

# GREENING CHINA'S FINANCIAL SYSTEM

## CHAPTER 9:

# A SYSTEMIC VIEW OF THE INSURANCE INDUSTRY AND SUSTAINABLE DEVELOPMENT: INTERNATIONAL DEVELOPMENTS AND IMPLICATIONS FOR CHINA

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## EXECUTIVE SUMMARY

The contribution of the insurance industry to sustainable development relates to its three roles as a financial loss “shock absorber” in reducing real risks to assets, in safety and health, and as a significant investor in the real economy. Particular areas where the insurance industry is responding to sustainable development challenges are in relation to natural disasters, financial inclusion, aging populations, and the insurance and investment needs of the green economy.

Emerging regulations, legal frameworks and policies are addressing climate change and natural disasters, disaster resilience, access to insurance and aging populations. Key issues being debated in relation to environmental liability insurance include whether it should be compulsory or voluntary. There are also concerns that the impact of financial reforms such as the European Union’s Solvency II could prevent insurers from allocating capital to long-term infrastructure.

The United Nations’ Principles for Sustainable Insurance (PSI) provide a global insurance industry framework to address environmental social and governance issues and have been adopted by insurers representing 15 per cent of world premium volume. However, there is no common global framework for the routine and systemic integration of sustainable development issues into insurance regulation.

China is the world’s fastest-growing insurance market, and it faces key sustainability challenges related to environmental damage and an aging population. In relation to insurance, the key focus has been on environmental pollution liability insurance. But there is also broader potential to harness insurers as risk managers, risk carriers and investors in relation to the green economy, and to learn from and contribute to international regulatory practices. Policy proposals include:

- **Improving the insurability of environmental pollution liability risks** by strengthening regulations.
- **Reassessing the current environmental pollution liability insurance scheme** through a comprehensive consultation process.
- **Expanding the definition and scope of green insurance beyond** environmental pollution liability insurance to other areas where it could address environmental risks and liabilities, and promoting environmental sustainability.
- **Participating in international sustainable insurance initiatives and promoting sustainable development in global insurance regulatory frameworks.**

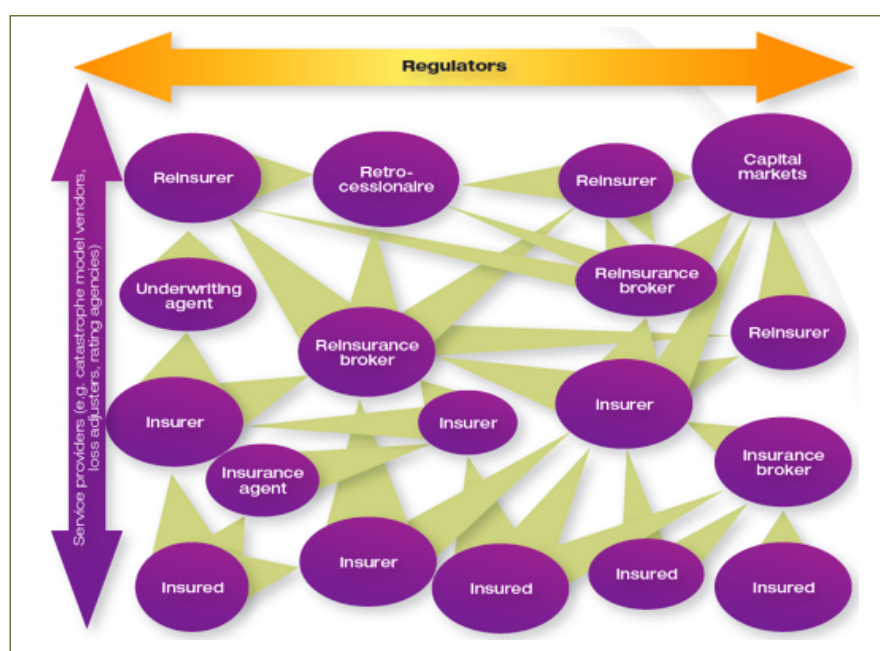
# THE INSURANCE INDUSTRY

The core business of the insurance industry is to understand, manage and carry risk. By pricing and creating a market for risk, it enables it to be pooled, diversified, managed and reduced, thereby protecting society, and supporting innovation and economic development (United Nations Environment Programme Finance Initiative [UNEP FI], 2012). Without this mechanism, risks would be borne solely by individuals, households, businesses, governments and other societal entities. However, it is important to understand that insurance is not only a financial risk transfer instrument—it also supports physical risk management because insurers carry out risk prevention and risk reduction measures in conducting their business (UNEP FI, 2009). When unexpected losses arise, insurance helps communities cope with the financial hardship associated with them (UNEP FI, 2014).

The nature of insurance activity—covering risks for the economic, financial and corporate undertakings and households—has both differences and similarities when compared to the other financial sectors. The International Association of Insurance Supervisors (IAIS, 2012) characterizes it as “reversing the production cycle” compared to other financial products, insofar as premiums are collected when the contract is entered into and claims arise only if a specified event occurs.

Since certain risks are too large to be borne by an individual insurer, these risks are spread in a global risk-sharing system comprising many players, including reinsurance (“insurance of an insurance”) and retrocession (“reinsurance of a reinsurance”).

FIGURE 1: HOW RISKS ARE SPREAD OUT IN THE INSURANCE INDUSTRY



Source: UNEP FI

Insurers, reinsurers and retrocessionaires are all risk carriers, as they put capital at risk and ultimately pay claims. Insurance agents and insurance brokers are intermediaries who provide services to those insured and their insurers, with agents representing insurers and brokers representing the insured. Similarly, reinsurance brokers and reinsurance underwriting agents provide services to insurers, reinsurers and retrocessionaires. There are also other service providers such as catastrophe model vendors, loss adjusters and rating agencies that are not directly involved in carrying risks.

In this paper, when referring to the **insurance industry**, the focus is on insurers and reinsurers. **Insurance regulation** refers to both insurance regulation and supervision.

Over the last few decades, insurance-linked securities have been developed (e.g., catastrophe bonds), where risk carriers transfer peak risks in their portfolios to the capital markets by securitizing, for example, their accumulated risk exposure in a specific territory due to natural hazards such as cyclone, flood or earthquake. Finally, insurance and financial regulators and supervisors oversee this risk-sharing system and the capital markets.

# 2

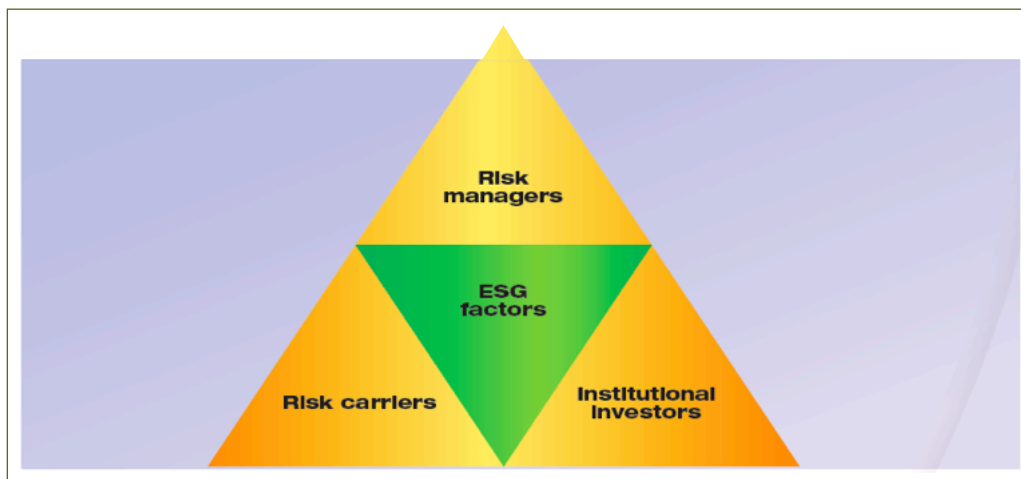
## THE ROLE OF THE INSURANCE INDUSTRY IN SUSTAINABLE DEVELOPMENT

The contribution of the insurance industry to sustainable development relates to its three roles—risk carrying, risk management and institutional investment.

