide both literature review and empirical evidence. See P. Glick, D. Sahn, T. Walker, *Household Shocks and Education Investments in Madagascar: IZA Discussion Paper, no 8731*, IZA, 2014, <https://www.econstor.eu/bitstream/10419/107507/1/dp8731.pdf>

<sup>24</sup> J. Baez, L. Lucchetti, M. Genoni et al., *Gone with the Storm: Rainfall Shocks and Household Wellbeing in Guatemala*, IZA Discussion Paper, no 8792, IZA, 2015, <http://anon-ftp.iza.org/dp8792.pdf>

<sup>25</sup> J. Haushofer, M. Chemin, C. Jang et al., *Peace of Mind: Health Insurance Reduces Stress and Cortisol Levels – Evidence From a Randomized Experiment in Kenya*, Princeton University, 2017.

<sup>26</sup> N. Jensen, C. Barrett, A. Mude, "Cash Transfers and Index Insurance: A Comparative Impact Analysis from Northern Kenya", *Journal of Development Economics*, online, 2017, <http://www.sciencedirect.com/science/article/pii/S0304387817300627>

<sup>27</sup> S. Janzen, M. Carter, M. Ikegami, *Valuing Asset Insurance in the Presence of Poverty Trap*, Working Paper, University of California, 2012.

## How insurance contributes to development

**Table 2**

A selection of recent empirical research using RCTs on insurance and development outcomes

<b>Findings on risk-taking behaviour</b>		<b>Source study</b>
Random assignment of insurance policies to farmers in India	Insured farmers are more likely to plant riskier cash crops (eg, castor, groundnut) with higher expected profit but which also require more rain, rather than subsistence crops (eg, sorghum).	S. Cole, X. Giné, J. Vickery, "How does risk management influence production decisions? Evidence from a field experiment", <i>The Review of Financial Studies</i> , vol 30, no 6, 2017, pp 1935–1970.
Random assignment of rainfall insurance in India	Farmers with insurance plant riskier varieties of rice that have greater expected yields but are less drought-tolerant	A. Mobarak and M. Rosenzweig, "Informal Risk Sharing, Index Insurance, and Risk Taking in Developing Countries", <i>American Economic Review</i> , vol 103, no 3, 2013, pp 375–380.
Random assignment of insurance and cash grants in Ghana	Cash grants alone do not increase agricultural investment but insured farmers do invest more	D. Karlan, I. Osei-Akoto, R. Osei et al., "Agricultural decisions after relaxing credit and risk constraints", <i>The Quarterly Journal of Economics</i> , vol 129, no 2, 2014, pp 597–652.
Random assignment of sow insurance in China	Sow insurance encourages farmers to raise sows, which is a risky but higher-yielding activity	H. Cai, Y. Chen, H. Fang et al., "The Effect of Microinsurance on Economic Activities: Evidence from a Randomized Field Experiment", <i>Review of Economics and Statistics</i> , vol 97, no 2, 2015, pp 287–300.
<b>Findings on peace of mind</b>		
Random assignment of insurance among informal workers in Kenya	Insured workers have lower levels of cortisol and lower self-reported stress than workers without insurance	J. Haushofer, M. Chemin, C. Jang et al., <i>Peace of Mind: Health Insurance Reduces Stress and Cortisol Levels – Evidence from a Randomized Experiment in Kenya</i> , Princeton University, 2017.
<b>Findings on avoiding costly coping strategies</b>		
Random assignment of livestock insurance in Kenya	Households with insurance are less likely to sell assets and reduce food consumption	S. Janzen and M. Carter, <i>After the Drought: The Impact of Microinsurance on Consumption Smoothing and Asset Protection, Working Paper 19702</i> , The National Bureau of Economic Research, 2013.
Random assignment of health and accident insurance in Pakistan	Lower incidence of child labour among insured households	A. Landmann and M. Frölich, <i>Can microinsurance help prevent child labor? An impact evaluation from Pakistan, IZA Discussion Paper Series, no 7337</i> , IZA, 2013.
<b>Findings on utilisation of healthcare and reduced health expenditure</b>		
Random assignment of health insurance in Nicaragua	Health insurance improves utilisation of healthcare among insured children	A. Fitzpatrick and R. Thornton, "The Effects of Health Insurance within Families: Experimental Evidence from Nicaragua", <i>Policy Research Working Paper 8115</i> , World Bank, 2017.
Random assignment of health insurance for the informal sector in Nicaragua	Insured households have lower out-of-pocket health expenditures	R. Thornton, L. Hatt, E. Field et al., "Social Security Health Insurance for the Informal Sector in Nicaragua: A Randomized Evaluation", <i>Health Economics</i> , vol 19, Special Edition, 2010, S. 181–206.
Random assignment of health insurance in Kenya	Health insurance reduces net health spending and informal borrowing for medical costs. There is also increased consumption (including of non-food items).	S. Dercon, J. Gunning, A. Zeitlin et al., <i>The Impact of a Health Insurance Programme: Evidence from a Randomized Controlled Trial in Kenya, ILO, Research Paper Nr. 24</i> , Microinsurance Innovation Facility/ILO, 2012.
Random assignment of health insurance in Cambodia	Health insurance has the greatest impact on economic outcomes, such as less incidence of taking on new debt due to a health shock	D. Levine, R. Polimeni and I. Ramage, "Insuring Health or Insuring Wealth? An Experimental Evaluation of Health Insurance in Rural Cambodia", <i>Journal of Development Economics</i> , vol 119, 2016, S. 1–15.

Source: Swiss Re Institute.

Insurers contribute to economic growth and development by managing risks, offering financial protection and making investments.

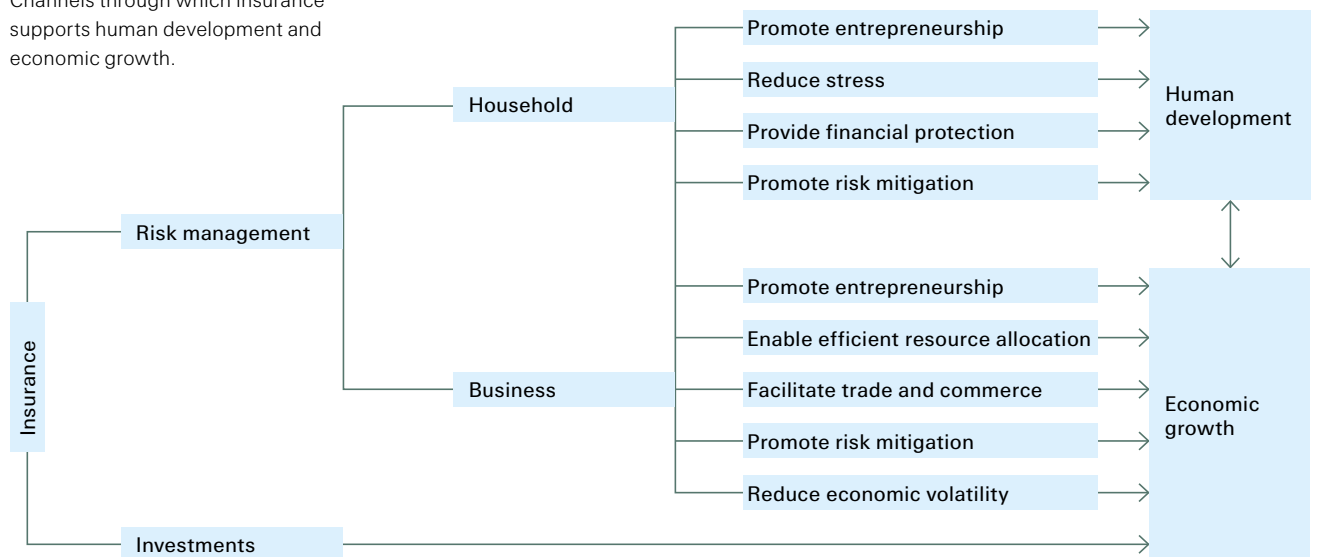
### A functional view of the contributions of insurance

A more nuanced view of the role of insurance in economic growth and development is offered by reviewing the various functions of insurance, of which three are key:

- Insurance enables economies and individuals to be more enterprising and supports risk mitigation through ex-ante risk management;
- Ex-post, insurance allows households, businesses and economies to recover more quickly in the aftermath of an insured event; and
- Insurance plays an important role in funnelling savings into investments.

Figure 2 gives a high level overview of the contributions of insurance to both economic growth and human development. Then follows a deeper assessment of the ex-ante and ex-post impacts of risk transfer solutions. These apply in both the emerging and advanced markets.

**Figure 2**  
Channels through which insurance supports human development and economic growth.



Source: Swiss Re Institute.

Risk-transfer has several ex-ante effects even before the occurrence of a shock.

### Ex-ante issues

Even before the occurrence of a shock, the availability of insurance leads to several ex-ante effects such as supporting entrepreneurship, enabling efficient resource allocation, facilitating trade and commerce, encouraging risk mitigation, and offering peace of mind.

Risk transfer via pooling risks globally can reduce emerging markets' aggregate exposure.

Furthermore, if markets are open, emerging countries can access capital from global re/insurers. By transferring some risks to these players, countries can reduce their overall exposures. For low-income countries with a large exposure to natcat risk, this can be very helpful post-event. Because the large re/insurers are globally diversified, the cost of protection against catastrophic events can be minimized and should an event occur, the real GDP growth trajectory can be smoother with the payment of claims from outside the country. This illustrates the automatic stabiliser role of insurance in smoothing out income and financial volatility due to external shocks.

## How insurance contributes to development

Through risk transfer, insurance enables new markets and encourages entrepreneurship.

Risk-based pricing generates a signal for efficient resource allocation and reduces sub-optimal precautionary savings.

The availability of insurance is instrumental in supporting international trade and commerce.

- **Supporting entrepreneurship:** Risk management is a key factor in business. Insurance products such as transport and liability cover enable businesses to explore new markets and invest in new products and technologies. Transferring insurable risks to an efficient insurance market thus facilitates entrepreneurial spirit and the pursuit of higher value-add activities. For example, insurance can help manage risks associated with the development and operation of renewable energy projects. Besides protecting against physical accidents or delays due to inclement weather, insurance solutions can also reduce revenue volatility by compensating for the periods when the sun does not shine, the wind does not blow or when energy prices fall, improving the return on investment of renewable energy projects. A number of studies have shown that weather index insurance can improve farmers' planting decisions, causing them to plant riskier, higher yield crops.<sup>28</sup> Similar results have been obtained for livestock insurance.<sup>29</sup> A study in 2014 tested the relative importance of capital constraints and uninsured risk, and found that uninsured risk was a binding constraint on farmer investment, more so than liquidity constraints.<sup>30</sup> These results show that uninsured risk is a bigger obstacle than previously understood, and that insurance can facilitate both consumption smoothing and increase incomes expectations.
- **Enabling efficient resource allocation:** Insurers gather, analyse and disseminate information about risks, thereby providing better understanding of the exposures that households, businesses, societies and economies face. As providers of information about and pricing for risks, insurers help reduce information asymmetry and optimise resource and credit allocation.<sup>31</sup> For example, high insurance premiums for a building located in a hurricane zone or flood plain can discourage construction in that area. Insurance can also help to reduce sub-optimal precautionary savings. In a world without insurance, individual, households, enterprises and governments would need to hold additional liquid financial assets to cope with unexpected losses. For example, a family may not be able to invest in education for their children because of fear of their house burning down. An RCT in Pakistan showed that increased health and accident insurance reduced the use of child labour, and that the impact is related to ex-ante effects of insurance.<sup>32</sup>
- **Facilitating trade and commerce:** Insurance also plays a significant role in international trade and commerce, thereby supporting economic growth.<sup>33</sup> Insurance markets provide protection against some of the risks associated with international trade, such as damage or loss of goods in transit and credit risks associated with the non-payment by foreign customers.

<sup>28</sup> S. Cole, X. Giné, J. Vickery, "How does risk management influence production decisions? Evidence from a field experiment", *The Review of Financial Studies*, vol 30, no 6, 2017, pp 1935–1970.

<sup>29</sup> H. Cai, Y. Chen, H. Fang et al., "The Effect of Microinsurance on Economic Activities: Evidence from a Randomized Field Experiment", *Review of Economics and Statistics*, vol 97, no 2 2015, pp 287–300.

<sup>30</sup> D. Karlan, I. Osei-Akoto, R. Osei et al., "Agricultural decisions after relaxing credit and risk constraints", *The Quarterly Journal of Economics*, vol 129, no 2 .2014, pp 597–652.

<sup>31</sup> J. Greenwood and B. Jovanovic, "Financial Development, Growth, and the Distribution of Income", *Journal of Political Economy*, vol 98, no 5 1990, pp 1076–1107.

