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UNITED NATIONS ENVIRONMENT PROGRAMME

The global state of sustainable insurance

Understanding and integrating environmental, social and governance factors in insurance

A report by the Insurance Working Group of the United Nations Environment Programme Finance Initiative

Based on the IWG's pioneering 2009 global survey on ESG factors and insurance underwriting and product development

UNEP Finance Initiative
Innovative financing for sustainability

Launch document

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October 2009

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Contents

Commonly used terms

ESG Environmental, social and governance (factors or issues)
AWG UNEP FI Academic Working Group
IWG UNEP FI Insurance Working Group
UNEP FI United Nations Environment Programme Finance Initiative

1 Foreword from the United Nations Environment Programme

Achim Steiner
United Nations Under-Secretary-General
and Executive Director, United Nations Environment Programme

UNEP

The insurance industry has long been in the vanguard of understanding and managing risk, and has served as an important early warning system for society by amplifying risk signals. Through loss prevention and mitigation, by sharing risks over many shoulders, and as major investors, the insurance industry has protected society, shaped markets and underpinned economic development. Today, the risk landscape is rapidly evolving, spawning new and complex risks that threaten our increasingly scarce nature-based assets and undermine our common future.

This landmark report by the UNEP FI Insurance Working Group is a testament to the fundamental role of the insurance industry in sustainable development, which is not a choice, but the only option. And the message is loud and clear—insurers are communicating strong risk signals stemming from a wide range of environmental, social and governance issues—from climate change, biodiversity loss and ecosystem degradation and water scarcity, to poverty, emerging manmade health risks, ageing populations, child labour and corruption.

In UNEP, the insurance industry has a partner that cultivates the enabling environment necessary to understand these risks better, to act on them with urgency, and to uncover the opportunities. UNEP, which co-established the Intergovernmental Panel on Climate Change, is helping policymakers seal a fair, balanced and effective deal in Copenhagen that would usher in robust mitigation and adaptation policies crucial to, for example, insuring climatic risks, driving innovative solutions, and building new markets. Yet sealing the deal in Copenhagen, critical as it is for this and future generations, is only one of many pressing global priorities.

UNEP is also leading a global effort to measure the vast economic benefits of biodiversity and ecosystem services—our species' life insurance policy—and to hold to account unsustainable practices that result in biodiversity loss and ecosystem degradation. This is being done through the initiative, The Economics of Ecosystems and Biodiversity, which will culminate next year in Nagoya at the 10th Conference of the Parties to the Convention on Biological Diversity.

Finally, out of the ashes of the worst financial and economic crisis in generations, UNEP launched its Green Economy Initiative in 2008. This initiative includes a Global Green New Deal, which calls for a 21st century global economy that invests in real and inclusive long-term growth, genuine prosperity and job creation by tackling the multiple challenges of our time, particularly the environmental, social and governance issues highlighted in this report.

Steering the global economy onto a sustainable path and delivering a Global Green New Deal is not about sentiment, but about hard economics, real choices and a new compass for delivering genuine wealth creation. It is not about cutting growth, but about more intelligent, sustainable and inclusive growth that captures the true value of human and natural capital. However, a low carbon, resource efficient and inclusive economy cannot be achieved by a single bound—and we must pay the premium to insure it. That premium entails collaboration and collective action, putting an end to short-termism, and investing in transformative, long-term solutions.

Indeed, the principle of 'one for all, all for one' that underpins the sharing of risks in the insurance industry has demonstrated that by collectively understanding and managing the risks that arise today, we can discover the opportunities of tomorrow, and prepare for the challenges the day after. We must adopt this very same principle to tackle the global and systemic risks posed by many environmental, social and governance issues. We can no longer afford to view these issues as peripheral as the stakes could not be higher. In the final analysis, the journey to a Green Economy must be shared by all, for we are all part of the solution.

UNEP is committed to continue working with the insurance industry to meet this challenge.

Achim Steiner

2 Foreword from HRH The Prince of Wales

CLARENCE HOUSE

Insurance companies play a pivotal role in identifying and assessing new and emerging risks. No other sector takes a longer term or more carefully calculated professional view of the future. Their approach to sustainability is therefore of fundamental importance, not only to the rest of the corporate sector, but to the whole of human society. So I am delighted to introduce this timely and comprehensive global sustainability survey of the insurance industry by the UNEP Finance Initiative.