- **Risk carrying** – Insurance is a financial loss “shock absorber” that builds the financial resilience of communities, businesses and households to unexpected losses such as those resulting from natural disasters, currency fluctuations, policy shifts, illness or accident. This in turn enables investment and supports economic resilience and growth.
- **Risk management** – The insurance industry’s contribution to managing risk extends well beyond the losses it pays out but includes developing an understanding and reduction of risks in homes, offices, factories, vehicles and vessels, including as related to emerging industries and issues. Insurers help reduce risk through research, as well as advocacy and support at the local level. Insurance pricing and other policy terms and conditions can provide clear risk signals and reward risk reduction efforts.
- **Institutional investment** – Insurers’ premiums are pooled and become part of a fund of financial assets, which insurers invest to generate additional funds to meet their obligations to policy holders. Globally, the insurance industry has over USD 29 trillion in assets under management (TheCityUK, 2014)

Critical sustainable development issues (or so-called environmental, social and governance (ESG) issues) with implications for the insurance industry across these three roles include climate change and extreme weather events, increasing vulnerability to natural disasters, natural resource degradation, water scarcity, environmental pollution, lack of access to insurance, widening social inequality, human rights, labour standards, aging populations, emerging health risks, trust and reputation issues, lack of accountability and transparency, and unfair treatment of customers.

FIGURE 2: THE INSURANCE INDUSTRY’S MULTIPLE ROLES TO MANAGE ESG RISKS AND OPPORTUNITIES



Source: UNEP FI

Particular areas where the insurance industry is finding new ways to respond to the diverse needs of individuals, government and commercial enterprise and support sustainable development are in relation to *natural disasters, financial inclusion, aging populations* and the insurance and investment needs of the *green economy*.

## 2.1 DISASTERS AND CATASTROPHES: MANAGING RISKS AND ENABLING RESILIENCE

The insurance industry's experience tells us that disasters are becoming more frequent and more severe. Together with higher exposure through population growth and urbanization, this is expected to result in a significant increase in losses over the coming decades. In 2013 global economic losses due to natural disasters amounted to USD 131 billion, which represents almost 2 per cent of GDP, with USD 37 billion of these losses being insured (SwissRe, 2014b).

Catastrophe insurance pools and index-based insurance solutions can facilitate the coverage of disaster risk in highly exposed and vulnerable communities. Insurance-linked securities, such as catastrophe bonds and extreme mortality bonds, can bring alternative capital to cover disaster risk. Governments and the insurance industry have set up public-private partnerships to establish social protection systems at national and regional levels that incorporate insurance mechanisms to increase disaster resilience. Examples include the African Risk Capacity, Caribbean Catastrophe Risk Insurance Facility, Central America Natural Disaster Insurance Facility, Pacific Catastrophe Risk Assessment and Financing Initiative, and Turkish Catastrophe Insurance Pool.

Environmental liability insurance, which is premised on good environmental risk management, covers risks arising from environmental damage, including pollution of lakes and rivers and damage to biodiversity and ecosystems (UNEP FI Insurance Working Group, 2007). Insurance products have traditionally covered forests for the loss of timber, but there are insurers that now include reforestation costs.

Insurance that facilitates investment in disaster risk reduction will lead to less economic, social and environmental losses; it is estimated that every dollar spent in disaster risk reduction returns between \$2 and \$10 in recovery savings.

## 2.2 FINANCIAL INCLUSION: DEVELOPMENT OF MICROINSURANCE

Microinsurance has emerged as a means to tackle social inequality and financial exclusion by providing access to affordable insurance. Globally, microinsurance covers about half a billion risks (International Labour Organization Impact Insurance Facility, n.d.) and up to 4 billion people (SwissRe, 2010). It provides financial protection to low-income communities by insuring their crops, livestock and assets and providing a means to cover accident, healthcare, dependents and funeral expenses. Another form of inclusive insurance is providing coverage for people with HIV/AIDS, people with disabilities and other underserved markets.

## 2.3 AGING POPULATIONS: MANAGING LONGEVITY RISK

For the life and health insurance industry, the question of how to provide for and address the needs of aging populations is becoming urgent in many countries. The global share of older people (aged 60 years or over) increased from 9.2 per cent in 1990 to 11.7 per cent in 2013 and will continue to grow as a proportion of the world population, reaching 21 per cent by 2050. Older persons are projected to exceed the number of children for the first time in 2047 (United Nations, 2013). As populations age, health expenses tend to grow rapidly since older persons usually require more healthcare and more specialized services to deal with their more complex pathologies.

The sustainability issues stemming from aging populations include longevity risk—the risk that individuals live longer than anticipated, with consequent shortfalls in incomes, pensioner poverty and pressure on public support systems, and on employers that sponsor defined benefit pension funds. Funded global longevity risk exposure has been estimated in excess of EUR 15 trillion, based on worldwide pension assets in Organisation for Economic Co-operation and Development (OECD) registered countries (Chief Risk Officers Forum, 2010).

Longevity risks are being addressed by a growing number of health insurance and retirement funding products from the insurance industry, including critical illness insurance, long-term care insurance (or nursing home insurance), impaired life annuities, longevity annuities (or longevity insurance), longevity swaps, longevity bonds and equity releases, which allow homeowners to release money from the property they live in.

## 2.4 RESOURCE-EFFICIENT OPPORTUNITIES: INSURANCE FOR THE GREEN ECONOMY

In the context of environmental sustainability, there is an increasing range of insurance products that promote the transition to a cleaner and more resource-efficient economy. These include insurance for renewable energy projects (including cover for transit, construction and operational risks), performance warranty insurance for solar panels and wind turbines, insurance for energy and water-efficient buildings, energy-efficiency or energy-savings insurance, geothermal exploration risks insurance, insurance for carbon capture and storage technology, insurance for hybrid and electric vehicles, and “pay-as-you-drive” or usage-based insurance.

More sophisticated solutions are being explored, such as policy risk insurance to facilitate renewable energy investments by providing a guarantee for investors against any changes in policy that will adversely affect their returns (UNEP, 2009). Other areas being explored include insurance solutions for low-emission shipping, such as managing risks associated with “save-as-you-sail” financial models to finance the energy-efficiency retrofit of vessels (Sustainable Shipping Initiative, n.d.). There are also insurance products that cover rebuilding costs for damaged buildings and homes to bring them to better environmental standards, promote better indoor air quality and use sustainable materials, as well as insurance products that replace damaged appliances with energy-efficient ones.

As long-term asset managers, insurers can support sustainable development through their investments across asset classes and geographies. This includes investments in renewable energy, sustainable agriculture and forestry, healthcare, waste management, inclusive finance, sustainable water management, and climate and disaster-resilient infrastructure.



# 3

## PRINCIPLES FOR THE INSURANCE INDUSTRY

Insurers are increasingly recognizing that sustainable development issues matter to their core business. This is reflected in the global, voluntary and aspirational Principles for Sustainable Insurance (PSI) and Principles for Responsible Investment (PRI) supported by the United Nations.

The PSI is a framework for the insurance industry, which includes the spheres of influence of an insurer including but not limited to investment management. The PRI is a framework for the institutional investment industry, which spans insurance and non-insurance institutions addressing only investment management.

The principles are complementary and also aligned with the UN Global Compact Principles on human rights, labour, environment and anti-corruption. They have become part of the criteria for assessing insurance companies for inclusion in key sustainability indices such as the Dow Jones Sustainability Indices, FTSE4Good and BM&FBOVESPA Corporate Sustainability Index. To demonstrate accountability and transparency to the public, a fundamental aspect is adopters having to publicly disclose their implementation progress every year.

The IAIS Insurance Core Principles, Standards, Guidance and Assessment Methodology (ICPs) that form the globally accepted framework for insurance regulation do not explicitly reference sustainability, but cover a number of relevant topics.

### 3.1 THE PRINCIPLES FOR SUSTAINABLE INSURANCE

The PSI were developed by UNEP FI and launched at the 2012 UN Conference on Sustainable Development with endorsement by the UN Secretary-General. They were developed through a global consultation process involving more than 500 senior representatives from the insurance industry and its stakeholders, and have been adopted by insurers representing approximately 15 per cent of global premium volume and USD 8 trillion in assets under management.

The PSI are applicable to all lines of insurance, all regions and all insurance industry participants and address environmental, social and governance risks and opportunities in relation to insurers' spheres of influence, including company strategy, risk management and underwriting, product and service development, claims management, sales and marketing, and investment management, as well as engagement with regulators and other stakeholders.

The vision of the PSI Initiative is of a risk-aware world, where the insurance industry is trusted and plays its full role in enabling a healthy, safe, resilient and sustainable society. Its purpose is to better understand, prevent and reduce environmental, social and governance risks, and better manage opportunities to provide quality and reliable risk protection.