<sup>32</sup> A. Landmann and M. Frölich, *Can microinsurance help prevent child labor? An impact evaluation from Pakistan*, IZA Discussion Paper Series, no 7337, IZA, 2013, <https://www.econstor.eu/bitstream/10419/71703/1/742106039.pdf>

<sup>33</sup> In a seminal paper, Newbery and Stiglitz (1984) develop a stylised model showing that trade may actually be welfare decreasing in the absence of insurance. Empirically, Allen and Atkin (2016) find that in India, farmers' ability to insure against risk allowed them to take advantage of new (risky) opportunities, amplifying the gains from trade. D. Newbery and J. Stiglitz, "Pareto Inferior Trade", *The Review of Economic Studies*, vol 51, no 1 1984, pp 1–12. See also T. Allen and D. Atkin, *Volatility and the Gains from Trade*, Working Paper 22276, Northwestern and the National Bureau of Economic Research, 2016.

Insurance incentivises adoption of risk mitigation measures.

Recent field experiment suggests that insurance may even reduce stress through a peace-of-mind effect.

After an insured event, insurance provides a great amount of stability to households and society.

Insurance can reduce income volatility, post event.

Disaster risk financing using insurance is particularly important for small emerging markets with constrained fiscal means and high levels of indebtedness.

- **Risk prevention and mitigation:** In many emerging markets, there is a lack of interest and resources to adopt risk mitigation measures, ranging from more resilient building codes, to mandatory fire detection in buildings or compulsory health check-ups. In general, these measures reduce both direct and indirect losses to businesses and individuals post an event. Insurance pricing provides a signal which incentivises companies and households to, for example, build safer structures. The role of insurance is also important in the context of natcats, where risk mitigation measures taken by governments, businesses and households against floods or windstorms, for example, help sustain economic growth by reducing the scale of financial and economic losses post a disaster event.
- **Offering “peace of mind” to policyholders:** Insurance can offer “peace of mind”. However, quantifying this utility in economic terms is challenging because peace of mind “is an unconscious fact, which cannot be measured, unlike assets under management and insurers’ contribution to GDP”.<sup>34</sup> A recent study, however, has sought to provide a measure of peace of mind through self-reported levels of stress and actual cortisol (the “stress hormone”) levels.<sup>35</sup> In a randomised controlled trial among informal workers in Nairobi, Kenya, researchers found that health insurance may reduce stress and cortisol levels through a peace-of-mind effect. Stress has significant welfare costs. It is correlated with undesirable psychological outcomes such as depression, but is also associated with a weakened immune system, which has economic costs. Moreover, the researchers found that those participants with health insurance reported lower cortisol and stress levels than those receiving unconditional cash transfers, (ie, welfare programs without any conditions upon the beneficiaries’ actions).

### *Ex-post financial protection*

After an insured event, insurance reduces volatility and prevents negative spill-over effects, supports resilience, provides financial protection, facilitates cost-coping strategies and helps maintain health standards.

- **Insurance reduces income volatility:** By paying claims, insurers help stabilise the financial positions of enterprises and households after major loss events, and limit negative spill-overs. Businesses that incur significant uninsured losses may suffer major financial shocks or even fail. The negative spill overs on the wider economy could include higher unemployment, suppliers losing business, and governments missing tax revenues. In a severe scenario, there could even be economic recession. The Mw 8.8 earthquake that hit Chile on 27 February 2010 offers a good illustration of the benefits that sufficient re/insurance protection offers. A study by the Chilean regulator shows that out of the USD 30 billion in economic losses, USD 8.0 billion were covered by insurance, a significantly high coverage especially by emerging market standards. Foreign reinsurers absorbed close to 95% of the insured losses providing important relief for the Chilean domestic market.
- **Insurance supports resilience in emerging markets post natcat events:** A 2012 study found that in the case of natcats, it is mainly uninsured losses that drive the macroeconomic costs in both the short- and long-term. On the other hand, sufficiently insured events are inconsequential in terms of foregone output.<sup>36</sup> The findings suggest that disaster risk financing, in particular risk transfer to insurance markets, helps minimise the cost and optimises the timing of meeting post-disaster funding needs without compromising development goals and fiscal stability, which is especially important in low-income emerging markets.

<sup>34</sup> K. Hoppe, “The value of insurance to society”, *Risk Management Newsletter 51*, The Geneva Association, 2012.

<sup>35</sup> J. Haushofer et al., op. cit.

<sup>36</sup> G. Peter, S. von Dahlen, S. Saxena, *Unmitigated disasters? New evidence on the macroeconomic cost of natural catastrophes*, Working Paper 394, BIS, 2012, <http://www.bis.org/publ/work394.pdf>

## How insurance contributes to development

Insurance provides financial protection to households in the event of a shock scenario.

In the case of a loss event, insurance can reduce reliance on costly coping strategies.

There is some evidence that health insurance improves access to and use of health services, and reduces health expenditures.

- **Providing financial protection:** Just as insurance helps stabilise the financial positions of enterprises after major loss events, so does it help households maintain financial status. A recent study found that insurance payments allowed farmers to cultivate larger land areas in subsequent growing seasons following a weather shock.<sup>37</sup> The insurance payments also resulted in higher household expenditures per capita, indicating welfare gains.
- **Avoiding costly coping strategies:** A number of studies have shown that insurance coverage may help policyholders avoid costly post-event coping strategies, as shown in Table 1. For example, an RCT-based investigation in Kenya found that index-based livestock insurance made households less likely to sell assets, and also that they were less likely to reduce their food consumption, following a drought.<sup>38</sup>
- **Increase utilisation of healthcare and reduce health expenditure:** In most cases, empirical evidence shows increased access to and use of health services in the event of a shock for insured households.<sup>39</sup> However sometimes insurance can lead to moral hazard, in which insureds take fewer measures to limit risk on the expectation that losses will be covered by insurance. In the case of emerging markets, the limited empirical evidence available is less conclusive. The use of group insurance with peer monitoring has been shown to reduce moral hazard in many situations. And, whereas utilisation rates for preventive health care (ex-ante) are less clear-cut, utilisation rates for curative health services (ex-post) increase for insureds.<sup>40</sup> An RCT study in Nicaragua in 2017 found that health insurance improves utilisation of healthcare among insured children.<sup>41</sup> And most empirical evidence finds a decrease in household health expenditures once insured,<sup>42,43,44</sup> (see Table 2). However, a few studies do not find this positive impact, either because of a high co-payment rate or limited coverage.<sup>45</sup>

<sup>37</sup> A. de Janvry, E. Ritchie, E. Sadoulet, *Weather Index Insurance and Shock Coping: Evidence from Mexico's CADENA Program*, Policy Research Working Paper 7715, World Bank, 2016.

<sup>38</sup> S. Janzen and M. Carter, *After the Drought: The Impact of Microinsurance on Consumption Smoothing and Asset Protection*, Working Paper 19702, The National Bureau of Economic Research, 2013.

<sup>39</sup> Escobar et al. (2010) provide an extensive review of the impact of health insurance in low-and middle income countries. M.L. Escobar, C. Griffin, R. Shaw (ed.), *The Impact of Health Insurance in Low- and Middle-Income Countries*, The Brookings Institution, 2010.

<sup>40</sup> O. De Bock and D. Ontiveros, *Literature Review on the Impact of Microinsurance*, Research Paper no 35, Microinsurance Innovation Facility/ILO, 2013.

<sup>41</sup> A. Fitzpatrick and R. Thornton, *The Effects of Health Insurance within Families: Experimental Evidence from Nicaragua*, Policy Research Working Paper 8115, World Bank, 2017.

<sup>42</sup> D. Levine, R. Polimeni, I. Ramage, "Insuring Health or Insuring Wealth? An Experimental Evaluation of Health Insurance in Rural Cambodia", *Journal of Development Economics*, vol 119, 2016, pp 1–15.

<sup>43</sup> S. Dercon, J. Gunning, A. Zeitlin et al., *The Impact of a Health Insurance Programme: Evidence from a Randomized Controlled Trial in Kenya*, Research Paper no 24, Microinsurance Innovation Facility/ILO 2013.

<sup>44</sup> R. Thornton, L. Hatt, E. Field et al., "Social security health insurance for the informal sector in Nicaragua: A randomized evaluation." *Health Economics*, vol 19, special editor, 2010, pp 181–206.

<sup>45</sup> O. Bock and D. Ontiveros, op. cit.

### *Funnelling savings into investments*

Insurance reduces the need for precautionary savings and redirects those savings into investments

Insurance not only helps to reduce sub-optimal precautionary savings but also facilitates the funnelling of savings into investments. In emerging countries, which often have under-developed capital markets, precautionary savings may not find a way into institutions which can utilise the savings for investments. The availability of insurance can help by redirecting those savings, which insurers receive in the form of insurance premiums, into productive (and often long-term) investment assets.<sup>46</sup>

Insurance companies invest premium flows into assets, ...

Insurers are major institutional investors. They receive a flow of premiums and, as claims do not all occur at the same time, insurers invest the premiums in assets which match the duration of the time claims are expected to be paid. The assets are short-term investments for many property lines, and longer-term for casualty lines and life insurance policies. In addition, life insurers usually have a wide range of products with a savings component, of which they invest some to meet future claims connected with the policy (eg, guaranteed interest rate policy), and some is invested by the insured (eg, variable annuities). Insurers mostly invest in fixed income products, when available. Equities and alternative asset classes tend to be a smaller share of total assets.

... and that boosts economic growth.

The role of insurers as institutional investors is an important one for the economy. In some advanced countries, insurers and pension funds (which hold about the same amount of assets as insurers), have assets representing over 60% of national GDP.<sup>47</sup> In emerging markets, as the insurance sector grows, so too will the importance of insurers as investors. Since insurers need to match their assets to their risks, the investments tend to be in local currency, which further builds the domestic economy.

<sup>46</sup> Insurers contribute to economic growth by facilitating the efficient allocation of capital, but that the effect is greater when both banking and insurance sectors are present, according to I. Webb, M. Grace, H. Skipper, "The effect of banking and insurance on the growth of capital and output," *Centre for Risk Management and Insurance, Working Paper 02-1*, 2002.

<sup>47</sup> R. Della Croce, J. Yermo, "Institutional investors and infrastructure financing", *OECD Working Papers on Finance, Insurance, and Private Pensions*, no 36, OECD Publishing, 2013. [http://www.oecd.org/daf/fin/private-pensions/WP\\_36\\_InstitutionalInvestorsAndInfrastructureFinancing.pdf](http://www.oecd.org/daf/fin/private-pensions/WP_36_InstitutionalInvestorsAndInfrastructureFinancing.pdf)

## How insurance contributes to development

The UN's global development agenda is to end poverty and protect the planet.

Insurance contributes to many aspects of the UN's "Sustainable Development Goals".

### Insurance and Sustainable Development Goals (SDGs)

On 25 September 2015, the 190 member countries of the United Nations adopted the Sustainable Development Goals (SDGs). These are a set of 17 global goals and 169 targets to end poverty, protect the planet and ensure prosperity for all. The SDGs reflect the growing understanding that the global development agenda needs to integrate human development and environmental sustainability.

Insurance contributes to many aspects of the SDGs but the word "insurance" appears only once among the set of goals, targets and indicators. Under SDG 8, the target is to "strengthen the capacity of domestic financial institutions to encourage and expand access to banking, insurance and financial services for all". Despite the just one mention, a closer look at the SDGs reveals that insurance is implicit in a number of the goals, and can be categorised into levels of contribution, as shown in Table 3.<sup>48</sup>

**Table 3**

Categorisation of insurance industry's contributions to SDGs

Low	Medium	High
<ul style="list-style-type: none"> <li>■ <b>SDG4 Quality education</b> – supporting technical skills and financial literacy</li> <li>■ <b>SDG6 Clean water and sanitation</b> – investments and insurance for water infrastructure</li> <li>■ <b>SDG14 Life below water</b> – risk mitigation in marine insurance</li> <li>■ <b>SDG15 Life on land</b> – investments in protection and restoration of natural habitats</li> <li>■ <b>SDG16 Peace, justice and strong institutions</b> – promote responsible business</li> </ul>	<ul style="list-style-type: none"> <li>■ <b>SDG5 Gender equality</b> – women in managerial positions</li> <li>■ <b>SDG7 Affordable and clean energy</b> – investments and insurance for clean energy projects</li> <li>■ <b>SDG10 Reduced inequalities</b> – investments in emerging markets</li> <li>■ <b>SDG11 Sustainable cities and communities</b> – disaster risk mitigation</li> <li>■ <b>SDG13 Climate change</b> – environmental risk mitigation</li> </ul>	<ul style="list-style-type: none"> <li>■ <b>SDG1 No poverty</b> – access to insurance, including microinsurance; risk mitigation</li> <li>■ <b>SDG2 Zero hunger</b> – insurance solutions for climate resilient agriculture; investments in agriculture; risk mitigation</li> <li>■ <b>SDG3 Good health and wellbeing</b> – health insurance and health risk mitigation</li> <li>■ <b>SDG8 Decent work and economic growth</b> – support domestic financial institutions; insurance for SMEs</li> <li>■ <b>SDG9 Industry, innovation and infrastructure</b> – investments in infrastructure; insurance for SMEs</li> <li>■ <b>SDG12 Responsible production and consumption</b> – sustainability reporting</li> <li>■ <b>SDG17 Partnerships for the goals</b> – support for broader role of financial sector within sustainable development</li> </ul>

Source: *Insurance 2030: Harnessing Insurance for Sustainable Development*, UNEP Inquiry/PSI, 2015, and Swiss Re Institute.