I have been working with business leaders over the past twenty-five years to understand how sustainability issues impact, and are impacted by, their operations. During that time the issue of climate change has moved inexorably up the list of concerns, to the point where it is now not just at the top of the list, but forms the biggest single threat to our survival on this planet. When I launched the ClimateWise Principles in 2007, I stressed the importance of insurance companies taking a strategic view of climate change. It is immensely reassuring that the industry has responded so positively and that ClimateWise has now become a truly global initiative.

Climate change is the global challenge that will define our generation. But it is important not to lose sight of the other sustainability challenges that we face, such as biodiversity loss, water management, rapidly increasing population growth and rapid, unplanned urbanization. In all these and many other areas of human life we need to find more sustainable ways of running our economies. This survey demonstrates that the insurance industry recognizes the importance of these challenges and is developing responses that truly reflect the level of risk.

Charles

3 Message from the UNEP FI Insurance Working Group and its Academic Working Group

This report is the result of a truly collaborative, global effort. We are indebted to hundreds of our colleagues, peers and stakeholders who contributed their time, effort and expertise to the pioneering global survey that made this report possible.

After we produced an agenda-setting report in 2007, which identified key global sustainability issues for the insurance industry and exemplified best practice on sustainable insurance, we embarked on a journey to better understand the impacts of environmental, social and governance (ESG) factors on the insurance business and sustainable development, and how to unleash the immense capacity of the insurance industry to manage ESG risks and uncover the opportunities these entail.

We believe that the capacity of the insurance industry to address global sustainability issues—as risk managers, risk carriers and institutional investors—is underestimated. We believe that the industry itself, given the complexity of the insurance business and the industry structure, is not fully understood by its stakeholders. Equally, we recognise major challenges confronting a highly fragmented, competitive and regulated industry that impede the integration of ESG factors at the company level, the varying degrees of impact that ESG factors can have across core insurance processes and lines of insurance, and the collective industry action needed to robustly tackle ESG factors at the national, regional and global levels.

In 2008, we established an Academic Working Group, comprising leading academic institutions in Europe and North America, to understand the extent of research done on the complex and inherent relationship between a wide range of ESG factors and core insurance processes, for which there had hardly been any, and to support us on our own research. Another important reason was that we wanted to achieve a well-balanced view of what sustainability means, particularly since ESG factors impact many stakeholders. In this vein, we also invited other key stakeholders, including industry initiatives and associations, insurance regulators and civil society institutions, to provide input on the survey scope and design, to participate in the survey, and to promote it.[1] Indeed, the multi-stakeholder process of developing and conducting the global survey was exceptionally challenging and fulfilling, for much of it was quite new to everyone, including ourselves. The nature and scope of the survey was the first of its kind and we will certainly build on the foundation we have laid.

This ground-breaking report offers profound insights on the dynamics of ESG factors and core insurance processes, the state of play of sustainable insurance, sustainability challenges and potential solutions, and the many opportunities that remain largely untapped. However, this report is just the beginning—our survey generated nearly 2,700 pages of data from 60 territories worldwide and from respondents with over 3,800 years of cumulative insurance experience.

This report comes at a critical time of change. In the past two years, we have experienced an unprecedented financial and economic crisis that has made the financial sector, including the

1 See 'Acknowledgements'.

insurance industry, reassess fundamental thinking and practice. Moreover, scientific wisdom over the years, along with an increasingly globalised world, has provided illumination on a myriad of interconnected ESG factors, many of which are highlighted in this report, that can undermine the long-term health of the insurance industry, economic prosperity, the goals of sustainable development and, ultimately, life on this planet. The fact that we are launching this report at the UNEP FI Global Roundtable, which is taking place for the first time in Africa, the region with the lowest insurance density in the world, is a testament to the need to be inclusive and for collaborative action. Furthermore, the crucial UN Climate Change Conference that will determine the post-Kyoto Protocol regime is just weeks away, 2010 heralds the International Year of Biodiversity, and 2011 marks the International Year of Forests.