## Box 1: The Principles for Sustainable Insurance

*“Sustainable Insurance is a strategic approach where all activities in the insurance value chain, including interactions with stakeholders, are done in a responsible and forward-looking way by identifying, assessing, managing and monitoring risks and opportunities associated with environmental, social and governance issues. Sustainable insurance aims to reduce risk, develop innovative solutions, improve business performance, and contribute to environmental, social and economic sustainability” (UNEP, 2012, p. 3).*

**Principle 1:** We will embed in our decision-making environmental, social and governance issues relevant to our insurance business.

**Principle 2:** We will work together with our clients and business partners to raise awareness of environmental, social and governance issues, manage risk and develop solutions.

**Principle 3:** We will work together with governments, regulators and other key stakeholders to promote widespread action across society on environmental, social and governance issues.

**Principle 4:** We will demonstrate accountability and transparency in regularly disclosing publicly our progress in implementing the Principles.

Source: UNEP (2012, pp. 4–5)

In terms of engagement with regulators, these possible actions are stated under Principles 3 and 4 (UNEP, 2012, p. 5):

- “Support prudential policy, regulatory and legal frameworks that enable risk reduction, innovation and better management of environmental, social and governance issues”
- “Dialogue with governments and regulators to develop integrated risk management approaches and risk transfer solutions”
- “Dialogue with clients, regulators, rating agencies and other stakeholders to gain mutual understanding on the value of disclosure through the Principles”

## 3.2 THE PRINCIPLES FOR RESPONSIBLE INVESTMENT

Launched in 2006 by the UN Secretary-General, the Principles for Responsible Investment (PRI) Initiative is an investor initiative in partnership with UNEP FI and the UN Global Compact. The initiative is driven by a growing recognition in the financial community that effective research, analysis and evaluation of environmental, social and governance issues are a fundamental part of assessing the value and performance of an investment over the medium and longer term, and that this analysis should inform asset allocation, stock selection, portfolio construction, shareholder engagement and voting. Responsible investment requires investors and companies to take a wider view, acknowledging the full spectrum of risks and opportunities facing them, in order to allocate capital in a manner that is aligned with the short and long-term interests of their clients and beneficiaries. The PRI Initiative believes that an economically efficient, sustainable global financial system is a necessity for long-term value creation, and that such a system will reward long-term, responsible investment and benefit the environment and society as a whole.

The PRI Initiative has become the leading global network for investors to publicly demonstrate their commitment to responsible investment, to collaborate and learn with their peers about the financial and investment implications of environmental, social and governance issues, and to incorporate these factors into their investment decision-making and ownership practices. Over 1,200 institutional investors, representing more than USD 45 trillion in assets under management, have adopted the principles.

The principles offer a menu of possible actions for incorporating environmental, social and governance issues into investment practices across asset classes. They are designed to be compatible with the investment styles of large, diversified, institutional investors that operate within a traditional fiduciary framework.

## Box 2: The Principles for Responsible Investment

*“Responsible investment is an approach to investment that explicitly acknowledges the relevance to the investor of environmental, social and governance factors, and the long-term health and stability of the market as a whole. It recognises that the generation of long-term sustainable returns is dependent on stable, well-functioning and well-governed social, environmental and economic systems”* (UN Principles for Responsible Investment, n.d.a).

**Principle 1:** We will incorporate environmental, social and governance issues into investment analysis and decision-making processes.

**Principle 2:** We will be active owners and incorporate environmental, social and governance issues into our ownership policies and practices.

**Principle 3:** We will seek appropriate disclosure on environmental, social and governance issues by the entities in which we invest.

**Principle 4:** We will promote acceptance and implementation of the Principles within the investment industry.

**Principle 5:** We will work together to enhance our effectiveness in implementing the Principles.

**Principle 6:** We will each report on our activities and progress towards implementing the Principles.

In terms of engagement with regulators, the following possible action is stated under Principle 4:

- “Support regulatory or policy developments that enable implementation of the Principles”

Source: UN Principles for Responsible Investment (n.d.b).

## 3.3 THE IAIS CORE PRINCIPLES

Established in 1994, the IAIS, based in Basel, Switzerland, represents insurance regulators and supervisors of more than 200 jurisdictions in nearly 140 countries, constituting 97 per cent of the world’s insurance premiums. It also has more than 130 observers.

The objectives of the IAIS are to promote effective and globally consistent supervision of the insurance industry in order to develop and maintain fair, safe and stable insurance markets for the benefit and protection of policyholders, and to contribute to global financial stability.

IAIS Insurance Core Principles (ICPs), Standards, Guidance and Assessment Methodology are the globally accepted framework used in the evaluation of supervisory regimes under the Financial Sector Assessment Program (FSAP) conducted jointly by the World Bank and International Monetary Fund. The most recent revision adopted in 2011 takes into account experience gained from the FSAP assessments, as well as recommendations from the G20 Finance Ministers and Central Bank Governors and the Financial Stability Board and include a new principle on macroprudential surveillance (IAIS, 2012).

### Box 3: The ICPs and Sustainability

As with the core objectives of the IAIS, the ICPs do not explicitly aim for an insurance industry aligned to sustainable development. It seeks to maintain a “fair, safe and stable” insurance sector for the benefit and protection of the interests of policyholders, beneficiaries and claimants, as well as contribute to the stability of the financial system. The insurance industry and its regulators must respond to a “wide range of social, technological and global economic forces,” but the environment is not mentioned.

The ICP provides high-level principles, each supported by a hierarchy of standards and guidance. A range of principles can be relevant to the aims of the PSI and PRI, such as ICP 7 (corporate governance), ICP 8 (risk management and internal controls), ICP 13 (reinsurance and other forms of risk transfer), ICP 14 (valuation), ICP 15 (investment), ICP 16 (enterprise risk management for solvency purposes), ICP 17 (capital adequacy), ICP 18 (intermediaries), ICP 19 (conduct of business), ICP 20 (public disclosure), ICP 21 (countering fraud in insurance), ICP 22 (anti-money laundering and combating the financing of terrorism), and ICP 24 (macroprudential surveillance and insurance supervision).

No ICP explicitly recognizes the interlocking ESG and economic dimensions of sustainable development, and the materiality of ESG risks and opportunities to the insurance business.

Source: IAIS (2013)

# 4

## INTERNATIONAL REGULATORY ISSUES LINKED TO SUSTAINABLE DEVELOPMENT

The ICPs which provide the accepted regulatory framework for the insurance industry are not clear and explicit about the ESG dimensions of sustainable development, and do not sufficiently enable the routine and systemic integration of sustainable development issues into insurance regulation. Nevertheless, a range of regulatory issues is emerging in relation to insurance and sustainable development.

### 4.1 NATURAL DISASTERS ARE INTERTWINED WITH CLIMATE CHANGE AND OTHER ENVIRONMENTAL RISKS.

Insurance regulation has long been focused on risk management with regard to natural hazards such as earthquakes, cyclones and floods, ensuring that the market provides affordable insurance for households and enterprises, and that insurers are able to fulfil their obligations to policyholders. The UN has warned that economic losses linked to disasters are “out of control,” with direct losses tending in the range of USD 2.5 trillion between 2000 and mid 2013 (UNISDR, 2013). The implications of the relationship between climate change and natural disasters are not well understood, and the two are often mistakenly viewed as synonymous or even as sweeping terms for environmental risks. There is also a material difference between natural disasters and man-made disasters (such as industrial accidents that result in environmental pollution). For example, assessing the predictability of natural disaster risk entails scientific information such as hydro-meteorological and geological data, while assessing environmental pollution risk is more dependent on industrial company risk management and safety cultures. Generally, property damage due to natural hazards can also be quantified much faster compared to environmental damage claims, which can take years or even decades to fully develop (Insurance Europe, 2013)

### 4.2 CLIMATE CHANGE IS A MATERIAL RISK, BUT THE RESPONSE HAS LARGELY BEEN ON ADAPTATION ONLY.

Climate change has been a driver of market innovation, policy engagement and analysis within the insurance industry—and is now stimulating new approaches to insurance regulation. In the United States, the National Association of Insurance Commissioners (NAIC) adopted a white paper on the potential impacts of climate change on insurance regulation in 2008 and, in 2009, approved a mandatory requirement that insurance companies disclose to regulators the financial risks they face from climate change, as well as actions companies are taking to respond to those risks. A number of states have been actively promoting mandatory public disclosure, notably California. In 2012, NAIC adopted revisions to the 2013 Financial Condition Examiners Handbook to ensure that insurers are addressing climate-related risks. These revisions incorporated risk-focused examination questions that provide examiners with needed guidance on what questions to ask insurers regarding any potential impact of climate change on solvency. They were specifically designed to help examiners identify unmitigated risks and to provide a framework for them when examining such risks and their impact on how an insurer invests its assets and prices its products.