<sup>48</sup> Based on a critical examination of the goals, targets or indicators, those that have a clear link to access to financial services are categorised as "high" contribution, as it relates to the fundamental business of insurance. Those that have a clear link to investments and risk mitigation are categorised as "medium" contribution, as there is much room for insurance to contribute in this space in emerging markets. Finally, "low" contribution are those that do not have a direct link to financial services, but nevertheless where the insurance industry can play a role.



# Barriers to insurance: an evidence-based approach

Insurance markets face numerous demand and supply-side barriers.

To date, insurance has not made its full contribution to development in the emerging markets. The provision of insurance is less efficient in the emerging than in the advanced markets due to various barriers from both the demand and supply sides. The benefits of insurance must be weighed against the costs of providing cover: whereas the benefits of insurance can be high, so can the cost of providing insurance.

## Demand-side barriers

There are eight key demand-side barriers to insurance in the emerging market context:

There are a number of demand-side barriers to take-up of formal-sector insurance.<sup>49</sup> A review of literature highlights eight that are particularly relevant in the emerging market context.

Price (although other factors may carry more weight),...

- **Affordability:** Standard economic theory states that for normal goods, demand falls as prices rise. Several studies have explored the price sensitivity of insurance by randomly assigning discount vouchers or subsidies. The findings show, not surprisingly, that price is negatively correlated with demand.<sup>50</sup> However, in many emerging markets, even when heavily subsidised, demand for insurance is very low.<sup>51</sup> This suggests other factors (eg, trust in insurance) may influence buying behaviours more so than price.

... liquidity constraints, ...

- **Liquidity constraints:** Even when insurance is affordable, liquidity constraints pose barriers. Studies have found that less wealthy farm households have little to no margin to buy insurance after paying for agricultural needs at the start of the growing season, which is when cover must be purchased.<sup>52, 53</sup> Lack of finance is also cited as one of the biggest barriers to buying insurance for small and medium enterprises in the emerging markets (see Insuring SMEs in emerging markets). Innovations in contract design can help address such issues. For example, an RCT in 2013 in which farmers in rural China were able to pay premiums at the end of the insured period tripled the take-up rate.<sup>54</sup>

... lack of trust in insurers, ...

- **Trust:** Numerous studies based on qualitative responses note that lack of trust in insurance providers is a major barrier to insurance demand.<sup>55</sup> This may be more so in the emerging markets with weak legal and regulatory systems for enforcing payment of valid claims. An important aspect of the lack of trust is the possibility of contract non-performance. Expectations of non-performance that may arise from contract exclusions, insurer bankruptcy, basis risk (when insurance payouts are not well-correlated with underlying losses), and in some cases non-payment of valid claims, can have a negative influence on demand.<sup>56</sup> In terms of basis risk,

<sup>49</sup> See, for example, M. Eling, S. Pradhan, J. Schmit, "The determinants of microinsurance demand", *The Geneva Papers on Risk and Insurance-Issues and Practice*, vol 39, no 2, 2014, pp 224–263.

<sup>50</sup> A. Mobarak and M. Rosenzweig, "Informal Risk Sharing, Index Insurance, and Risk Taking in Developing Countries", *American Economic Review*, vol 103, no 3, 2013, pp 375–380. See also S. Cole, X. Giné, J. Tobacman et al., "Barriers to Household Risk Management: Evidence from India", *American Economic Journal: Applied Economics*, vol 5, no 1, 2013, pp 104–135.

<sup>51</sup> Thornton et al. op. cit. find that take-up rates were about 20% for subsidised insurance premiums in Nicaragua, but in the second year fewer than 10% continued to purchase the subsidised policies. Cole et al. (2013) op. cit. note that even when an insurance policy was so highly subsidised as to yield an expected return of up to 181%, only half of the households offered the policy purchased it. .

<sup>52</sup> X. Giné, R. Townsend, J. Vickery, "Patterns of Rainfall Insurance Participation in Rural India", *World Bank Economic Review*, vol 22, no 3, 2008, pp 539–566.

<sup>53</sup> Cole et al. (2013), op. cit.

<sup>54</sup> Y. Liu, K. Chen, R. Hill et al., *Borrowing from the insurer: An empirical analysis of demand and impact of insurance in China*, Research Paper, no 34, Microinsurance Innovation Facility/ILO, 2013.

<sup>55</sup> Cole et al. (2013), op. cit. See also H. Cai, Y. Chen, H. Fang et al., *Microinsurance, trust, and economic development: Evidence from a randomized natural field experiment*, Working paper 15396, The National Bureau of Economic Research, 2009.

<sup>56</sup> S. Dercon, J. Gunning, A. Zeitlin, *The demand for insurance under limited trust: Evidence from a field experiment in Kenya*, Stanford Institute for Theoretical Economics, 2015, [https://site.stanford.edu/sites/default/files/dgz\\_201503.pdf](https://site.stanford.edu/sites/default/files/dgz_201503.pdf)

a 2013 study found that for every kilometre increase in a farmer's perceived distance to the weather station used to calculate insurance payouts (the proxy for basis risk), demand fell by 6.4%.<sup>57</sup>

...and lack of awareness.

- **Awareness:** Many studies find lack of awareness to be a critical barrier to insurance demand. Relatedly, so is financial literacy. The empirical evidence is mixed, some studies finding that demand is higher among households with higher financial literacy, and others finding no relationship.<sup>58</sup> The mixed results may be due to different ways of measuring financial literacy. There have recently also been a wave of programmes to improve the financial literacy skills of individuals. However, these have likewise yielded mixed outcomes, with some improving insurance take-up rates, while others have no impact.<sup>59</sup>

Despite their importance to economic development, SMEs in emerging markets are mostly under- or totally uninsured.

### Insuring SMEs in emerging markets

Insuring small- and medium-sized enterprises (SMEs) in emerging markets has received less attention than health and agricultural coverage, even though small business owners are vital to economic development, create most jobs and also face large income volatility.<sup>60</sup> In emerging markets there are around 80–95% of the world's estimated 420–510 million SMEs.<sup>61</sup> Formal SMEs contribute up to 60% of total employment and up to 40% of the GDP of emerging economies.<sup>62</sup> Despite their economic importance, however, SMEs are generally underinsured or uninsured. For example, a 2012 report estimated that in Malawi only 2% of small businesses have ever bought an insurance policy. Similarly low penetration was observed in other African markets: 1% in Mozambique, 4% in Tanzania, and 5% in Zimbabwe.<sup>63</sup> In a separate study by the International Financial Corporation which analysed survey data from over 45 000 businesses in 106 emerging markets, access to finance (often facilitated by insurance) topped the list of constraints faced by businesses and this was a greater problem for small businesses than large ones.<sup>64</sup>

Another demand-side barrier is informal risk-sharing networks, which can crowd-out formal insurance or complement it.

- **Informal risk sharing:** Informal risk sharing networks are the original form of insurance, but can present a barrier to a formal insurance market. There is some evidence that strong informal networks crowd out government health insurance schemes,<sup>65</sup> but there is also evidence that risk-sharing networks can complement formal insurance.<sup>66</sup> Importantly, recent research also shows that formal insurance mechanisms can crowd out informal risk-sharing mechanisms.<sup>67</sup> Leveraging the awareness of how informal risk sharing is a benefit to participants could lead to a better understanding of formal insurance.

<sup>57</sup> Distance to weather station works as a proxy for basis risk as the further the distance to the weather station, the more risk that the weather station does not capture the rainfall data accurately. For example, if there is heavy rain and the weather station fails to capture this due to its distance from the field, there is more basis risk for farmers. A. Mobarak and M. Rosenzweig, op. cit.

<sup>58</sup> Giné et al. (2008) and Cole et al. (2013) find a positive relationship whereas Dercon et al. (2012), op. cit. do not find a relationship.

<sup>59</sup> Gaurav et al. find a positive impact whereas Bonan et al. do not find an impact. See S. Gaurav, S. Cole, J. Tobacman. "Marketing complex financial products in emerging markets: Evidence from rainfall insurance in India", *Journal of Marketing Research*, vol 48, special issue, 2011, pp 150-162. Also J. Bonan, O. Dagnelie, P. L.-Boucher et al., *Is it all about money? A randomized evaluation of the impact of insurance literacy and marketing treatments on the demand for health microinsurance in Senegal*, ILO Impact Insurance Facility Research Paper, no 14, ILO, 2012.

<sup>60</sup> M. Groh and D. McKenzie, "Macroinsurance for microenterprises: A randomized experiment in post-revolution Egypt", *Policy Research Working Paper 7048*, World Bank, 2014.

<sup>61</sup> A. Merry, Insurance for Small Businesses, *ILO Impact Insurance Facility Research Paper*, no 43, ILO, 2016.

<sup>62</sup> *Small and Medium Enterprises (SMEs) Finance*, World Bank, 2015.

<sup>63</sup> *FinScope MSME survey 2012*, FinMark, 2012.

<sup>64</sup> A. Merry, op. cit.

<sup>65</sup> M. Jowett, "Do informal risk sharing networks crowd out public voluntary health insurance? Evidence from Vietnam", *Applied Economics*, vol 35, no 10, 2003, pp 1153–1161.

<sup>66</sup> A. Mobarak and M. Rosenzweig, op. cit.

<sup>67</sup> A. Landmann, B. Volla, M. Frölich, *Insurance versus savings for the poor: Why one should offer either both or none*, IZA discussion paper 6298, IZA, 2012.

Quality of service is an important determinant of insurance demand.

Behavioural biases can hinder insurance demand.

Cultural factors also impact demand for insurance.

Several supply-side factors also affect insurance demand.

Transaction costs, such as premium collection costs, costs of verification and distribution costs, can be very high.

- **Quality of service:** Quality of service is an important factor in a household's decision to buy insurance. This is particularly the case for health insurance where quality of health care, the attitudes of health care providers, and the distance to and quality of hospitals are all important influences in buying decisions.<sup>68</sup>
- **Behavioural biases:** The study of economic decision-making shows that individuals around the world make inconsistent decisions and have substantial behavioural biases.<sup>69</sup> Some important biases include: (1) loss aversion, where individuals are extremely averse to incurring losses relative to obtaining gains (eg, someone who has bought cover but does not experience a loss may consider the insurance policy purchased a "loss"); and (2) self-control, which relates to individuals putting more value on present consumption. Insurance requires an upfront payment for a benefit that will accrue in the future and for that reason, those with self-control bias do not buy cover. There are different possible approaches to dealing with behavioural biases, for example promotion of the saving aspects of whole life insurance rather than term life products, which offer no savings feature. This can help consumers overcome their loss aversion.<sup>70</sup>
- **Cultural factors:** Various cultural factors can act as barriers to insurance demand, sometimes in very specific contexts. For example in Burkina Faso, some see setting money aside for healthcare as attracting disease.<sup>71</sup> Similarly, in Uganda, a study on community health insurance found that prepayment before illness was associated with "inviting disease".<sup>72</sup> More broadly, when it comes to dealing with the consequences of natural disasters, a significant barrier is the lack of a risk-preparedness culture, which can be fuelled by reliance on assumed government and non-governmental funding relief in the case of a disaster. Takaful was created to overcome Islamic religious concerns about the financial form of traditional insurance.

## Supply-side barriers

On the supply side, emerging markets face severe imperfections in insurance and financial markets. In general, insurance underdevelopment can be mostly explained by four supply-side factors.

- **Transaction costs:** There are significant administrative costs to providing insurance, including premium collection and distribution costs, underwriting costs and the cost involved to verify insurance claims. For example, distribution for agriculture insurance in emerging markets could require substantial travel to the widely dispersed farms and assessing crop losses on small farms is prohibitively expensive. These costs raise the price of insurance, reducing the market size without heavy subsidies. A study showed that allowing workers to sign up for insurance cover at their place of employment rather than miss a day of work to travel to make the purchase elsewhere, led to a 30 ppt increase in sales.<sup>73</sup> In addition, the dispersion of risk pools, coupled with small sums insured, makes it difficult for insurers to benefit from economies of scale.

<sup>68</sup> O. Bock and D. Ontiveros, op. cit.

<sup>69</sup> See for example, *sigma* 6/2013, Life insurance: focusing on the consumer, Swiss Re.

<sup>70</sup> S. Anagol, S. Cole, S. Sarkar "Understanding the advice of commissions-motivated agents: evidence from the Indian life insurance market", *Review of Economics and Statistics*, vol 99, no 1, 2017, pp 1–15.

<sup>71</sup> M. De Allegri, M. Sanon, R. Sauerborn . "To enrol or not to enrol? A qualitative investigation of demand for health insurance in rural west Africa", *Social Science & Medicine*, vol 62, no 6, 2006, pp 1520–1527.

<sup>72</sup> R. Basaza, B. Criel, P. van der Stuyft. "Community health insurance in Uganda: Why does enrolment remain low? A view from beneath", *Health Policy*, vol 87, no 2, 2008, pp 172–184.

<sup>73</sup> Thornton et al., op. cit.