As members of the UNEP FI Insurance Working Group and Academic Working Group, we believe that ESG factors are part of a full spectrum of risks and opportunities, and part of prudent, responsible and sustainable underwriting and product development.

In line with its provision of risk management services and insurance products, and as major institutional investors, we also believe that the insurance industry must help identify future challenges within the financial system, mitigate systemic risks, and avert crises, including the potentially highly complex and profound 'natural resources crisis' arising from the unsustainable use of a wide range of natural resources such as the climate, biodiversity and ecosystems, and water.

We believe that through the systematic integration of material ESG factors into core insurance processes, insurance companies[2]—along with the individuals and entities that they protect and the entities that they invest in—will be able to sustain their economic activities and play their roles in the creation of a more sustainable global economy that invests in real and inclusive long-term growth, genuine prosperity and job creation, in line with UNEP's Green Economy Initiative[3] and the broad objectives of its 'Global Green New Deal':

- Make a major contribution to reviving the world economy, saving and creating jobs, and protecting vulnerable groups;
- Reduce carbon dependency and ecosystem degradation, putting economies on a path to clean and stable development;
- Further sustainable and inclusive growth, achieve the Millennium Development Goals, and end extreme poverty by 2015.

We believe that implementing the key findings and recommendations of this report will help create a sustainable insurance industry that would accelerate the transformational process to a green, inclusive and sustainable global economy.

In conclusion, we believe that the insurance industry—whose core business is to manage risk—must lead in understanding a rapidly changing risk landscape and address global sustainability issues with rigour and innovation. The scale of these issues is too big for any one institution to tackle—it requires collective action and long-term solutions.

As one chief underwriter survey respondent said:

'Future-proof thinking. Plan better. Learn from mistakes of the past.'

This is not only a call for the insurance industry to rise to the challenge, but also a recognition of its vital role as an early warning system for society, as a catalyst for finance and investment, and as a pillar of economic prosperity and sustainable development.

2 In this report, unless otherwise stated or distinguished, the use of the terms 'insurer', 'insurance' and 'insurance company' is also generally meant to encompass the terms, 'reinsurer', 'reinsurance' and 'reinsurance company'.

3 www.unep.org/greeneconomy

The UNEP FI Insurance Working Group

Member institution	Head office
Achmea	Netherlands
Allianz	Germany
Aviva	United Kingdom
AXA	France
Chartis International	United States
Folksam	Sweden
HSBC Insurance	United Kingdom
Insurance Australia Group	Australia
Interamerican Hellenic Insurance Group	Greece
Lloyd’s	United Kingdom
MAPFRE	Spain
Munich Re	Germany
RSA Insurance Group	United Kingdom
Swiss Re	Switzerland
Storebrand	Norway
The Co-operators Group	Canada
Tokio Marine Nichido	Japan
XL Insurance	Bermuda

The UNEP FI Academic Working Group

Lead academic institution	
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Advisory academic institutions	
Earth Institute, Columbia University	United States
Glasgow Caledonian University	United Kingdom
International Institute for Applied Systems Analysis	Austria
Institute for Catastrophic Loss Reduction	Canada
University of Cambridge	United Kingdom
University of Karlsruhe	Germany
University of Oxford	United Kingdom
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4

Executive summary

I. Background and context

The insurance industry is large, complex and unique. World premium volume exceeded USD 4.2 trillion in 2008, while the industry's global assets under management stood at USD 19.8 trillion in 2007. It is crucial for insurers to generate income from both their insurance and investment operations at all times. Therefore, prudent and disciplined risk management, underwriting and investment management are key processes to sustain profitability and long-term value creation.

The insurance industry is uniquely placed in our economies as a private market mechanism for the sharing of risk, with the global pooling of what would be risks otherwise borne solely by individuals and entities estimated at roughly USD 400 trillion. As this risk pooling is integral to the efficient functioning of markets, economies and societies, the insurance industry is a key focus of regulators and policymakers.

This report is based on the pioneering global survey conducted in 2009 by the UNEP FI Insurance Working Group and its Academic Working Group on the understanding and integration of environmental, social and governance (ESG) factors in insurance underwriting and product development.