In Europe, the United Kingdom’s Prudential Regulation Authority (PRA), part of the Bank of England, has accepted an invitation from the government to complete a Climate Change Adaptation Report by July 2015. The report will inform the next U.K. Climate Change Risk Assessment, to be laid before the U.K. parliament in 2017. With a focus on insurance, the report will examine the impact of climate change on the PRA’s objectives and the roles of insurance regulation in supporting adaptation to climate change. In producing the report, the PRA will be carrying out a phased approach, including a survey of insurance companies on climate-related risks (UNEP, 2014b)

Insurance regulation does not appear to focus on the mitigation side of climate change—the need to reduce the level of greenhouse gas emissions produced by human activities. In particular, there is a lack of regulatory innovation to support the development of insurance products that facilitate the transition to a low-emission and resource-efficient economy. For the insurance industry, delays in a strategic regulatory response to climate change could result in increasing litigation—both against insurers and by insurers. Many in the industry have warned that climate claims could match the industry’s decades-long financial pain from paying asbestos settlements (Leurig, 2011).

Over the years, the insurance industry has grappled with legacy issues, defined as potential loss exposures, arising from policies issued in the past where new theories of litigation might trigger a claims payment never contemplated at the time the policy was underwritten. A classic example is asbestosis, which has resulted in massive payouts from the insurance industry that span decades and continue to this day. Potential legacy issues could be nanotechnology risks or liability risks associated with the failure to act on climate change. Not all conversations on environmental, social and governance issues are “safe” or “comfortable,” as they can touch not just the coverage to be offered in the future, but also the potential reinterpretation of policies issued in the past (UNEP FI Insurance Working Group, 2009).

#### **4.3 ACCESS TO INSURANCE IS A KEY PRIORITY IN DEVELOPING COUNTRIES, AND MICROINSURANCE REGULATORY FRAMEWORKS ARE EMERGING.**

Poverty, social inequality, natural disasters and climate change all reinforce the policy and regulatory imperative of ensuring access to insurance to reduce vulnerability and help escape the poverty trap, particularly in developing countries. But there can be market tension between access to affordable insurance and risk-based pricing, which could move insurance cover out of reach of low-income communities (UNEP, 2014a). Regulators have a particularly difficult balance to maintain. At times, insurance availability and affordability and the claims-paying ability (capital adequacy and solvency) of the insurers they regulate and supervise present conflicting objectives. For example, high premiums preclude financial inclusion, while inadequate premium rates (price is not commensurate to risk) can ultimately lead to insurer insolvency, the potential for unpaid claims, and insurers withdrawing a certain coverage or from a market altogether.

Internationally, the Access to Insurance Initiative, founded in 2009 by the IAIS, multilateral organizations, governments and other organizations, is working to enhance broad-based, demand-oriented and sustainable access to insurance for low-income customers (Access to Insurance Initiative, n.d.). The initiative seeks to:

- Generate the knowledge that policy-makers and supervisors need about financial inclusion (e.g., good regulatory practices to inform IAIS-globally accepted insurance standards such as the ICPs).
- Enable the effective use of knowledge (e.g., helping regulators implement the ICPs in national regulatory frameworks).

Complementary regional programs have started, such as the Regulatory Framework Promotion of Pro-poor Insurance Markets in Asia. The program, which will be implemented from 2013 to 2015, supports Asian insurance regulators in enhancing the enabling conditions for pro-poor insurance. The program uses Access to Insurance Initiative methodology and IAIS global tools to build the capacity of insurance regulators and currently has mutual exchange forums on inclusive insurance in Indonesia, Mongolia, Nepal, the Philippines, Thailand and Vietnam (Inclusive Insurance Asia, 2014).

Moreover, in 2012, the IAIS adopted the *Application Paper on Regulation and Supervision Supporting Inclusive Insurance Markets* (IAIS, 2012). The *Application Paper* provides regulators, particularly in developing countries, guidance in implementing the ICPs, balancing the objectives of protecting policyholders and contributing to global financial stability, with policies that aim to develop inclusive insurance markets. In recent years, a growing number of microinsurance-specific regulatory frameworks have been developed in Asia and



Latin America, including Brazil, China (Taiwan, Province of China), India, Mexico, Peru and the Philippines. Territories where microinsurance regulation is under consideration include Nigeria, Pakistan, South Africa and member countries of the Inter-African Conference on Insurance Markets (CIMA or Conférence Interafricaine des Marchés d'Assurances), spanning French-speaking countries in Central Africa and West Africa (Beiner, Eling, & Schmidt, 2013).

#### **4.4 HARNESSING THE FULL POTENTIAL OF INSURERS IN DISASTER RISK MANAGEMENT IS AN EMERGING STRATEGIC RESPONSE.**

With increasing disaster risk, insurers are increasingly looking at ways to better understand and reduce disaster risk and build resilience, beyond the financial resilience provided by insurance coverage. This is the focus of the PSI Initiative's Global Resilience Project, which aims to deepen understanding of disaster risk reduction globally, assess the economic, social and environmental cost of disasters, and use this information to help governments and communities manage risk. The project, which focuses on the three natural hazards that have created the most devastation globally—cyclone, earthquake and flood—will include engaging insurance regulators and governments in disaster risk reduction, and its links to the availability and affordability of insurance.

This initiative goes beyond the traditional, narrower focus on the risk-pooling role of the insurance industry. It could also be argued that insurance—the financial risk transfer instrument—may not be the appropriate societal response if it creates a perverse incentive for behaviours that should not be rewarded and that stifle innovation. Along this view, the PSI Initiative has produced an insurance industry commitment in support of the intergovernmental process to develop the Post-2015 UN Framework for Disaster Risk Reduction. The commitment seeks to harness the full potential of the insurance industry in disaster risk management—from understanding, assessing, preventing and reducing disaster risk—to disaster response and relief, disaster recovery, disaster risk financing and disaster risk-sensitive investments (UNEP FI, 2014).

Furthermore, efforts are underway to explore how the application of risk-based assessments and stress tests common in the insurance industry can be applied to manage disaster risk in other parts of the financial system. Insurers are routinely assessed to ensure that they can remain solvent and pay all valid claims in the event of a 1-and-200-year worst-case event over each 12-month period (UNEP, 2014a).

#### **4.5 POST-FINANCIAL CRISIS REGULATORY REFORMS ARE AFFECTING THE ROLE OF INSURERS AS INVESTORS.**

The insurance industry is a large investor, with over USD 29 trillion in assets under management globally (TheCityUK, 2014). There has been concern about the impact of financial reforms, such as the EU's Solvency II regulations on the appetite of insurance companies to allocate capital to long-term infrastructure, including renewable energy. According to Swiss Re and the Institute for International Finance, "high capital charges for longer-term assets such as infrastructure and a high degree of uncertainty surrounding the implementation of reforms is not conducive to these investments" (UNEP, 2014a). The risk-based solvency rules at the core of Solvency II have been proposed for application to European pension funds as well. This matter could also be relevant for other risk-based solvency regimes under development such as the Solvency Assessment and Management (SAM) regime in South Africa and the China Risk-Oriented Solvency System (C-ROSS).

## 4.6 AGING POPULATIONS ARE A MAJOR GLOBAL CHALLENGE.

In 2013 the Joint Forum<sup>1</sup> released its final paper on longevity risk transfer markets, which underscores the serious social policy and regulatory challenges in many countries associated with aging populations. Beyond the fact that people are living longer, the report highlights the problem with longevity risk. It says that longevity risk—the risk of paying out on pensions and annuities for longer than anticipated—increasingly calls into question whether existing “saving for retirement” products are sustainable (Joint Forum, Bank for International Settlements, 2013).

The report outlines that total longevity risk is significant when measured from a financial perspective, with each additional year of life expectancy adding about 3–4 per cent to the present value of the liabilities of a typical defined benefit pension fund. It notes that estimates of the total global amount of annuity and pension-related longevity risk exposure range from USD 15 trillion to USD 25 trillion. Hence, risk holders will have to pay over an additional USD 450 billion to USD 1 trillion in aggregate for each year that they underestimate longevity (Joint Forum, Bank for International Settlements, 2013). For this reason, the report says that pension funds in some countries are increasingly looking to transfer their longevity risk. Furthermore, it acknowledges that “longevity risk transfer markets are a more or less uncharted territory for analysts and academics as well as for supervisors.” The report concludes with eight recommendations to supervisors and policy-makers, including: communicating and cooperating, understanding longevity risk exposures, assessing relevant policies, reviewing longevity risk rules and regulations, ensuring adequate risk-bearing capacity, monitoring market developments, paying attention to tail risk, and collecting adequate data. It highlights that “while longevity risk transfer markets are not large enough to present systemic concerns yet, their massive potential size and the growing interest from investment banks in mobilising this risk make it important to ensure that these markets are safe, both on a prudential and a systemic level.”