## Barriers to insurance: an evidence-based approach

Adverse selection and moral hazard pose significant challenges for insurers in emerging markets.

Sound legal and regulatory institutions are key for an efficient insurance market.

Sound regulatory framework is essential to build consumer trust.

Lack of data results in an “ambiguity” price premium.

■ **Adverse selection and moral hazard:** Information asymmetries restrict credit, saving and insurance markets in the form of moral hazard and adverse selection. Insurance can induce moral hazard, which is when the insured becomes less careful after purchasing insurance. This may result in either less preventive efforts (ex-ante moral hazard) or increase the loss amount in the event of a shock (ex-post moral hazard). Adverse selection is another challenge, whereby insurers are unable to distinguish between good and bad risks, and good risks are priced out of the market. Many emerging markets have few or no resources such as credit bureaux or centralised medical records to help insurers assess the potential risk of their customers.

■ **Institutional setting:** Institutional features that support insurance include the strength of legal systems and ability to enforce regulations, the breadth and depth of social security systems and government policies. The primary foundation of an insurance market is an insurance law, providing a specific definition of insurance and setting forth the fundamental parameters of the insurance market, such as a supervisory authority, licensing criteria and prohibited practices. The quality of legal and regulatory environment has a significant effect on insurance market development. In many emerging markets legal authority is weak and rules are not enforceable, and this negatively impacts insurance supply. Legal environments that provide investor protection tend to encourage a higher degree of financial intermediation.

Following the development of the legal framework, a sound regulatory framework is required to carry out efficient and effective supervision. Without these preconditions, an insurance industry can be curtailed by arbitrary, opaque, ineffective and unnecessarily costly regulatory interventions, which in turn can diminish consumer trust. In addition, lack of effective supervision can discourage foreign and domestic investors from supplying capital, retard insurance market efficiency, and dampen industry development. Countries at earlier stages of insurance development tend to require more assistance with reserving and financial analysis practices, while those at later stages may need help with risk-based capital and asset-liability risk modelling.<sup>74</sup>

■ **Ambiguity aversion and data scarcity:** Insurance markets also face barriers in terms of institutional aversion to ambiguity or actuarial prudence.<sup>75</sup> Insurance companies prefer to insure when they have a good understanding of the probability of losses. In many emerging markets, data and actuarial know-how is scarce, and ambiguity can result in insurers adding a high loading to cover the uncertainty, thus undermining the product’s value proposition.

<sup>74</sup> *Assessment on how strengthening the insurance industry in developing countries contributes to economic growth*, USAID, 15 February 2006.

<https://iifdc.org/wp-content/uploads/2017/04/Insurance-Assessment-Report.pdf>

<sup>75</sup> D. Clarke and S. Dercon, *Insurance, credit, and safety nets for the poor in a world of risk: Working Paper, no 81*, Department of Economic Social Affairs, United Nations, 2009, [http://www.un.org/esa/desa/papers/2009/wp81\\_2009.pdf](http://www.un.org/esa/desa/papers/2009/wp81_2009.pdf)

There is evidence of a move to liberalisation of insurance markets in emerging Asia ...

### Regulation: Some markets are liberalizing, others retracting

Globally, while some markets are liberalizing, others are retracting to nationalistic re/insurance regulations. The overall trend in emerging Asia is of liberalisation of re/insurance regulations. For example, Thailand relaxed its foreign shareholding and board foreign directorship limits for insurance companies from 49% to 100% in January 2017. And in the Philippines, the regulator removed the foreign investment limit for loss adjustment companies in August 2016. In India, the government granted a first batch of reinsurance licenses to five global reinsurers in 2016 and it plans to abolish the 49% ceiling of foreign ownership in insurance brokerages. China is considering relaxing joint venture requirement in life insurance. Regulators in emerging Asia have also passed a number of insurance product deregulation laws. These include greater freedom for insurers in China in pricing of commercial motor and participating life policies, and a gradual de-tariffication of fire and motor policies in Thailand and Malaysia.

... and also in the Middle East and Latin America.

Similar developments have been observed in the Middle East and Latin America. The Insurance Authority of the United Arab Emirates (UAE) issued a new motor insurance tariff system in December 2016 permitting risk-based pricing. And in Argentina, the regulator has committed to opening up the reinsurance market starting in 2017. In Brazil, revising reinsurance cession limits has been included in the regulatory agenda, and in Colombia foreign players remain a key driver of mergers and acquisitions (M&A) and exploration of new business lines.

However, some countries are retrenching to nationalistic regulations ...

Nevertheless, a few nationalistic re/insurance regulations have (re)emerged in certain markets. In Africa, some regulators restrict foreign reinsurer access to specific lines of business and/or are limiting cessions.<sup>76</sup> Elsewhere, Indonesia and Russia have established national reinsurance companies, and stipulate mandatory cessions to these firms. The regulators in India have proposed priority cession to domestic reinsurers, and the authorities in some other markets (eg, Malaysia and Indonesia) are also contemplating stricter enforcement of domestic shareholding requirements.

... due to concerns about balance of payments positions, commerce and the interests of specific customer groups.

The rise of nationalistic re/insurance regulations could be due to heightened concerns about capital outflows in the form of profit repatriation and overseas reinsurance, and the resulting possibility of deteriorating balance of payment positions. Other concerns include the potential for selective marketing by foreign insurers, resulting in the neglect of some customer groups, especially the low-income population, and the prospect of a sudden withdrawal of foreign insurers and capacity in times of conflicts, which could cripple local trade and commerce. A more liberal insurance market will require different and, usually, more detailed and effective regulation, especially with regards to market conduct, competition laws and prudential oversight if there is to be balance between insurance market stability and value for consumers. Ultimately, however, liberal insurance markets tend to bolster competition and improve the professionalism of the industry, to the benefit of households and businesses.

<sup>76</sup> Francophone Africa (CIMA Africa) countries restrict access for international reinsurers without a local presence; in Kenya marine insurance for imported goods needs to be purchased locally from 1 January 2017.

# Insurance through new and alternative means

Insurance growth follows typical patterns of adoption, although with variations across markets.

For economic reasons, the P&C insurance market typically matures before the life sector.

Compulsory and subsidised P&C lines can make early headway.

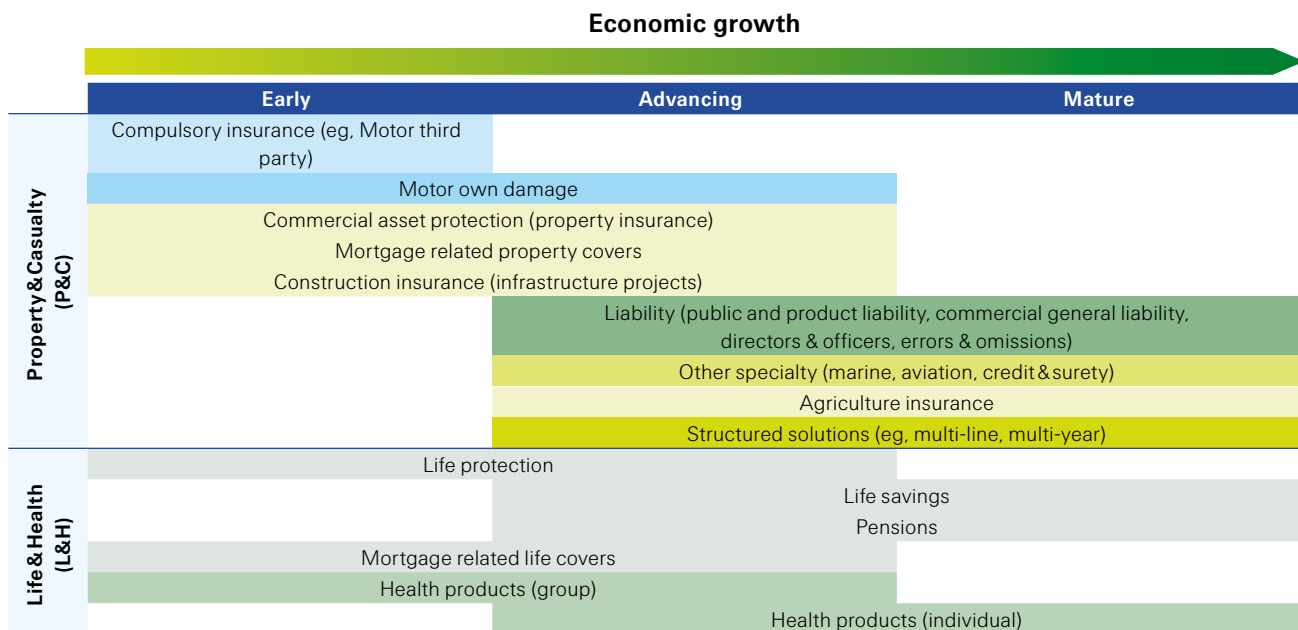
## Traditional insurance growth path

Researchers typically use an 'embryo-to-maturity' approach to illustrate the availability of different insurance products as emerging economies grow and mature.<sup>77</sup> Figure 3 illustrates such a model where the insurance lines of business evolve along a stylised trajectory of the growth stages of the economy.

In emerging economies, commercial Property & Casualty lines usually develop first, driven by construction of public infrastructure and natural resource extraction projects, the requirements of foreign trading partners/investors, and the arrival of international insurance brokers. Formal life insurance markets typically develop later, because the life sector is relatively more dependent on the rise of the middle class (and financial literacy) and the existence of liquid capital markets.

Motor insurance also tends to develop early since third-party liability insurance is generally compulsory. Activity in sectors with heavy government subsidies such as agriculture, where insurance may be used for income smoothing purposes, often develops next. The development of public and professional liability insurance usually comes at a much later stage because a litigation culture tends to develop with rising incomes and consumerism. As the formal credit markets develop, credit & surety insurance emerges given the need to cover losses due to the bankruptcy of a buyer or, in the case of surety, a construction company. Sometimes export trade credit develops early, often through a government entity, to support the development of exporters.

**Figure 3**  
Stylised representation of traditional insurance growth path



Note: Shaded areas indicate when a line of business is typically observed to start developing alongside economic growth.  
Source: Swiss Re Institute.

<sup>77</sup> See for example the stylised insurance development model in S. Goualal, N. Goulder, R. Lester, *Bancassurance: A Valuable Tool for Developing Insurance in Emerging Markets*, Policy Research Paper 6196, World Bank, 2012, <https://openknowledge.worldbank.org/bitstream/handle/10986/12037/wps6196.pdf;sequence=1>

## Alternative approaches

Alternative approaches can help overcome some of the traditional supply and demand barriers.

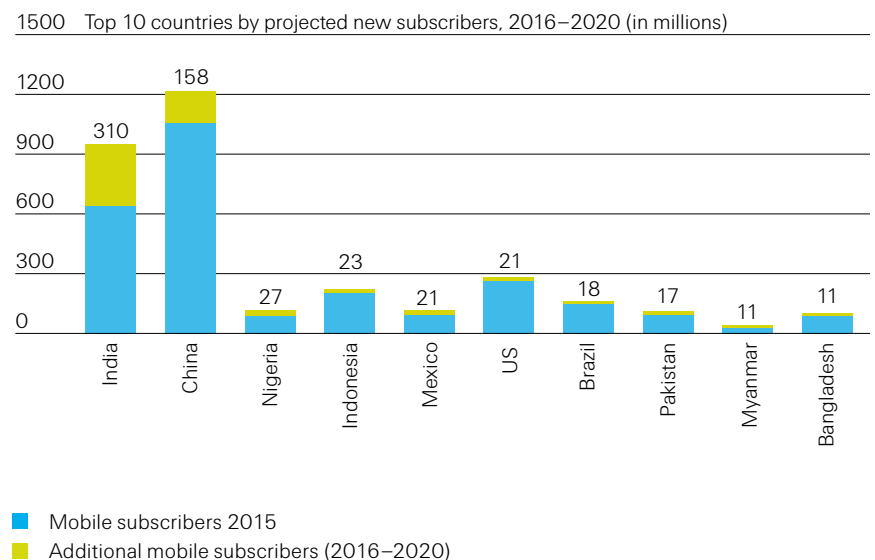
New approaches to insurance in emerging markets are developing to overcome the demand- and supply-side barriers described in the previous chapter. These are in part technology-enabled, but also reflect emerging social (eg, longevity), environmental (eg, increasing severity of natural catastrophes) and economic (eg, new payment systems and sharing economy) trends. These alternative development paths for insurance are more needs-based reflecting the underlying demand, can help extend the reach of insurance to more consumers, and ultimately make emerging market societies more resilient.

Location intelligence combined with mobile technology has made insurance more accessible.