The comprehensive survey covered a wide spectrum of ESG factors, primarily:

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

The survey generated nearly 2,700 pages of data from 60 territories worldwide and from respondents with over 3,800 years of cumulative insurance experience. This report represents the analysis of broad themes that emerged from survey results.

ESG factors are relevant to both the insurance and investment operations of insurance companies. Therefore, the global, long-term and systemic risks posed by many ESG factors can undermine the solvency of an insurance company and the long-term economic health of the insurance industry, including insureds and entities financed by insurance capital.

Equally, given their multiple roles as risk managers, risk carriers and institutional investors, insurance companies have immense capacity to manage ESG factors. However, in a highly competitive, fragmented and regulated industry, tackling ESG factors entails overcoming major challenges.

II. Survey objectives

1. Assess the awareness level of ESG factors in the global insurance industry
2. Understand the integration of ESG factors into insurance underwriting and product development and gather best practice
3. Collect data to help develop a material business case supporting ESG integration into core insurance processes
4. Clarify trends that will guide follow-up research
5. Educate respondents and stakeholders on the importance, and language, of ESG factors and sustainability

It is important to note that the survey was designed mainly for private insurance market players, not government-run insurance schemes.

III. Key survey findings

From the survey results, five broad themes emerged.

Theme 1 ➔ ESG factors influence underwriting, and have varying degrees of impact across lines of insurance

Survey respondents, including many Chief Underwriting Officers, judged the existing influence of ESG factors in risk underwriting to be substantial and pervasive. It was apparent that ESG factors have varying degrees of impact across lines of insurance (e.g. ageing populations is a factor intrinsically more relevant to a life underwriter than, say, a property underwriter). Survey results also revealed a correlation between the societal progress of an ESG factor and its influence on underwriting activities (i.e. the more developed a regulatory or legal framework for an ESG factor is, the greater the influence of the factor in underwriting).

Furthermore, many respondents opined that an insured’s superior management of ESG factors signals better overall risk management philosophy and practice, and is a key consideration in the underwriting process that determines the price and coverage of insurance. Similarly, respondents articulated that underwriting the ESG performance of their insureds is an important part of their company's own risk management, and that they seek to manage or avoid the reputational risk associated with having as clients those known for performing poorly on ESG factors.

Yet in a data-driven industry, the absence of a substantial track record in utilising ESG factors as a performance predictor or risk quality was noted as a barrier to both the development of new products and further integration of ESG criteria into formal underwriting guidelines.

Theme 2 ➔ Proper management of ESG factors potentially enhances insurance company earnings and long-term company value via avoided loss and new product offerings

Underwriting is a challenging process that entails understanding risk then pricing it. Although the term ESG has not been traditionally used in the insurance industry, generically, the industry refers to new risks affecting policies already issued and/or to be underwritten in the future as *emerging risks*. It is the connection, symmetry and prior experience of insurers with ESG factors as a critical category of emerging risks that runs as a consistent theme throughout the survey results.

This validates the unsurprising view that new product development in the insurance industry is an equally challenging process. Since the formulation and pricing of a product—'a promise to pay'—is the result of detailed analysis of a large body of historical experience and loss data, much of the needed 'raw materials' in the form of exposure data required to understand the risk at hand are in short supply when creating an insurance policy for an entirely new class of business. This challenging process is intensified by global emerging risks such as climate change, biodiversity loss & ecosystem degradation, and technological risks, which require a large volume of historical and scientific data to understand a wide array of risks and to make sound, forward-looking risk assessments, before risk-specific insurance products are developed. Furthermore, the product development process is linked to legal and regulatory frameworks, which is a key factor in claims management.

Theme 2 also highlights the significant finding that *established procedures to report [holistic] ESG performance* by insureds (e.g. companies) are still underdeveloped, even though the most common answer to the ESG factor, *disclosure*, along the evolutionary progress scale was *developed regulatory or legal framework*. An insured's duty to disclose all *material* risk factors conforms with the fundamental principle of utmost good faith in the insurance business. However, conventional disclosure does not necessarily mean that material ESG factors are *routinely* taken into account, suggesting the need to establish more integrated and holistic reporting procedures to disclose a range of material ESG factors (e.g. risks associated with climate change, nanotechnology, pandemics) for risk management, underwriting and product development purposes.