The very substantial global longevity risk exposure and the growing demand for longevity risk mitigation solutions were already highlighted by the Chief Risk Officers Forum (2010). Furthermore, while longevity risk is largely about increasing life expectancies, the Chief Risk Officers Forum has outlined countervailing trends to consider, including emerging health risks and environmental risks: “Over short durations, the effects of increased obesity, alcohol consumption and recreational drug-taking may prove damaging to life expectancies. Over longer durations, there will be challenges ahead from climate change, pressure on water resources and new pathogens, as well as the increasing prevalence of conditions specific to an aging population, such as Alzheimer’s disease. During the last 30 years more than 30 new pathogens have been identified, including HIV, new variant CJD (Creutzfeldt-Jakob Disease) and SARS (Severe Acute Respiratory Syndrome). A significant proportion of these is derived from human-animal transmission and represents a material change in the risk landscape.”

The nature of certain longevity risk products for individuals, such as equity release, has led to governance-related practices from providers that ensure integrity and transparency when products and services are offered to customers. For example, the Equity Release Council in the United Kingdom has a Code of Conduct that sets strict criteria for its members, and puts in place safeguards for consumers to ensure that they can have confidence in Equity Release Council members and their products and services. The council also has a Statement of Principles for its members to bring about outcomes that are in the best interests of customers and rules and guidance incorporating a number of documents that set out the council’s requirements and expectations of its members (Equity Release Council, 2015a, 2015b).

<sup>1</sup> The Joint Forum is a group of senior financial sector supervisors working under the auspices of its parent committees: the Basel Committee on Banking Supervision, the International Organization of Securities Commissions and the IAIS. The objective of the Joint Forum is to support banking, insurance and securities supervisors in meeting their regulatory and supervisory objectives and, more broadly, to contribute to the international regulatory agenda in particular where risks exist across or in gaps between the three supervised sectors. See [Chapter 4](#) in Section 2 of this book, Lessons from the Development of Green Finance China by Tian Huy and [Chapter 4](#) in Section 2 of this book, Problems and Difficulties in the Development of China’s Green Finance by Wang Gang.



## 4.7 TRUST, REPUTATION, ACCOUNTABILITY AND TRANSPARENCY ARE MORE IMPORTANT THAN EVER.

Insurers have articulated that “we depend on the trust people place in our industry to fulfil its obligations” (UNEP FI, 2012). An annual international trust and credibility survey of business and governments has produced consistent results over the past five years (Edelman Berland, 2014). Across industry sectors, the financial services industry, which includes banks and insurers, is the least trusted. In contrast, the technology industry is the most trusted. By a three-to-one margin, informed publics say that there is not enough government regulation of the financial services, energy, and food and beverage industries. The main reason is to protect consumers, and because the demand for oversight is even higher for industries where the potential impact on environmental, health and economic well-being is more prominent.

Despite the high demand for regulation of business, the survey shows a significant level of permission for business to play a role in the debate and design of regulation, as most respondents do not see government as capable of delivering the necessary regulations on its own, especially at the scale and level of complexity that is often required. Another key finding is that the vast majority (84 per cent) of respondents believe that business can pursue its self-interest while doing good work for society.

The survey report concludes that today’s world requires a shift from the historic, transactional nature of capitalism to a model of value creation that encompasses both social benefit and shareholder value. It ends with examples of companies that have created value for clients and society, highlighting that, “in a world of constrained resources and growing stresses, compromise and choice are required for forward progress, based on values and with a commitment of greater societal value” (Edelman Berland, 2014).

Insurance and financial regulators have continued to step up efforts on governance and conduct of business. For example, in 2014, the Joint Forum released its final paper on point-of-sale disclosure. The report identifies and assesses differences and gaps in regulatory approaches to point-of-sale disclosure for investment and savings products across the insurance, banking and securities sectors, and considers whether the approaches need to be further aligned across sectors. It sets out eight recommendations, for use mainly by policy-makers and supervisors to assist them in considering, developing or modifying their point-of-sale disclosure regulations (Joint Forum, Bank for International Settlements, 2014).

Beyond point-of-sale disclosures and as part of the overall thrust on financial consumer protection, insurance regulators are working on outcome-based regulatory reforms. Examples include the Treating Customers Fairly (TCF) initiative of the Financial Conduct Authority in the United Kingdom, and TCF approach of the Financial Services Board in South Africa. There are similar initiatives in Asia, such as the Guidelines on Fair Dealing of the Monetary Authority of Singapore (2013), applicable to investment products, and the Treating Customers Fairly Charter of the Hong Kong Monetary Authority (2013), applicable to banks. According to the UK Financial Conduct Authority (FCA, 2013): “All firms must be able to demonstrate that they are consistently delivering fair outcomes to consumers and that senior management are taking responsibility for ensuring the firm and staff at all levels deliver the consumer outcomes relevant to their business through establishing an appropriate culture. We expect customers’ interests to be at the heart of how firms do business. Customers can expect to get financial services and products that meet their needs from firms that they can trust. Meeting customers’ fair and reasonable expectations should be the responsibility of firms, not that of the regulator.”

#### Box 4: Treating Customers Fairly

The United Kingdom FCA's Treating Customers Fairly initiative set out six consumer outcomes expected of firms. The FCA said it would use them as an important factor in guiding regulatory decisions and actions.

**Outcome 1:** Consumers can be confident that they are dealing with firms where the fair treatment of customers is central to the corporate culture.

**Outcome 2:** Products and services marketed and sold in the retail market are designed to meet the needs of identified consumer groups and are targeted accordingly.

**Outcome 3:** Consumers are provided with clear information and are kept appropriately informed before, during and after the point of sale.

**Outcome 4:** Where consumers receive advice, the advice is suitable and takes account of their circumstances.

**Outcome 5:** Consumers are provided with products that perform as firms have led them to expect, and the associated service is of an acceptable standard and as they have been led to expect.

**Outcome 6:** Consumers do not face unreasonable post-sale barriers imposed by firms to change product, switch provider, submit a claim or make a complaint.

Source: FCA (2013)

The TCF outcomes of South Africa's Financial Services Board (FSB) mirror those of the United Kingdom's FCA. According to the FSB's TCF Roadmap, released in 2011, it is implementing a program for regulating the market conduct of financial services firms. It indicates that the TCF approach seeks to ensure that fair treatment of customers is embedded within the culture of financial firms. TCF will use a combination of market conduct principles and explicit rules to drive the delivery of clear and measurable fairness outcomes, and will enforce the delivery of these outcomes through imposing a range of visible and credible deterrents to unfair treatment. The FSB adds that TCF will require regulated firms to consider their treatment of customers at all stages of their relationship with the customer, from product design and marketing, through to the advice, point-of-sale and after-sale stages. Firms will ultimately be required to demonstrate—through management behaviours and monitoring—that they are consistently treating customers fairly throughout the stages of the product life cycle to which they contribute.

TCF initiatives in different jurisdictions are in line with the aims of Insurance Core Principle 19 (Conduct of Business) of the International Association of Insurance Supervisors, and those of the High-Level Principles on Financial Consumer Protection endorsed in 2011 by the G20 Finance Ministers and Central Bank Governors.

### Box 5: The G20 High-Level Principles on Financial Consumer Protection

These G20 principles are voluntary principles. They are designed to complement, not be a substitute for, existing international financial principles or guidelines. In particular, they do not address sector-specific issues dealt with by the relevant international organizations and the financial standard setters (e.g., Basel Committee on Banking Supervision, International Association of Insurance Supervisors, International Organization of Securities Commissions). They cover ten key areas:

1. Legal, regulatory and supervisory framework
2. The role of oversight bodies
3. The equitable and fair treatment of consumers
4. Disclosure and transparency
5. Financial education and awareness
6. Responsible business conduct of financial services providers and authorized agents
7. The protection of consumer assets against fraud and misuse
8. The protection of consumer data and privacy
9. Complaints handling and redress
10. Competition

Source: G20/OECD (2011)

## 4.8 ENVIRONMENT LIABILITY INSURANCE IS COMPLEX AND STILL EVOLVING.

In 2013 commercial liability premiums accounted for 10 per cent of total global non-life premiums. Liability insurance is far more prevalent in advanced markets such as the EU and North America than in emerging markets. In 2013 advanced markets accounted for 93 per cent of global liability premiums (Swiss Re, 2013).