### Digitally-enabled insurance

Digital technology is being used to make insurance more accessible and affordable, especially for younger people. Mobile technology, which is spreading rapidly (see Figure 4), can be combined in innovative ways with other technology tools. Geospatial technologies can be used to track behaviour such as driving, risk accumulation, weather, etc. Parametric insurance products relying on weather stations for data can pay claims in an automated manner using mobile money methods. By 2016, such systems had helped, for example, more than 1 million farmers in Kenya, Tanzania and Rwanda buy risk protection via the crop, livestock and index insurance offerings developed by the Agriculture and Climate Risk Enterprise Ltd. (ACRE), (see next chapter for more detail).<sup>78</sup> In addition, the growing proliferation of new data about insureds collected via sensors and smart devices, combined with smart analytics and predictive modelling permits more granular underwriting. This allows insurers to create products and set premiums based on how insureds actually behave rather than on age, marital status, gender, etc. As new hazards are identified, insurers can improve their data sets to better manage eligibility, underwriting and risk ratings.<sup>79</sup>

**Figure 4**  
Projected growth in mobile subscribers (2016–2020)



Source: *The Mobile Economy 2017*, GSMA Association.

<sup>78</sup> *Harnessing Technology to Narrow the Insurance Protection Gap*, The Geneva Association, 2016. [https://www.genevaassociation.org/sites/default/files/research-topics-document-type/pdf\\_public/harnessing-technology-to-narrow-the-insurance-protection-gap.pdf](https://www.genevaassociation.org/sites/default/files/research-topics-document-type/pdf_public/harnessing-technology-to-narrow-the-insurance-protection-gap.pdf), and "ABOUT ACRE AFRICA", [acreafrica.com](http://acreafrica.com), 2017.

<sup>79</sup> *Technology and insurance: themes and challenges*, Swiss Re Institute, 2017.

## Insurance through new and alternative means

Digital insurers use Big Data to target new consumers with simple and intuitive insurance experiences.

Digitally-enabled insurers in China and India are offering a wide variety of simple (eg, pay-per-use sharing economy insurance) as well as sophisticated new products (eg, liability for new technology), using these techniques.<sup>80</sup> In some cases, traditional insurers are joining forces with tech giants to design variations of existing products. For example, internet search engine Baidu and China Pacific Property Insurance (CPIC) have established an online car insurer. Baidu will contribute the machine learning and Big Data expertise while CPIC brings product design knowledge.<sup>81</sup> The trend has started in India also with new tech-driven insurance start-ups such as Acko General Insurance and Digit Insurance.<sup>82,83</sup> The application of technology for sourcing and underwriting business will help digitally-enabled insurers to be cost competitive, making insurance products more affordable.

Peer-to-peer insurance platforms are covering hitherto uninsured risks for tech savvy consumers.

Peer-to-peer (P2P) insurance platforms are insuring unusual risks (eg, social risks, which are an important consideration in many Asian markets) for tech savvy consumers in some emerging markets. There are a number of P2P insurance initiatives in China, such as TongJuBao, which offers products like marriage safety insurance, child safety insurance and income protection cover.<sup>84</sup> Chaojiyuanzhou is a Chinese P2P insurer providing flight delay insurance and home insurance.<sup>85</sup> Outside China, Insbee in Singapore is another P2P platform, which rewards people for responsible driving.<sup>86</sup>

Use of innovative payment mechanisms can reduce churn and improve affordability.

The use of mobile money platforms has resulted in higher renewal rates, since potential policyholders have irregular incomes, and restricted access to traditional payment mechanisms. As of 2016, mobile money services have been available in two thirds of low- and middle-income countries.<sup>87</sup> Most digital insurance initiatives in these markets also bundle insurance products with ancillary services (eg, telecom subscription plans, online travel platforms, social media). Mobile insurance not only expands reach, but also reduces acquisition and administration costs, rendering insurance more affordable.

Mutual insurance is witnessing a modest revival in emerging markets.

### Mutual insurance

Mutual insurance, which can have a greater alignment of member and insurer interests, is sometimes promoted by governments and policymakers to provide insurance coverage to more people. Markets are also adopting hybrid approaches that combine mutual insurance with other insurance schemes such as microinsurance or public-private partnerships (PPPs), in a bid to adapt to the local market landscape and allow for scale in operations. Rwanda and Mexico are two examples where mutual insurance has been used to address gaps in health and agriculture insurance.

<sup>80</sup> Zhong An offers more than 200 insurance products and had written more than 3.6 billion policies for 369 million customers as of 2015. K. Wu, "China's First Online-Only Insurer Zhong An Plans Up to \$2 Bln IPO", *dowjones.com*, 18 February 2016, <https://www.dowjones.com/scoops/chinas-first-online-only-insurer-zhong-an-plans-up-to-2-bl-ipo/>

<sup>81</sup> "China: Search engine giant Baidu forms online auto insurer", *asiainsurancereview.com*, 9 June 2016, <http://www3.asiainsurancereview.com/News/View-NewsLetter-Article?id=36146&Type=eDaily>

<sup>82</sup> Online insurance is deemed to have strong potential in India. Mobile penetration, for example, is expected to increase to 68% by 2020. *The Mobile Economy, India 2016*, GSMA Intelligence, 2016.

<sup>83</sup> M. Shetty, "Fairfax to back general insurance startup Digit", *tech.economictimes.indiatimes.com*, 13 June 2017, <http://tech.economictimes.indiatimes.com/news/startups/fairfax-to-back-general-insurance-startup-digit/59120632>

<sup>84</sup> "About TongJuBao", *tongjubao.com*, 13 June 2017, <http://www.tongjubao.com/en/how-it-works-protect-each-other>

<sup>85</sup> H. Terry, "Chaojiyuanzhuo – Chinese P2P insurer", *The Digital Insurer*, 13 June 2017, <https://www.the-digital-insurer.com/dia/chaojiyuanzhuo-chinese-p2p-insurer/>

<sup>86</sup> "About P2P", *Insbee.sg*, 13 June 2017, <http://www.insbee.sg/home/p2p.php>

<sup>87</sup> *State of the Industry Report on Mobile Money, Decade Edition: 2006–2016*, GSMA, 2016.



They can substitute for publicly traded insurers in the early stages of economic development.

Hybrid mutual structures can achieve scale by overcoming capacity constraints with reinsurance.

PPPs can widen insurance reach, by piggy-backing on existing institutions.

Insurance PPPs can provide protection for uninsured risks and generate substantial premiums.

Many emerging markets lack a viable health insurance sector, partly due to a lack of healthcare infrastructure, but also due to barriers such as affordability and high distribution costs. A mutual health insurance program has been particularly successful in Rwanda, where 84% of the defined population had enrolled in a community-based health insurance scheme by April 2017.<sup>88</sup> Rwanda reduced its maternal mortality rate by 79% from 1990 to 2015, becoming the first African country to meet this Millennium Development Goal. Its health insurance programme was cited as a big part of the reason for this success.<sup>89</sup>

Reinsurance can help mutual insurers overcome capacity constraints that can delay increases in insurance penetration. For example, since formation of the first farmer insurance fund in Mexico in 1978, mutual insurance funds have scaled up to cover two thirds of the insured agricultural area, and now also offer property, life and health insurance, in addition to crop insurance.<sup>90</sup> These private funds retain low levels of risk and rely on affordable excess-of-loss reinsurance, provided mostly by the state reinsurer, Agroasemex. Cooperative or mutual insurance is popular in other parts of Latin America also, including in Argentina, Uruguay and Paraguay.<sup>91</sup>

### Public-private partnerships

PPPs in emerging markets can leverage existing federal and local infrastructure to enable wider distribution. Products can be rolled out more quickly and risks can be better pooled and diversified due to the larger scale of PPP operations. This also reduces variations around expected losses, meaning that pricing can be more accurate. For example, insurance penetration can increase rapidly if governments require borrowers from government banks to purchase insurance.

Government-subsidised insurance programs through PPPs can also accelerate insurance uptake and significantly increase associated premiums. While subsidies can be useful in emerging markets to create a new market, sustainable insurance development relies on market pricing. For example in India, crop insurance has grown rapidly in recent years. The state PPP scheme Pradhan Mantri Fasal Bima Yojana (PMFBY) made crop insurance the third largest non-life insurance segment in less than two years after launch in 2016. Currently, the scheme covers 44% of the total farmer population, and the government targets 50% by 2019.<sup>92</sup> The loss patterns will become clearer in the coming years, but since inception the scheme has provided protection for many farmers and has generated substantial premium volumes for insurers. Technology, like unique identification, can also be used for such schemes to facilitate enrolment and on-account payment mechanisms.

<sup>88</sup> A. Tashobya, "Rwanda to use mobile technology to boost health insurance subscription", *newtimes.co.rw*, 27 April 2017, <http://www.newtimes.co.rw/section/read/211399/>

<sup>89</sup> "Health care in Rwanda, An African trailblazer", *economist.com*, 15 September 2016, <http://www.economist.com/news/middle-east-and-africa/21707226-how-poor-country-brought-health-insurance-91-population-african>

<sup>90</sup> In 2012, farmer insurance funds in Mexico covered 64% of total insured agricultural area. *Mexico Agriculture Insurance Market Review*, World Bank, 2013.

<sup>91</sup> In total, mutual insurers contributed 9% of total premiums written in the region in 2015. "Agricultural insurance in Latin America: taking root", Swiss Re, 2016.

<sup>92</sup> D. Mahapatra, "44% of tillers under crop insurance", *The Times of India*, 7 July 2017, <http://timesofindia.indiatimes.com/india/44-of-tillers-under-crop-insurance/articleshow/59481768.cms>

## Insurance through new and alternative means

PPPs can address market failure by mandating coverage where insurance awareness is low.

Takaful addresses social and cultural barriers that traditional products may overlook.

In microinsurance, life and health products are the most popular in the emerging markets.

Finally, PPPs can introduce a culture of risk mitigation and address market failure by mandating coverage. Private insurers can act as sub-contractors and assume operational functions from sales to claims settlement. For example, in Turkey 70% of the population and 75% of industrial assets are exposed to earthquake risk. In 2000, the government implemented compulsory earthquake insurance for households through a PPP programme.<sup>93</sup> The World Bank provided financial and technical assistance for the programme. Premiums for the pool are not subsidised and vary with the risks involved. Today, the pool covers 42.6% of the insurable households<sup>94</sup> and manages USD 292 million in premiums.<sup>95</sup> Risks underwritten are shared with reinsurers and the capital markets.

### Takaful

Social and cultural barriers can prevent some segments of society from accessing insurance in emerging markets. For example, conventional insurance may contain elements unacceptable to Islamic principles.<sup>96</sup> As a result Sharia law allows takaful; insurance which is compliant with Islamic principles. Under takaful, policyholder and shareholder funds are separated, and a Sharia-compliant investment strategy is adopted. The regulator in Saudi Arabia prescribes another Sharia-compliant cooperative insurance model. According to this definition, Saudi Arabia and Malaysia had an estimated 75% share of the global Sharia compliant insurance market in 2014.<sup>97</sup> Non-life insurance dominates the Saudi cooperative market with a 97% share. The share of life business is just 3%, in part because of the government's social security provisions. In contrast, in Malaysia life business leads, with a 76% share of the takaful market. A stringent regulatory framework, favourable demographics, and a growing middle class are boosting the takaful sector there. Africa had an estimated 3% share of the global Sharia-compliant market in 2014. Insurers in Africa are promoting takaful products but have failed to get significant traction, despite the sizeable Muslim populations in countries like Nigeria and Kenya.

### Microinsurance

Life insurance is the most popular microinsurance product in emerging markets. Most of this is micro credit life insurance, typically compulsory and covering the outstanding balance of a loan on the death of a borrower. Micro credit life policies protect the portfolios of banks, providing security for the banks and in turn facilitate consumer access to financial services. Demand is also high for micro term life insurance that provides substantial coverage in case of death of the breadwinner. In many African countries, micro life insurance that covers funeral costs is very popular. Many microfinance institutions (MFIs) also offer mixed credit and life insurance. The microfinance arm of Alexandria Business Association in Egypt offers a policy which, upon death of the borrower, his or her family receives the full initial loan sum less the outstanding credit. There has also been rising demand for micro health insurance in some emerging markets, enabling low-income, unwell people access to treatment earlier so hopefully avoiding a prolonged illness.

<sup>93</sup> *Turkish Catastrophe Insurance Pool, Providing Affordable Earthquake Risk Insurance*, GFDRR, 2011.

<sup>94</sup> "Turkey Insurance Market Information: Non-Life (P&C)", 1 March 2017, [axco.co.uk](https://www.axco.co.uk/axcoimr/c_report_display_frame.asp), [https://www.axco.co.uk/axcoimr/c\\_report\\_display\\_frame.asp](https://www.axco.co.uk/axcoimr/c_report_display_frame.asp)

<sup>95</sup> "Policy Generation Statistics", *Turkish Natural Catastrophe Insurance Pool*, 2017, <http://www.tcip.gov.tr/zorunlu-deprem-sigortasi-istatistikler.html>

<sup>96</sup> Conventional insurance may contain uncertainty and unclear terms (Gharar), excessive risk taking (Maisir), fixed interest (Riba) and investments in industries considered Haram by Islamic principles. *Islamic Insurance revisited*, Swiss Re, 2011.