In view of the various issues mentioned above, the insurance industry is quite cautious in developing new products. Emerging risks, in this context, ESG factors, typically become an influence in the underwriting of existing products first, before they become themselves the subject of new, risk-specific insurance products. Accordingly, through their recognition of underwriting influence and awareness of existing related products, survey respondents indicated many potential product opportunities across ESG factors surveyed, and which lines of insurance these reside. For example, survey data suggest that *biodiversity loss & ecosystem degradation* and *water management* combined present opportunities across agroforestry, casualty, health, life, marine aviation & transport, and property.

Theme 3 ➔ Given their assessment of ESG risks, underwriters judge the societal response for many ESG factors as underdeveloped

A critical component of the survey was to ask respondents to judge where on a seven-point evolutionary progress scale they believed ESG factors lay, with *not a factor* being the starting point and *developed regulatory or legal framework* being the end point.

Additionally, ESG factors were evaluated with respect to their potential risk frequency, severity, and uncontrollability. One of the more profound insights from the survey was the extent to which underwriters judged ESG risks to have significant loss potential, and yet the societal response on the evolutionary progress scale was indicative of societal response 'lagging' the underwriters' assessment of the risk involved.

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 risks 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. This is significant because it is a fact that the insurance industry is highly regulated, and the survey statistics reveal 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 civil society, and the data suggests that the dynamic characteristics of ESG risks need an equally dynamic framework to bridge the gap and guide an industry-led response to many global ESG risks where prudential regulatory or legal frameworks are underdeveloped. Examples of such frameworks are the ClimateWise Principles developed by the insurance industry to address climate change risks, and the United Nations-backed Principles for Responsible Investment, developed by the investment industry to address a full spectrum of ESG risks, and directly applicable to the investment operations of insurance companies.

Survey responses received were also undoubtedly influenced by the fact that underwriters operate with a well-defined model of what constitutes a risk ideally suited for a private market solution (e.g. large number of similar exposure units; unintentional loss; measurable loss; non-catastrophic loss, or a catastrophic loss within the economic scale of the insurance industry to bear). Therefore, one might legitimately consider any number of ESG factors (e.g. climate change, nanotechnology risks) as outside the scope and scale of the insurance industry as the sole mechanism for response. And going back to the earlier discussion on emerging risks, to what extent should the industry be held liable to pay claims for which it never actually had the capacity to price a risk-based premium at the time the policy was issued? Additionally, it could be argued quite coherently that insurance, the pooling of risks, may ***not*** be the appropriate societal response for a given ESG factor if it creates a perverse incentive for behaviours that should not be rewarded, and that stifle innovation.

Theme 4 ➔ The evolution of ESG factors in developing regions is different, but there are aspects common globally

Survey data indicate significant differences in the assessment of ESG factors depending on a respondent's country of operations being in a developed region or a developing region.

Financial inclusion, an ESG factor that embodies striking contrasts in insured losses in developed and developed regions over the years, is the only factor where the views between respondents in developed and developing regions converge. For example, most households in developed regions have *access* and sufficient financial resources to buy insurance, but this is not the case for many countries in developing regions.

Survey data also reveal that ESG factors have evolved further towards developed regulatory or legal frameworks in developed markets; and that companies in developed markets assess their ESG performance and enhance their organisational capacity to address ESG factors more considerably. However, the difference in the level of ESG integration in all core insurance processes surveyed (i.e. underwriting, product development, investment, claims management, sales & marketing) between developed and developing markets is not statistically significant.

Possible explanations are:

1. External agents, such as insurance associations and regulators, possess greater influence on ESG factors in developing markets.
2. ESG factors are global issues.
3. A considerable number of respondents were from international players, and the nature and scope of ESG-related strategies and policies can differ significantly between domestic and international players.
4. The risk-sharing nature of insurance business inherently carries ESG factors across markets.
5. Insurers companies structure and monitor activities according to product lines, which encapsulate generic core insurance processes and provide the gateway to material ESG factors.

Theme 4 also brings to light the finding that, among all core insurance processes, ESG integration appears to be weakest in investment management in both developed and developing markets.