Established legal liability frameworks for environmental damages include the U.S. Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (which established the “Superfund”), the Environmental Liability Directive in the EU, Prevention and Integral Management of Wastes in Mexico and the Environmental Protection Law in China. The insurance industry has been responding to the rise of these liabilities through the development of new products such as environmental impairment liability (EIL) insurance. These products were introduced following the introduction of the Superfund Regulations, when U.S. insurers began excluding pollution cover under general liability policies. This specialist EIL insurance class continued to develop in the early 1990s covering damages from sudden as well as gradual pollution and has since become available in Europe and globally. More recently, EIL insurers have started to explore emerging issues such as damages to natural resources and loss of biodiversity (UNEP FI, 2007)

## Box 6: The EU Environmental Liability Directive

The EU Environmental Liability Directive (ELD), which entered into force in 2004, established a legal framework to prevent and remedy environmental damage to protected species and habitats, water and soil. “The polluter pays” is the underlying principle. As the ELD deals with the ecological damage, it is based on the powers and duties of public authorities (“administrative approach”). Therefore, liability claims are brought by public administrators for remediation to the damaged environment, not by injured third parties, as would be the case in “traditional damage” such as damage to property, economic loss or personal injury.

Operators carrying out dangerous activities (such as waste management and manufacture of hazardous substances) fall under strict liability (no need to prove fault). Those carrying out other occupational activities are liable for fault-based damage. Affected natural or legal persons and environmental non-governmental organizations (NGOs) have the right to request the competent authority to take remedial action if they deem it necessary. The strict and fault-based liability regimes under the ELD are distinct from the purely strict liability regime of the Superfund in the United States. Furthermore, unlike the Superfund, the ELD is not retroactive, so it does not cover damage caused before its implementation.

The European Commission reported to the European Parliament in 2010 that the available information did not allow for concrete conclusions to be drawn about the effectiveness of the ELD. The European Commission is due to submit its report on the effectiveness and application of the ELD to the European Parliament and EU Council and undertake a review by mid 2015. A key element the report will cover is whether there is a need for EU-wide compulsory ELD insurance and an extension of activities falling under strict liability (Insurance Europe, 2014b).

Environmental liability products are offered across EU member states through different mechanisms, such as environmental liability pools, endorsements to existing general liability policies and stand-alone environmental liability products. However, insurance covering the liability for the prevention and remediation of environmental damage is still developing in many EU member states. While the availability of this insurance has increased since adoption of the ELD in 2004, financial capacity in the market remains small compared to other, more advanced liability insurance markets (such as motor or general third-party liability insurance) (Insurance Europe, 2013). Insurance Europe believes that a voluntary free market is working, with different products and approaches available, and that a “one-size-fits-all approach” at the EU level would not be feasible.

Other issues that continue to be debated include the potential extension of strict liability; the extension of the scope of environmental damage to air as well as invasive alien species; the significance thresholds for land damage and water damage; the harmonization of the currently optional ELD defences; and the consideration of industrial activities currently covered by international convention (Insurance Europe, 2014b)

*Source: European Commission (2015)*

The debates on the ELD illustrate the broader question of in what circumstances insurance should be compulsory or voluntary. Insurance usually works most effectively when developed in response to actual customer demand. Compulsory insurance can interfere with insurer’s ability to tailor cover to customer needs, such as by giving price incentives for improved risk management, thereby leading to more risk-reducing behaviour by the policyholder.

Governments usually step in, including through public-private partnerships, when there is a market failure. However, a consumer’s incentive to exercise due diligence and minimize risk may be diminished in cases where they are compelled by law to have a specific type and scope of insurance. This could include, for instance, the take-up of adaptation measures such as adhering to building codes and preparing flood defences). The result may be a potential decrease in overall risk awareness and safety and an increase in more severe losses as the result of a natural catastrophe. But moral hazard (i.e. the lack of risk-reducing behaviour) may not be an issue in all compulsory insurance markets. A compulsory insurance system implemented in line with a public-private partnership can at times even lead to diminished moral hazard. In

France, for example, which mandates an extension of natural catastrophe coverage to property insurance, the economic losses caused by a disaster are only partly covered by insurance (50 per cent to 60 per cent). Public authorities must thus deal with the remaining uninsured damage to infrastructure. As a result, the private and public sectors work together to try and minimize risk (Insurance Europe, 2013).

# OUTLOOK ON INSURANCE REGULATION AND SUSTAINABLE DEVELOPMENT

## 5.1 ESG RISKS RUNNING AHEAD OF REGULATORY FRAMEWORKS

In 2009 the UNEP FI Insurance Working Group conducted a global survey of the insurance industry and sustainable development issues. The survey results are relevant to regulatory and legal frameworks and continue to resonate today. A critical component of the survey was to ask respondents to judge the maturity of ESG factors in relation to the industry on a scale from “not a factor” to having a “developed regulatory or legal framework.”

FIGURE 3: EVOLUTIONARY PROGRESS SCALE



Source: UNEP FI Insurance Working Group (2009)

The 12 primary ESG factors considered were:

- **Environmental:** climate change, biodiversity loss and ecosystem degradation, water management, pollution
- **Social:** financial inclusion, human rights, emerging manmade health risks, aging populations
- **Governance:** regulations, disclosure, ethics and principles, alignment of interests

Respondents were also asked to evaluate the same factors—framed as risks—with respect to their potential frequency, severity and uncontrollability. One of the more profound insights from the survey was the extent to which the insurance underwriter, responsible for pricing risks, judged ESG risks to have significant loss potential in terms of risk frequency, severity and uncontrollability. However, the societal response to these ESG risks on the evolutionary progress scale was indicative of societal response “lagging” the underwriters’ assessment of the risk involved, with prudential regulatory or legal frameworks underdeveloped. Therefore, the interesting question that arises is whether a regulatory or legal framework is a precondition of insurability, or whether it is simply one of many important issues that influence the underwriting process. This is a question of no small importance with respect to ESG risks, many of which are dynamic and systemic and involve public goods. The insurance industry perspective reflected in the survey results suggests that ESG risks may be “outrunning” the development of prudential regulatory or legal frameworks that address sustainable development issues. This is significant because the insurance industry is highly regulated, and the survey statistics revealed that “regulations” is the number one factor influencing underwriting, and the number one factor in terms of risk severity.

The responsibility of insurers entails economic considerations as well as being part of society, and the survey data suggested that the dynamic characteristics of ESG risks need an equally dynamic framework to guide an industry response to ESG risks where prudential regulatory or legal frameworks are underdeveloped. The global survey was the final part of the research foundation that stimulated the development of the Principles for Sustainable Insurance, with the aim of bridging the societal, regulatory and legal gap on ESG risks in a proactive way.

## 5.2 NO GLOBAL FRAMEWORK FOR INTEGRATING SUSTAINABLE DEVELOPMENT INTO INSURANCE REGULATION

As yet, there is no common global framework for the routine and systemic integration of sustainable development issues into insurance regulation. Insurance regulatory frameworks at the global and national levels are addressing certain sustainable development issue, such as social inequality and lack of access to insurance, although there is still much work needed.

Overall, it appears that the insurance regulatory frameworks and practices, including the IAIS Insurance Core Principles, are more focused on the basic responsibility, safety and stability of the insurance industry in relation to its policyholders, than on its wider role in supporting a sustainable economy. Moreover, the roles of insurers as risk managers and institutional investors (i.e., beyond their role as risk carriers) appear to be underused in the context of tackling sustainable development challenges.

Meanwhile, the advent of global principles on sustainable development for the insurance industry offers key insights. For example, the PSI and PRI are consistent with the “total balance sheet approach” (i.e., assets and liabilities) of the IAIS Insurance Core Principles and new risk-based solvency regulatory frameworks such as the EU’s Solvency II. The PSI and PRI are frameworks and initiatives that can facilitate better understanding and management of ESG risks and opportunities and strengthen the capacity of insurers to fulfil their obligations to policyholders. Moreover, these principles serve as global frameworks that offer a shared view of the future, which, along with concrete actions today, can catalyze transformational and systemic change that supports sustainable development.