<sup>97</sup> *Malaysian Takaful Dynamics, Central Compendium 2015*, Ernst&Young, 2015, [http://www.ey.com/Publication/vwLUAssets/EY-malaysian-takaful-dynamics-central-compendium-2015/\\$FILE/EY-malaysian-takaful-dynamics-central-compendium-2015.pdf3](http://www.ey.com/Publication/vwLUAssets/EY-malaysian-takaful-dynamics-central-compendium-2015/$FILE/EY-malaysian-takaful-dynamics-central-compendium-2015.pdf3)

<sup>98</sup> Saudi Arabia has adopted the cooperative insurance model, which is distinct from the traditional takaful model, but is deemed to be Sharia compliant because it involves the concept of distribution of surplus. However, it does not include provisions for segregation of takaful and shareholder funds, requirement to invest in Sharia compliant manner and the appointment of a Sharia board.

The key challenge to sustaining growth in microinsurance is low premiums.

The key challenge in providing micro life and health insurance is that the low premiums do not cover the costs insurers incur in underwriting, distribution, claims processing and other overheads. There are different ways to reduce costs. For example community-based cost sharing, where insurers partner with community organizations including mutuals, cooperatives and reinsurers, among others, to lower average expenses per policy. An example is the Latin American Reinsurance Group (LARG), which facilitates access to reinsurance. The majority of LARG members are small institutions that use reinsurance capital to achieve scale and efficiencies in providing microinsurance. Another approach is to use client segmentation to reach more people. In November 2010, Aseguradora Rural, S.A. (Rural Insurance) in Guatemala launched the Aseguradora Rural Project to design micro health products to meet the needs of the different client segments of Banrural bank. Focus groups, interviews, medical care statistics and analysis of clients' socio-economic and epidemiological profile were used to identify potential market segments and product coverage. The scheme was a success: by the end of January 2013, the number of policies issued was 12 453 (or 22% of the bank's clients), and there were only 735 cancelations.<sup>99</sup>

Micro agriculture insurance schemes face their own demand- and supply-side challenges.

Micro agriculture insurance presents challenges also. From the supply side, insurers face significant data requirements; and from the demand side, individuals in emerging markets are often cash constrained and hesitant to trust unfamiliar financial products or institutions. In this regard, PPPs have been shown to be an important factor in sustaining micro agricultural schemes.<sup>100</sup> A successful case is the Remote Sensing-Based Information and Insurance for Crops in Emerging Economies (RIICE), a PPP that uses remote sensing technologies to map and observe rice growth in countries like Bangladesh, Cambodia, India, Indonesia, Philippines, Thailand and Vietnam. RIICE monitors and feeds data to insurers so they can create products that pay claims based on the technology's estimates of crop losses. It also provides training to farmers, which helps build trust between farmers and the other stakeholders.<sup>101</sup>

<sup>99</sup> *Health and life micro insurance products to Banrural clients in Guatemala*, Micro Insurance Innovation Facility, 2013.

<sup>100</sup> M. Burke, A. de Janvry, J. Quintero, *Providing index-based agricultural insurance to smallholders: Recent progress and future promise*, CEGA Working Paper, University of California at Berkeley, May 2010, [http://siteresources.worldbank.org/EXTABCDE/Resources/7455676-1292528456380/7626791-1303141641402/7878676-1306270833789/Parallel-Session-5-Alain\\_de\\_Janvry.pdf](http://siteresources.worldbank.org/EXTABCDE/Resources/7455676-1292528456380/7626791-1303141641402/7878676-1306270833789/Parallel-Session-5-Alain_de_Janvry.pdf) 2010

<sup>101</sup> "About RIICE", *riice.org*, 1 June 2017, <http://www.riice.org/about-riice/>

# Developments in select markets and regions

Each country develops its own path to a mature insurance market.

Each country takes its own path in developing its insurance market. In this section, a few countries are used as examples of the various potential paths. In China, the government has directly supported the insurance industry, while in Chile support comes from an innovative (especially for an emerging market) pension scheme. Contrary to the usual route of P&C first, India's life insurance sector grew rapidly early on due to the high interest in bolstering personal savings. In Africa, mobile technology has been a significant contributor to encouraging the spread of insurance, while in Poland foreign investment has helped the market mature.

The China experience offers unique insights into the path of insurance market development.

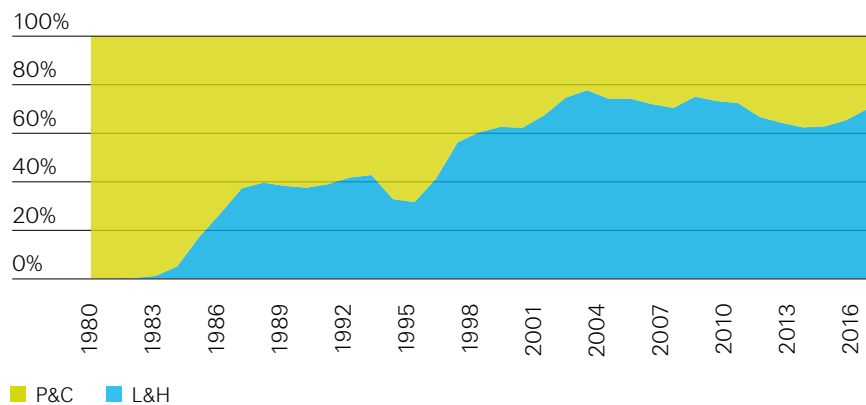
## China: rapid growth in just a few decades

China has had a unique insurance market history, with commercial insurance developing fairly early. However, it had a hiatus, resuming in 1980 after having been suspended in 1949 with the formation of the People's Republic of China. Since then, the insurance market in China has grown very rapidly, becoming by today the third largest in the world, largely through strong government support.

The market followed the usual growth trajectory, starting with the P&C sector, but now the life sector dominates.

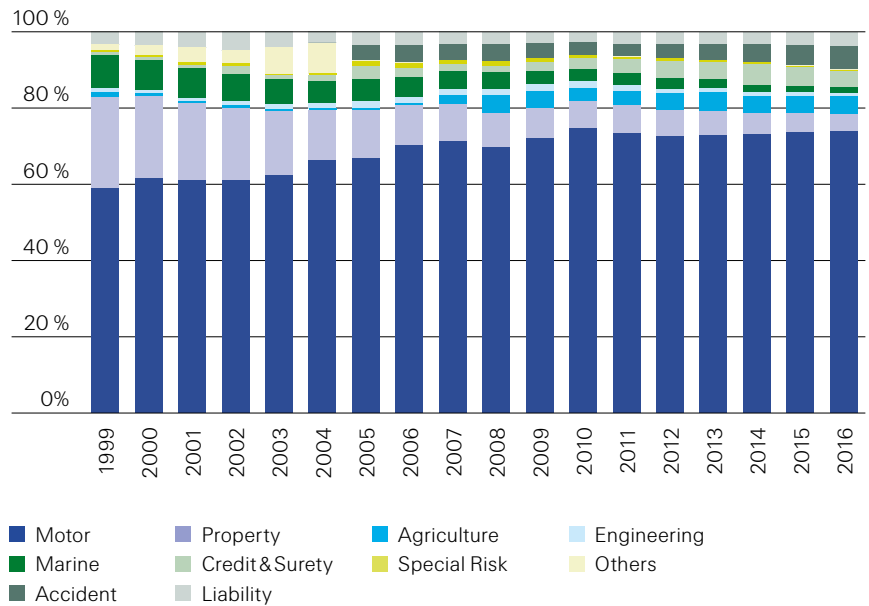
Following the usual historical pattern, activity in P&C insurance came first (see Figure 5), starting with commercial business including enterprise property, commercial motor and transport insurance. With the introduction of compulsory motor third-party liability insurance in 2007, motor further solidified its position as the largest line in P&C, accounting for more than 70% of sector premiums in 2016. The share of liability and speciality lines such as engineering, remains small (see Figure 6). Development of the formal life market began in the late 1990s, growing quickly after that. Today life and health insurance premiums account for 70% of the total for insurance. Participating life is a favourite product because it meets the savings and protection needs of China's rapidly expanding middle class.

**Figure 5**  
Share of gross premiums of L&H and P&C insurance in China, % of total



Source: CEIC, Swiss Re Institute.

**Figure 6**  
Shares of P&C premiums in China, by line of business, % of total P&C premiums

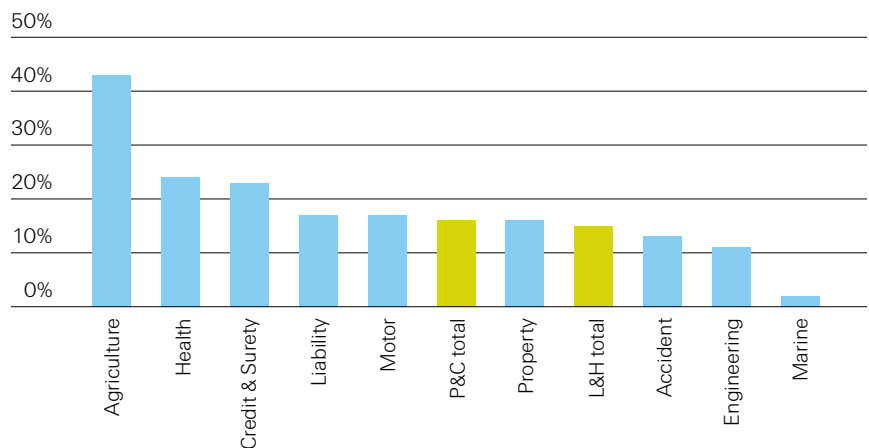


Source: CEIC, Swiss Re Institute.

The growth path in China has been unusual in terms of pace of expansion and the accelerated development of certain lines.

China is unusual, however, in its fast pace of insurance premium volume growth and strong growth in non-motor lines of business. Over the last decade, total premiums have grown at a compound annual growth rate (CAGR) of around 15–16%, compared to other emerging markets mostly with low single-digit growth rates. China now accounts for more than 50% of emerging market insurance premiums, up from 8% in 1990. Non-motor business lines, including agriculture, health, credit & surety and liability (see Figure 7) have had particularly strong growth in the last decade. Usually these insurance lines become larger at a later stage of development due to barriers such as affordability, weak institutions, and lack of awareness and trust.

**Figure 7**  
Premium growth in China by business line, CAGR 2006–2016



Source: CEIC, Swiss Re Institute.

## Developments in select markets and regions

Government policies and PPPs have been a key factor in insurance market development in China.

### *Government policies support insurance market growth*

Supportive government policies and PPPs have been key to the rapid development of the insurance market in China. For example, the agriculture insurance market there has grown by a CAGR of 43% over the last 10 years. By 2016, premiums were CNY 41.8 billion (USD 6.6 billion), making China the second largest agriculture insurance market in the world. In 2007, the government implemented an agricultural insurance subsidy policy, which boosted premiums.<sup>102</sup> Since then a slew of innovative agriculture insurance products have been designed through PPPs, including crop yield, crop production weather index, vegetable price index, hog price index and aquaculture covers.

The government has earmarked health insurance as an important tool for poverty relief...

Health insurance is another business line that has expanded rapidly in China, with the help of regulatory and government support.<sup>103</sup> Key actions included directing insurers to become major service providers of enterprise health insurance schemes, supporting qualified enterprises to set up their own commercial health insurance programmes to supplement the government's health system, and allowing individual tax deductions for commercial health insurance products. In addition, in September 2013 the China Insurance Regulatory Commission (CIRC) announced preferential treatment for health insurers within Shanghai Pilot Free Trade Zone, including support for the establishment of foreign-invested professional health insurance institutions, encouraging innovation in health insurance products, and granting insurers rights to develop insurance clauses. These measures have boosted uptake of health insurance, and encouraged the development of innovative private health insurance products.

... while policies on credit & surety insurance have supported China's transition to a consumer-oriented economy, and the SME sector.

Credit & surety insurance has also benefited from government support, mainly through loan guarantee schemes written for banks initially to promote consumer spending. With the issuance of the Guidance on Developing Credit Guarantee Insurance Services and Support for Small and Micro Businesses in 2015, the emphasis shifted to loan guarantee schemes to facilitate the growth of SMEs. The government subsidises premiums and stands by to keep loss ratios from becoming excessive. Banks must have a deductible to keep them focused on credit quality and to reduce moral hazard.

In Chile, pension reform was a main pillar of market liberalization.

### Chile: pension reforms benefit life insurance and society overall

In the 1980s, Chile introduced a number of market liberalisation reforms, one of which, pension reform, had a particularly positive impact on the life insurance sector. The pension reform was a change from a defined benefits (DB) to defined contributions (DC) scheme in which affiliates make a mandatory contribution to an individual saving account. The sum of these accounts funnel pension contributions to public and private investments. At the end of 2016, pension fund administrators (PFAs) in Chile managed 69.6% of GDP in assets, more akin to levels in advanced than in emerging markets. The asset allocation breakdown in Figure 8 shows that the PFAs are major institutional investors in the private sector, and thus also important agents in driving overall economic development. PFA asset management yielded an average annual real return of 3.8% from 2007 to 2016.<sup>104</sup>

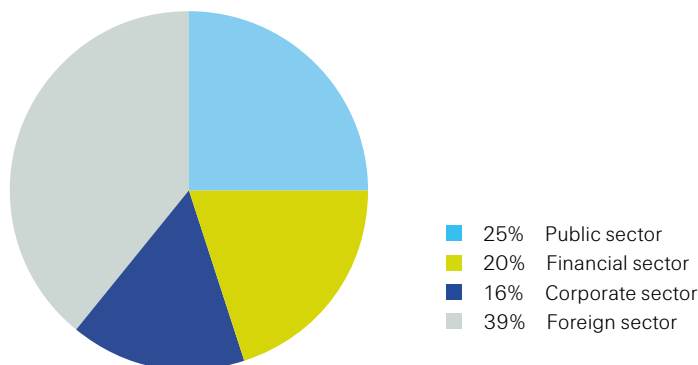
<sup>102</sup>By 2014, the central government premium subsidies expanded from the initial 6 pilot provinces to cover 34 regions, and the planting species insured expanded from 5 to 15, utilizing 738 insurance products and 22 insurance companies.