Indeed, global insurers are increasingly assessing ESG issues in relation to country risk, where previously they concentrated on political and financial risk criteria (Chief Risk Officers Forum, 2013). The insurance industry is also increasingly recognizing emerging ESG issues such as human rights in the context of reputational, legal and transactional risks (Chief Risk Officers Forum, 2014). The understanding and integration of ESG issues in investment management has traditionally been a weaker point for insurers, compared to the underwriting side of the insurance business. However, the role of insurers as institutional investors will likely gain more prominence in driving sustainable development (UNEP FI Insurance Working Group, 2009). The insurer, Aviva has produced a white paper outlining a roadmap for sustainable capital markets, and how the UN Sustainable Development Goals can harness the global capital markets (Aviva, 2014).

The convergence of sustainable development issues is posing a shared risk to the insurance industry, business, government and society. This provides a strong incentive for collaboration, and presents a new generation of opportunities for innovative solutions. With sustainable development issues increasingly on the agenda of insurers and society at large, it is becoming evident that formal insurance regulatory frameworks would need to respond in a proactive, holistic and systemic way. However, this presents a real challenge as the burden of regulation has consistently been singled out in recent years as the greatest risk facing the global insurance industry (Center for the Study of Financial Innovation, 2013).



## CHINA'S INSURANCE INDUSTRY AND SUSTAINABLE DEVELOPMENT

China is one of the world's largest and fastest-growing insurance markets. Agricultural insurance premiums in China were USD 5 billion in 2013, up 27 per cent from the previous year, making China the world's second largest agricultural insurance market after the United States. However, the majority of China's population lacks access to insurance. Insurance density and insurance penetration in China remain low at USD 201 in premiums per capita and 3 per cent (premiums as a percentage of GDP), respectively, in 2013 (excluding figures for Hong Kong, Special Administrative Region, China; and Taiwan, Province of China) (Swiss Re, 2014c) and there is a lack of trust in insurers (McKinsey & Company, 2012).

Insurers such as China Life view China's massive populations of rural residents and urban migrant workers as a huge market for microinsurance. From the launch of its life microinsurance pilot scheme in 2008 to September 2013, China Life has expanded its coverage to more than 122 million low-income people, providing accident, term life and medical insurance. During the same period, the proportion of the country's rural population that benefited from microinsurance coverage rose from 0.35 per cent to 4.1 per cent (China Life Insurance Co. Ltd., 2013).

Three key factors characterize the sustainable development challenge for insurance in China:

- **Major environmental challenges:** China is the world's largest emitter of greenhouse gases, relying heavily on coal and oil, which account for nearly 90 per cent of energy production. In 2011 China accounted for 60 per cent of the world's cement use, 49 per cent of iron and steel and 20 per cent of energy. It is estimated that 90 per cent of China's urban water bodies are polluted, and outdoor air pollution is estimated to contribute to 1.2 million premature deaths per year. It is also estimated that 10 million hectares of farmland are contaminated and the amount of waste sent to landfills is rising. High levels of public concern on the environment have led to a 29 per cent increase in local environmental protests. Without action, large levels of carbon dioxide emissions will result in dangerous climate change, to which China is vulnerable (UNEP, 2013). China has suffered five of the top ten deadliest natural disasters in history, three of the top five deadliest earthquakes, the top five deadliest floods and more typhoons than any other country (an average of approximately 11 per year). In recent history, catastrophes have affected over 70 per cent of China's land area and over half the population (Aon Benfield, 2013). In 2013 Typhoon Fitow became the strongest typhoon to reach China since 1949. It resulted in major flooding, which led to most of the estimated total losses of USD 10 billion. The insured losses of USD 1.1 billion made it the second-largest claims event ever in China (Swiss Re, 2014b).
- **Major environmental opportunities:** At the same time, China has become the world leader in renewable energy investment. China has the world's largest installed capacity of wind farms. It is the world's largest leading manufacturer of solar photovoltaic modules, and produces more hydroelectricity than any other country. In 2012, renewable energy investment in China stood at USD 67.7 billion, the highest in the world, and double the level of investments in 2009. During the 11th Five-Year Plan (2006–10), significant investments were made in industrial energy efficiency, resulting in a 19.1 per cent fall in energy use per unit of GDP. The cement sector, in particular, was successful at increasing its efficiency during that five-year period—the amount of energy required to produce a tonne of cement fell by 41 per cent. China aims to reduce the carbon intensity per unit of GDP by 40 to 45 per cent by 2020 compared to 2005 levels, and plans to produce 15 per cent of its energy from non-fossil fuel sources by 2020. Regulations are also playing a role in China's transition to a more sustainable economy, including regulations that led to the phasing-out of inefficient plants, and increasingly stricter regulations on water pollution, air quality and waste management are driving investment (UNEP, 2013).



- **A rapidly aging population.** China has had a declining number of births since the 1990s and has a rapidly aging population. In 2013 there were 23 million persons aged 80 years living in China, by 2050 this will have reached over 90 million (UNEP, 2013). Western European countries spend about USD 4,833 per capita on health, while Japan, the most aged country in the world, spends about USD 3,120 per capita on health. In the case of China, which still has a relatively young population structure, it spent only USD 374 per person in healthcare services in 2010. Rapid aging will increase both per capita and total spending in health.

## 6.1 KEY INSURANCE DEVELOPMENTS

Green insurance in China is currently defined as, and by, one insurance product—environmental pollution liability insurance. In 2013 the Ministry of Environmental Protection (MEP) and the China Insurance Regulatory Commission issued Guidelines on Pilot Projects of Compulsory Environmental Pollution Liability Insurance, and the Environment Protection Law, revised in 2014, “encourages” the purchase of environmental pollution liability insurance by companies.<sup>2</sup>

### Box 7: Guidelines on Pilot Projects of Compulsory Environmental Pollution Liability Insurance

The Guidelines on Pilot Projects of Compulsory Environmental Pollution Liability Insurance help local governments develop and test schemes for compulsory environmental pollution liability insurance in high-environmental-risk industries such as metals and petrochemicals. This is a significant development towards better environmental risk management practices. MEP (2013) sees insurance as “a social and market-oriented approach to reduce environmental pollution damage, and can help to push enterprises to enforce environmental risk management and lower the number of pollution accidents; it is also helpful to respond to pollution incidents promptly, as well as timely compensate and effectively protect the pollution victims.”

There appear to be differing views on the effectiveness of the insurance scheme, spanning a range of issues, such as the clarity, certainty and enforcement of environmental laws; the level of fines and penalties; the quality of environmental risk management practices; the limits and scope of insurance coverage; underwriting, loss evaluation and claims management standards; the high risk of adverse selection; and the lack of diversification given the focus on the most polluting industries only (The Geneva Association, 2011).

Other recent and ongoing regulatory reforms and developments in China include:

- The China Risk-Oriented Solvency System
- The construction of a national natural disaster risk-transfer program and improvement of loss models and underlying data
- The Scheme for the Overall Promotion of Life Microinsurance
- Microinsurance regulation in Taiwan, Province of China
- The TCF Charter of the Hong Kong Monetary Authority
- The establishment of the Independent Insurance Authority by the Government of Hong Kong, Special Administrative Region, China.

Given the major ESG risks and opportunities for China, ongoing development of insurance regulations and policies offer opportunities to enable the routine and systemic integration of ESG risks and opportunities to advance sustainable development. Developing such a regime could include having a clear recognition of the role of insurance for both economic resilience and sustainability through its risk carrying, risk management and institutional investment roles. China also has the opportunity to learn from international insurance regulatory practices linked to sustainable development; adopting global sustainability principles; and creating an enabling environment for insurers, regulators, policy-makers and other insurance industry stakeholders to communicate, innovate and collaborate for sustainable development.

<sup>2</sup> See [Chapter 4](#) in Section 2 of this book, Lessons from the Development of Green Finance China by Tian Huy.

### 7.1 IMPROVING THE INSURABILITY OF ENVIRONMENTAL POLLUTION LIABILITY RISKS

Improving the insurability of environmental pollution liability risks in China is a key priority. First, there must be legal clarity and certainty with respect to the Environmental Protection Law and its provisions relevant to environmental liability, including responsibilities and accountabilities of different entities. The greatest problem for liability insurers is the foreseeability of the loss. Insurers can only set appropriate premiums and the technical reserves required by insurance regulators for uncertain occurrences if they are foreseeable. Unforeseeable claims (relating to legal changes with retroactive effects or technological developments) provide a major challenge to insurers. Thus, legal clarity and certainty is a prerequisite for insurability—broadly defined as the willingness of insurers to provide cover. Second, there must be strict implementation and enforcement of the Environmental Protection Law, including effective penalties and fines. Third, good environmental risk management practices must be widely promoted and implemented in both the public and private sectors. Environmental risk management checks by insurers should be taken as procedures that supplement good environmental risk management practices by insured companies themselves, in compliance with applicable environmental laws.

Improving the legal system with respect to environmental liability; promulgating regulations on compulsory environmental pollution liability insurance and upgrading such cover from pilot projects to a nationwide, long-term system are all steps that can improve insurability. Aside from strengthening the coordination between environmental protection authorities and the insurance industry (such as on data collection and sharing, environmental risk management), insurers themselves must develop the technical competence to underwrite environmental liability insurance, a highly complex and specialized line of insurance. It is important to understand that the complexity of environmental liability risks is evolving along with new technological risks in industries such as oil and gas.

Equally, insurers must develop the technical competence to manage environmental liability claims. Liability claims are highly exposed to economic, social and legal dynamics. This is mainly because liability claims can take years to finalize—even decades. During this period, the variables determining final claims payments (such as inflation and the size of legal awards) may change, and because liability risks can accumulate, a single loss event may result in many claims being filed under different policies, and across policy types, by many injured parties. This is particularly the case for environmental liability claims (Swiss Re, 2014c). Proper claims management is also essential to restore the environmental damage in an effective way. To further mitigate policy-related risks, it would be prudent for China to learn from the difficult experience in more mature yet still evolving environmental liability insurance markets, particularly in the United States and the EU. It would also be insightful for China to better understand the circumstances that led to the insurance industry's decades-long financial pain from paying asbestos liability claims, which continues to plague insurers to this day.

### 7.2 REASSESSING THE CURRENT ENVIRONMENTAL POLLUTION LIABILITY INSURANCE SCHEME

Environmental pollution liability insurance is an important type of green insurance. However, the scale and effectiveness of the environmental pollution liability insurance scheme in China could be improved. There appear to be differing views on the effectiveness of the insurance scheme, and questions remain about whether a mandatory or voluntary approach will prevail.

In light of this, it is suggested that the environmental pollution liability insurance scheme in China be reassessed. A comprehensive consultation process could be carried out involving leading Chinese insurers

and reinsurers, leading international insurers and reinsurers operating in China, the China Insurance Regulatory Commission, the Insurance Association of China, relevant government entities (such as the Ministry of Finance, Ministry of Environment and Development Research Centre of the State Council) and other key insurance industry stakeholders (such as relevant UN agencies, business and industry associations, and civil society organizations).

### 7.3 EXPANDING THE DEFINITION AND SCOPE OF GREEN INSURANCE

Green insurance in China is currently defined as, and by, one insurance product—environmental pollution liability insurance. Limiting the definition and scope of green insurance to this product alone is a narrow, unintegrated approach to environmental risk management. This limits the huge potential for policy-makers and insurers to better understand, reduce and build resilience to a wide range of environmental risks, and to seize insurance-industry-related opportunities that accelerate the transition to a green economy.

The Development Research Center of the State Council itself has recognized this narrow definition:

The narrow understanding of green finance might limit the development of the policy support system and the market practice. This is remarkably demonstrated in the insurance field. In foreign countries, green insurance usually refer to the various insurance plans related to environmental risk management and in essence, the insurance is used as an instrument of sustainable development to deal with some issues related to environment, including the climate change, pollution and environmental destruction. By comparison, China's definition of green insurance at the current period is much narrower and it usually refers to one specific type of insurance, i.e. environmental pollution liability insurance, and has not included climate change, the long-term environmental risk, into the scope of environmental pollution liability insurance.<sup>3</sup>

This narrow definition of green insurance is further highlighted when compared to the application of green credit guidelines in China, which include areas such as agriculture, forestry, energy and water conservation, environmental protection and ecological restoration, disaster prevention and control, recycling, water treatment, pollution prevention and control, renewable energy, rural and urban water, green buildings, and green traffic and transportation. In essence, if green credit guidelines extend to these sectors, should green insurance guidelines also have similar scope?

Insurers' roles as risk managers and investors can be applied more widely and strategically with an expanded definition and scope of green insurance. For example, reducing environmental risks through risk research, models, analytics, tools and metrics across insurance lines (including property, marine and aviation), and advocating for greater investment in disaster risk reduction measures and disaster risk-sensitive investments.

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<sup>3</sup> See [Chapter 4](#) in Section 2 of this book, Problems and Difficulties in the Development of China's Green Finance by Wang Gang.

## Box 8: A Green Insurance Framework

The following is a proposed definition of green insurance: *Premised on good environmental risk management, green insurance is financial protection that spans environmental risks and liabilities, and promotes environmental sustainability.*

Insurance (i.e., financial risk protection) is not a substitute for good risk management (i.e., risk identification, assessment, prevention and reduction). Accordingly, good environmental risk management is the bedrock of green insurance. Without good environmental risk management, it will be difficult to make green insurance viable, affordable, effective, scalable and sustainable.

Recognizing the full spectrum of environmental risks and opportunities, three categories of green insurance are proposed, each with a distinct purpose:

- **Environmental liability protection:** Green insurance that provides financial protection from liabilities due to environmental damage. The specific insurance for this category is environmental impairment liability insurance. The cause of environmental damage could be pollution or non-pollution events.
- **Environmental risk resilience:** Green insurance that provides financial protection and builds resilience to environmental risks, including climate change risks and natural hazards. Examples include insurance for homes, vehicles and businesses against losses due to cyclones, floods, droughts, earthquakes and volcanic eruptions.
- **Environmental sustainability:** Green insurance that provides financial protection and promotes environmental sustainability through low emissions (i.e., emissions pertaining to greenhouse gases and air pollutants) and natural resource-efficient solutions. Examples include insurance for renewable energy technologies, energy and water-efficient buildings, energy savings, geothermal exploration risks, carbon capture and storage technology, electric vehicles, and pay-as-you-drive insurance and green rebuilding insurance.

## 7.4 PARTICIPATING IN SUSTAINABLE INSURANCE INITIATIVES

It is important to note that China's insurance industry is facing other sustainable development issues, such as a rapidly aging population and the lack of access to insurance, particularly with respect to low-income people. While these issues may not necessarily fall under the "green insurance" definition, they are part of the "sustainable insurance" definition internationally. In this context, it would be prudent for China to be aware of and learn from international good practices in managing ESG issues:

- **Environmental issues:** For example, climate change mitigation and adaptation, increasing vulnerability to natural disasters, natural resource degradation, water scarcity, environmental pollution.
- **Social issues:** For example, lack of access to insurance, widening social inequality, human rights, labour standards, aging populations, emerging health risks.
- **Governance issues:** For example, trust and reputation issues, lack of accountability and transparency, unfair treatment of customers.

ESG issues are the focus and scope of the UN's PSI, which serve as the global framework for insurance and sustainable development. PSI (UNEP FI, 2012) defines sustainable insurance as "a strategic approach where all activities in the insurance value chain, including interactions with stakeholders, are done in a responsible and forward-looking way by identifying, assessing, managing and monitoring risks and opportunities associated with environmental, social and governance issues. Sustainable insurance aims to reduce risk, develop innovative solutions, improve business performance, and contribute to environmental, social and economic sustainability."

By promoting the adoption of PSI in the Chinese insurance industry, China will be embracing a forward-looking policy that could set the foundation for China's next progression—from green insurance focusing on environmental issues to sustainable insurance focusing on ESG issues.

It would be strategic for Chinese insurance organizations (e.g., Chinese insurers and reinsurers, the China Insurance Regulatory Commission, the Insurance Association of China) to adopt the principles now. This will enable them to better understand and learn from good practices in managing ESG issues. Furthermore, as the largest collaborative initiative between the UN and the insurance industry, PSI provides a global network for the Chinese insurance organizations to communicate and work together with their peers in the insurance industry on sustainable development issues.

## **7.5 PROMOTING SUSTAINABLE DEVELOPMENT IN GLOBAL INSURANCE REGULATORY FRAMEWORKS**

With one of the largest and fastest-growing insurance markets, China is a key member of the global insurance industry. This presents an opportunity for China to take a leadership role in championing green insurance in both national and international public policy.

At the global level, the Insurance Core Principles (ICPs) of IAIS provide the accepted regulatory framework for the insurance industry. However, the ICPs are not clear and explicit about the ESG dimensions of sustainable development.

With its strong green insurance policy agenda and the proposal for Chinese insurance organizations to adopt the PSI, China would be well positioned to play a leading and catalyzing role in integrating the ESG dimensions of sustainable development into global insurance regulatory frameworks such as the ICPs. This could also extend to ongoing discussions on global capital standards, systemic risks, macroprudential policy and surveillance, and financial stability.

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