<sup>103</sup>The Chinese government and regulators identified health insurance as one of the insurance needs of poor people in poor regions in the "Opinions on Promoting Insurance Industry on Supporting Poverty Relieve" notice. Guided by a directive published in August 2014 by the State Council of China, the government has strived to incorporate private health insurance as a pillar of the social security system.

<sup>104</sup>Average of five investment funds ranging from A to E, depending on degree of risk.

**Figure 8**

Asset allocation of the pension fund administrators in Chile, end-2016.



Source: Chilean pensions superintendence (Superintendencia de Pensiones).

Life insurance policies are purchased through the pension system.

The benefits of the pension system include support for the life insurance industry. As part of the system, a share of the mandatory earnings deduction is used by the PFAs to buy disability and survivorship insurance on behalf of their affiliates, leading to a higher penetration rate in life insurance. A smaller mortality protection gap makes households more resilient against financial hardship resulting from the death or the disability of the primary earner.<sup>105</sup> Chile's pension system is considered a model for other emerging markets as a way to finance their aging societies.

In India, the life sector developed first with savings products.

#### India: government initiatives supporting insurance growth

The insurance market in India was government-dominated up until 2000, when the industry was opened up to the private sector, and a 26% cap on foreign direct investment (FDI) was introduced. The life sector developed first, driven by growth of savings products with life insurance being used as an investment vehicle. Savings products continue to dominate today, with risk premiums accounting for just 12% of total life premiums.<sup>106</sup> Overall, total insurance premiums grew at a CAGR of 13% from 2001 to 2015. Non-life sector growth came mostly from the motor and health lines. Economic growth and compulsory third-party liability cover drove motor premiums, while rising awareness and group business supported growth in health insurance.

Government schemes are expected to play a significant role in the next phase of insurance sector growth in India.

The next wave of insurance growth in India will likely be driven by government schemes alongside private-sector collaboration. For example in agriculture, crop insurance schemes initiated since 1985 were limited in scope. The current administration, which took office in 2014, launched a new government crop insurance (PMFBY) programme in January 2016 to provide cover for a greater variety of crops with higher subsidies. Within two years, crop insurance has become the third largest non-life segment in India, after motor and health. Life and health insurance is also expected to grow through PPPs, such as Pradhan Mantri Jeevan Jyoti Bima Yojana (PMJJBY) for life insurance and Pradhan Mantri Suraksha Bima Yojana (PMSBY) for accident insurance.

Regulatory developments will support sustainable development.

The regulatory environment in India is evolving as the insurance industry matures. In March 2015, the FDI ceiling was raised to 49% from 26%, and foreign reinsurers were permitted to set up branches in India. Since December 2015, insurers have been allowed to launch IPOs to raise capital. These developments will help the industry grow with the inflow of capital and knowledge. Further, sector-specific regulations in life and health space have helped standardise product features and streamline processes. The insurance regulator has also issued guidelines on e-commerce to standardize online sale of insurance.

<sup>105</sup> *The mortality protection gap in Latin America*, Swiss Re, September 2013.

<sup>106</sup> Swiss Re Institute estimate for 2015.

## Developments in select markets and regions

Start-ups, supported by government initiatives, should further strengthen insurance capabilities in India.

India also has InsurTech activity, especially in crop, health and motor business. Start-ups offer telematics and wearable devices for motor and health, and are developing weather alert and warning systems for crop insurance. While web aggregators exist, they are not yet important,<sup>107</sup> because product distribution is still largely through agents and brokers. However, government initiatives like 'Startup India' of the Ministry of Commerce, e-insurance accounts, and unified payment interfaces, should provide impetus for continued development of online capabilities in insurance.

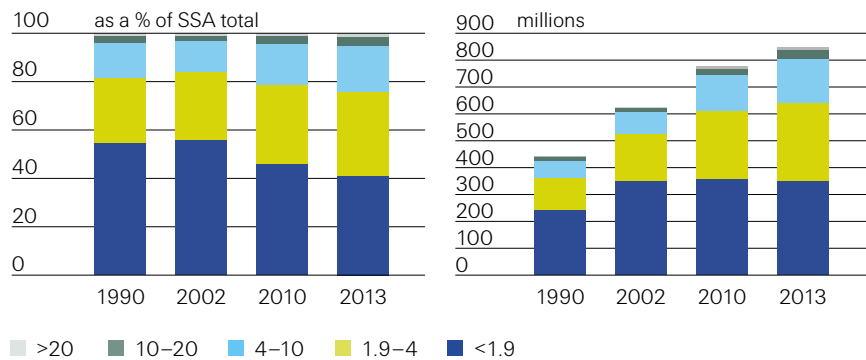
### Sub-Saharan Africa: extending insurance reach with mobile technology

SSA insurance markets have mostly focused on commercial risks and the needs of the fast-growing upper classes.

The Sub-Saharan Africa (SSA) markets are mostly in the early stages of insurance development. Insurance is dominated by group life and health on the life side and for non-life it is commercial risks, in particular those related to infrastructure investments, mining and oil & gas sectors. Insurers are mostly geared to serve the corporate sector and middle and upper income classes (> USD 4 purchasing power parity per day). With solid economic growth since the early 2000s, this population segment had more than doubled from 2002 to an estimated 210 million people by 2013 (see Figure 9).<sup>108</sup>

**Figure 9**

Percent of population in various income categories (USD purchasing parity per day) and the population number in those categories, in millions



Source: World Bank PovcalNet, Oxford Economics, Swiss Re Institute.

Poverty in SSA has been reduced, but remains high.

While poverty in SSA has fallen in relative and in absolute terms since 2002, three quarters of the population still live on less than USD 1.9 per day, or belong to the floating class (USD 1.9–4). For the latter, insurance can play a key role in avoiding fall-back into poverty due to death, illness or other events. With this understanding in recent years, community-based mutual schemes, and some private-sector insurers, have promoted microinsurance with simple and flexible product design.

Mobile technology has enabled cost-efficient provision of microinsurance in the region.

With low incomes, small sums insured and very small premiums, mobile technology has been employed to distribute cost-efficient microinsurance in SSA. The rapid expansion of mobile money platforms has been the key facilitator. The number of mobile money platforms in the region has grown rapidly over the past decade (see Figure 10), and SSA is at the forefront globally in terms of number of platforms. Only 24% of adults in SSA had an account at a financial institution in 2014,<sup>109</sup> but an additional 9% have gained access to financial services through mobile money

<sup>107</sup> There were 21 registered web-aggregators in India as of January 2017, and two tech-driven insurance start-ups, both launched recently (ie, Digit Insurance and Acko General Insurance).

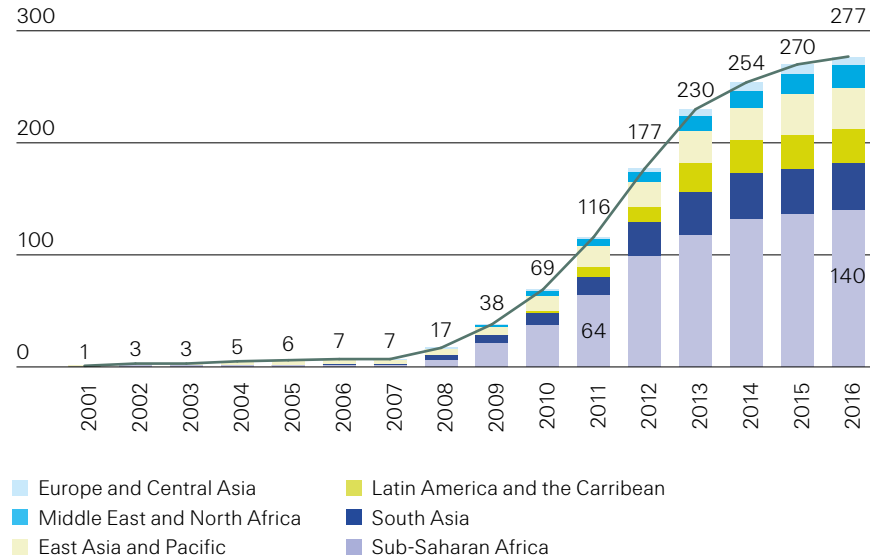
<sup>108</sup> Data retrieved from World Bank and PovcalNet. See <http://iresearch.worldbank.org/PovcalNet/povOnDemand.aspx>. See also M. Ncube, C. Lufumpa, S. K.-Mugerwa, *The middle of the pyramid: dynamics of the middle class in Africa*, African Development Bank, 2011.

<sup>109</sup> Data from World Bank global finindex database, <http://datatopics.worldbank.org/financialinclusion/region/sub-saharan-africa>



accounts since 2011. Kenya leads its regional peers, even the more developed South Africa, in terms of account penetration. The most popular mobile money platform is M-PESA by Safaricom.

**Figure 10**  
Number of mobile money platforms by region



Source: *Global mobile money dataset Version 1.0*, GSMA, 2017.

Mobile initiatives enable insurers in SSA to reach unbanked low-income consumers...

A fully mobile and digital insurance value chain is a reality, and in terms of mobile microinsurance services, SSA is the world leader. In 2015, 58% of the 31 million micro mobile policies globally were sold in SSA.<sup>110</sup> Many previously uninsured customers can obtain quotes, purchase insurance products, pay premiums and submit claims using basic mobile and smartphones.

... and provide crop farmers with index-based agriculture insurance.

A pioneering project is the Kilimo Salama Crop Insurance Program in East Africa. This scheme provides drought index insurance to rural farmers, using just two data points extracted from one text via mobile phone. Distributed by a local seed company, this pilot project provides a contact number in each bag of seed. When the farmer texts the number, the insurer captures two data points: GPS location and date. The insurer then sends a confirmation text to the farmer containing the policy number and coverage details. If weather stations measure a rain shortfall, a payment on the farmer's mobile money account is triggered. Kilimo Salama has become ACRE Africa. It is a registered company and cooperates with insurers to design suitable and affordable products. At the end of 2016, more than 1 million farmers in East Africa had purchased insurance cover from ACRE.<sup>111</sup>

The KLIP is an innovative scheme leveraging mobile and satellite technology to provide agriculture insurance.

Another innovative scheme test-piloted since autumn 2015, Kenyan Livestock Insurance Program (KLIP), uses mobile and satellite imagery technology. KLIP works as an index-based livestock insurance scheme, using the Normalized Difference Vegetation Index (NDVI), which measures plant "greenness" derived from satellite photos of the land. The colour of the ground indicates how dry the area is: yellow is very dry and green is not dry. Once a certain dryness threshold is reached, insured pastoralists automatically receive a lump sum payment which they can use to buy feed for their livestock. The programme does not compensate for loss of livestock, but allows pastoralists to protect their livestock from the outset. In 2017, around 14 000 pastoralists are insured under KLIP.

<sup>110</sup> 2015 Mobile insurance, savings and credit report, GSMA, 2016.

<sup>111</sup> "The State of Microinsurance. The Insider Guide to Understanding the Sector", *Micro Insurance Network*, no 3, 2017, p 22.

## Developments in select markets and regions

Government support is often required to make such programmes viable.

Government support is often needed to make such programmes affordable. While KLIP is fully funded by the Kenyan government, similar programmes, such as in Ghana for example, have failed to get traction because without subsidies smallholder farmers cannot afford them.<sup>112</sup>

Some insurers have partnered with start-ups to reduce administration cost and thus facilitate more affordable insurance for consumers.

Some insurers in SSA have been collaborating with start-ups that design digital insurance programs, which helps make insurance more affordable. For example in 2015, microinsurance start-up Jamii Africa partnered with Jubilee Insurance and Vodacom to provide cover for the low-income population. Jamii Africa has built a mobile policy management platform that performs all the administration activities of an insurer. This helps cut insurance administration cost by 95% and means that consumers can buy health insurance products for as little as USD 1 a month.<sup>113</sup>

With mobile data collection, insurers can monitor service quality of the agents and build trust with consumers.

In addition, with mobile data collection, insurers can monitor the quality of their agent communications, and build consumer trust. For instance, the mobile microinsurance intermediary Bima checks that each agent has correctly communicated with their customers by calling 5% of an agent's clients to verify that the customers can correctly identify three points: the premiums they are paying, the amount of coverage they have, and how to make a claim. According to customer surveys, 84% of Bima customers know how to make a claim and 71% know exactly how much they are paying for their coverage. Using these insights, Bima was able to refine its agent training program and marketing plans to better communicate with customers.

Ultimately trust, built through consumer protection, is key to the sustainability of mobile insurance distribution in SSA.

Mobile technology will remain key to increasing insurance penetration in SSA. However, a delicate trade-off between innovation and consumer protection needs to be maintained. Should mobile microinsurance providers be unable to pay claims, the reputational damage could have long-lasting effects on the creation of this new market. Insurers in SSA need to proactively inform consumers about claims processing, prevent mis-selling and maintain underwriting discipline. Further, with leading mobile network operators in the region taking on insurance functions such as underwriting, and policy and claims administration, while at the same time accumulating large amounts of customer data via e-transactions, insurers could be squeezed out of the market. It is therefore vital that they find new ways to fortify customer relationships and loyalty through mobile communications.

In the 1990s, the insurance markets of CEE were more advanced than those of other emerging regions.

### Poland: insurance markets help economies to transition

The insurance markets in Central and Eastern Europe (CEE) have historically been more advanced than other emerging regions. For example in 1991, non-life insurance penetration in CEE was 1.74%, almost triple the emerging market average of 0.65%. This reflected the relative development of the CEE economies, with GDP per capita of USD 5300 in 1991, compared to the emerging market average of USD 2100. In 1991, the main challenge for CEE markets was to shift from planned economies run by state monopolies to a market-based system. However, Poland provides some interesting insights into how insurance markets support growth within the context of the transition to market economies.<sup>114</sup> The experience offers unique insights into the importance of foreign re/insurers in providing risk capital

<sup>112</sup> Ibid.

<sup>113</sup> R. Peverelli and R. de Feniks, "JAMII: Bringing affordable health insurance to low income Tanzanians", *digitalinsuranceagenda.com*, 4 May 2017, <http://www.digitalinsuranceagenda.com/100/jamii-bringing-affordable-health-insurance-to-low-income-tanzanians/>

<sup>114</sup> M. Ćurak, S. Loncar, K. Poposki, "Insurance Sector Development and Economic Growth in Transition Countries", *International Research Journal of Finance and Economics*, vol 34, no 1 2009, pp 29–41. S. Wanat, M. Papież, S. Śmiech, "Insurance Market Development and Economic Growth in Transition Countries: Some new evidence based on bootstrap panel Granger causality test", *MPRA Paper 69051*, 2016. P. Haiss and K. Sümegi, "The relationship between insurance and economic growth in Europe: a theoretical and empirical analysis," *Empirica*, vol 35, no 4, 2008, pp 405–431.

capacity, facilitating economic restructuring, strengthening competition and improving efficiency through new products and knowledge transfer.<sup>115</sup>

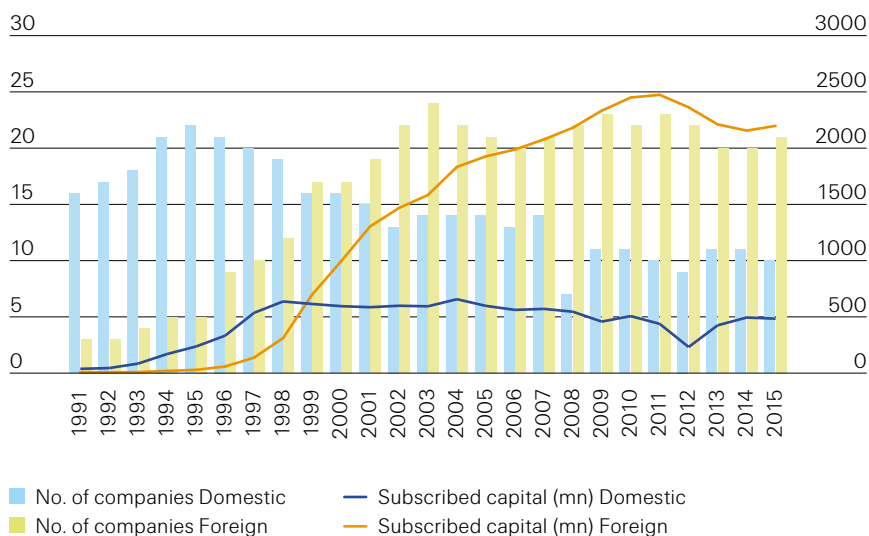
Attempts to break up the monopoly position of PZU have taken a long time, and PZU remains a dominant player in a highly concentrated market.

Although the law already permitted the establishment of new state or privately owned insurance companies in 1984, and the establishment of 100% foreign owned companies by 1990, Poland's insurance market remained dominated by two state-owned companies into the late-1990s, PZU, and to a much lesser extent WARTA. In 1994, PZU had a market share of over 60% of non-life premiums and 95% of life. These shares progressively declined to 33% and 29%, respectively, by 2015.<sup>116</sup> Still, PZU remains the market leader, even with the entrance of many new, often foreign insurers since the 1990s, with capital coming primarily from Germany, the UK and the Netherlands.<sup>117</sup> In the non-life market the top 5 companies have a 70% market share, higher than the EU average of 54%. The life market is less concentrated with the top 5 companies having a 57% market share vs 59% EU average.<sup>118</sup>

Nevertheless, the demand for insurance in Poland could only be satisfied with the availability of foreign capital.

Foreign capital in insurance has exceeded domestic subscribed capital since 2000 (see Figure 11).<sup>119</sup> Robust demand for insurance resulted in foreign capital inflows and by 2015 the amount of foreign capital in non-life was 4.5 times more than domestic capital. Non-life nominal gross written premiums (GWP) grew at a CAGR of 8% in real terms. The foreign capital inflows were facilitated by the permission for the establishment of foreign branch operations in 1999 and EU ascension in 2004. Insurance sector development was further supported by the early introduction in 1993 of minimum capital requirements, which helped industry sustainability.

**Figure 11**  
Number of non-life insurance companies and amount of insurance capital in millions of PLN (RHS), 1991–2015.



Source: Swiss Re Institute.

<sup>115</sup> *sigma* 1/1994: Eastern Europe: The insurance industry under the impact of economic transition, Swiss Re and *sigma* 5/1990: Eastern Europe: Hard road from insurance monopoly to market, Swiss Re.  
<sup>116</sup> *sigma* 4/1995: The insurance industry in Eastern Europe: Recovery has begun, Swiss Re and data from the KNF.  
<sup>117</sup> M. Borda and W. Ronka-Chmielowiec, "The insurance market in Poland – an analysis of the current situation and development prospects," *Mathematical Economics*, no 7 (14), 2011, pp 19–30.  
<sup>118</sup> The simple average is calculated as an unweighted average of Germany, France, Italy, the Netherlands, the Czech Republic, the UK and Poland.  
<sup>119</sup> M. Borda and W. Ronka-Chmielowiec, op. cit.

**Developments in select markets and regions**

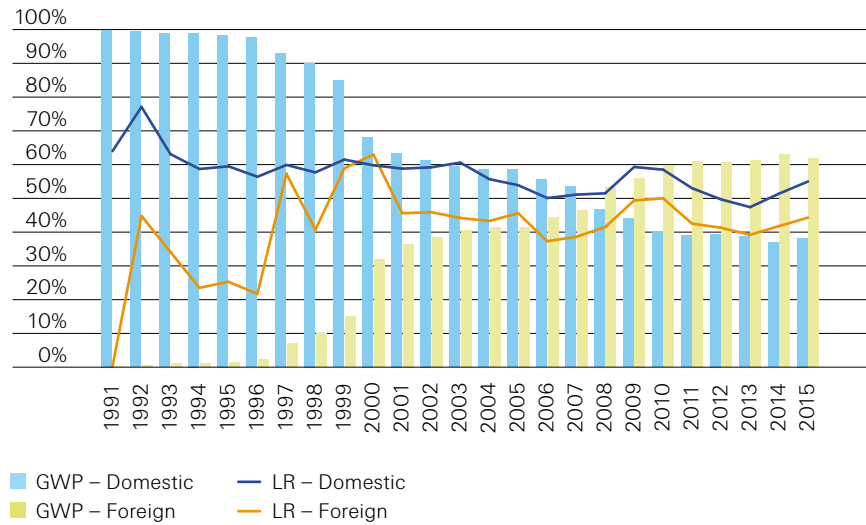
In underwriting, foreign insurers have consistently outperformed the domestic peers.

Reinsurance capital has also supported insurance market and economic transition in Poland.

**Figure 12**  
Share of non-life gross written premiums (GWP) and loss ratios (LR) split by origin of insurance capital, 1991-2015.

Foreign capital has helped the insurance industry in Poland become more sophisticated and more efficient in assessing risk, with a strong underwriting performance (Figure 12). Although majority-owned foreign companies have slightly higher cost ratios on average, their combined ratio is still lower than most domestic insurers due to lower loss ratios. The presence of foreign capital and insurers has also helped lower the average market loss ratio, from 62% in 1991–1999 to 55% from 2000–2015.<sup>120</sup>

Reinsurance has also played an important role in supporting the market’s development in Poland. In 1994, up to 40% of non-life cessions were to foreign reinsurers. Over time, the cession rate has come down significantly to average 15% since 2000, as local insurers become more skilled at underwriting and risk management.



Source: Swiss Re Institute.

Direct sales remains the main channel of insurance distribution in Poland.

Insurance in Poland is distributed primarily by insurance companies’ own direct sales networks, by sales agents and also through bancassurance.<sup>121</sup> In this regard there has been little change since the economic transition started, although the increasing cooperation with banks has enabled new financial insurance products to emerge. Digital technology is part of the distribution chain in Poland today, but the amount of insurance sold online remains negligible (0.6% of non-life premium volumes in 2015).<sup>122</sup>

<sup>120</sup> Excluding the 1992 anomaly in losses due to the economic crisis and inflation spike following the macroeconomic shock therapy, the loss ratio average for the 1990s is still 60%.

<sup>121</sup> M. Borda and W. Ronka-Chmielowiec, op. cit.

<sup>122</sup> *sigma* 3/2017: World insurance in 2016: the China growth engine steams ahead, Swiss Re Institute.

# Conclusion

Building an effective insurance system for emerging markets is joint public- and private sector endeavour.

Insurance sector development should be needs-based. This is challenging, particularly creating insurance solutions for the previously under- or uninsured, and requires a coordinated public- and private-sector response. The public sector plays a key role in establishing a legal and regulatory framework for the operation of an insurance market (eg, setting capital and licensing requirements, defining terms of liability, among others). For their part, private-sector insurers have the expertise to develop risk transfer and management solutions, and also help build risk awareness. Their ability to improvise and innovate to better align with consumers' needs can help overcome existing barriers to widen the reach of insurance cover.

Key considerations include ...

The following are key actions and considerations for both the public and private sector stakeholders involved in the building of an effective national insurance system.

... raising awareness, ...

Increase awareness and financial literacy, and promote inclusive finance programs.

... building trust, ...

Build trust, which can be supported by sound legal and regulatory framework that provide consumer protection against contract non-performance risk arising from insurer bankruptcy and non-payment of valid claims.

... well-informed decision making, ...

Use evidence-based decision-making for better cost-benefit analysis of different risk management strategies. For example, experience shows that even if insurance is heavily subsidised, consumers can still be reluctant to buy cover due to lack of trust. So trust could be an equally or more important consideration than price.

... introducing more compulsory insurance, ...

Governments can help further expand the availability of risk transfer solutions by introducing compulsory insurance schemes, thereby creating a sufficiently large risk pool and mitigating adverse selection.

... innovation, ...

Innovation in process and solution design. For example, index-based insurance products have been successfully used in managing agricultural risks in Asia, Latin America, the Caribbean and Africa. The greater transparency, low transaction costs and fast pay-outs offered by such products have resulted in increased take-up.

... a focus on consumer needs, ...

Customer-centricity and simplification: Insurers need to understand the drivers behind consumer choices. Simplified policy wording is also critical in reaching consumers and SMEs.

... improved metrics, ...

Improve data collection methods, and also metrics on the impact of insurance on social and economic development.

... and new technologies.

Harness the potential of digital technology to observe customer behaviour, improve operational efficiency, reduce claims and enhance customer satisfaction. Insurers can partner with technology companies to better utilise risk data and also track the evolving risk landscape created by technology itself.

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Telephone +41 43 285 2551  
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Armonk Office  
175 King Street  
Armonk, NY 10504

Telephone +1 914 828 8000

Hong Kong Office  
18 Harbour Road, Wanchai  
Central Plaza, 61st Floor  
Hong Kong, SAR

Telephone + 852 25 82 5644

Authors:  
Shailee Pradhan  
Telephone +41 43 285 5452

Zerlina Zeng  
Telephone +852 2582 5734

Ashish Dave  
Telephone +91 80 4900 2533

*sigma* editor:  
Paul Ronke  
Telephone +41 43 285 2660

Editor in chief:  
Kurt Karl, Swiss Re Chief Economist,  
is responsible for the *sigma* series.

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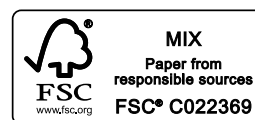
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