Theme 5 ➔ Active promotion and adoption of integrated ESG risk management and financing is needed

Based on both survey results and the informed views of the UNEP FI Insurance Working Group and its Academic Working Group, five critical actions emerge to advance systematic integration of ESG factors into core insurance processes.

1. Working together within a fragmented insurance industry structure on how to achieve collective industry action on ESG factors

   A highly fragmented industry structure and highly competitive playing field create three issues that must be addressed to more successfully integrate ESG factors as a fundamental component of risk underwriting:

   a. The impaired knowledge and information exchange on ESG factors.
   b. The reduced ability to manage systemic risks inherent in many ESG factors.
   c. The crucial role of large and influential insurers and reinsurers ('universal risk carriers') in addressing ESG factors.

2. Creating enhanced forums for dialogue on ESG factors within the insurance industry, and between the industry and its stakeholders

   Survey results suggest the need for more effective forums to address a wide range of ESG factors, alongside many of the issues arising from a fragmented industry.

3. Embedding material ESG factors in underwriting guidelines, and building the appropriate skill sets

   The survey results indicate that material ESG factors have made it into the informal underwriting guidelines 'in the head' with much greater speed and efficiency than they have been integrated into the formal underwriting guidelines of insurance companies. This is a real, missed opportunity that must be addressed to accelerate progress in understanding and managing material ESG factors across different lines of insurance. Yet as skilled as underwriters are, the reality is that many ESG factors entail enhanced skill sets, involve regulatory and legal challenges, and require greater knowledge and exposure data in order for the risks to be properly underwritten. These issues are often more pressing and acute in developing regions.

4. Addressing ESG communication gaps and barriers within insurance companies

   Communicating ESG factors within insurance companies themselves can be enhanced. Possible ESG communication gaps or barriers that exist between underwriters and investment managers are only one of many examples where organisational silos can impede ESG integration. This is particularly important as ESG is a relatively new language for the insurance industry, thus, organisation-wide ESG integration also entails addressing communication gaps and overcoming barriers in order to speak the same language.

5. Recognising and respecting divergent interests on ESG factors

The fragmented structure of the insurance industry and its highly competitive playing field entail that interests will often diverge, and in most commercial decisions, there will be winners and losers. As such, the enhanced forums called for on ESG factors will be a useful means of identifying those areas of common ground to be seized for mutual benefit, as well as those areas of clearly divergent interests to be more effectively managed once defined.

Regulators have a particularly difficult balance to maintain. At times, insurance coverage availability and the claims-paying ability of the insurance companies they supervise present quite conflicting objectives. For example, high premiums preclude financial inclusion, whereas inadequate premium rates can ultimately lead to insurance company insolvency, the potential for unpaid claims, and insurers withdrawing a certain coverage or from a market altogether.

There are also 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, spanning decades and continues 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 ESG issues are ‘safe’ or ‘comfortable’ for insurance companies 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. Without addressing these structural issues, it will be difficult to seize the benefits arising from a public-private partnership in response to the universe of largely long-term and systemic risks inherent in many ESG factors.

IV. Recommendations

Taking into account the key survey findings and their collective industry and academic experience, the UNEP FI Insurance Working Group and its Academic Working Group recommend the following steps going forward.

Company level

Effective ESG risk management and financing entail the systematic integration of material ESG factors into company-wide policy and core insurance processes.

Key starting points:

1. Establish a clear mandate and strategy from the Board and senior management to identify and integrate material ESG factors into core insurance processes.

2. Provide ESG education, training, tools and information to employees in order to

develop the appropriate skill sets. This entails effectively communicating ESG information across the entire organisation and between organisational units.

3. Review formal underwriting guidelines across all lines of business and integrate material ESG factors.

4. Review product pipeline and assess the potential for ESG-related products, including risk management services that promote ESG behaviour and practices among insureds.

5. Assess and monitor the company's own ESG performance (direct) and the ESG performance of the company's insurance and reinsurance portfolios, investment portfolios, and supply chain (indirect).

6. Disclose the company's direct and indirect ESG performance in a transparent, standardised and comparable manner.

Industry level

In order to effectively promote and adopt ESG risk management and financing at the industry and global levels, the insurance industry should develop and adopt a set of 'Principles for Sustainable Insurance' focused on ESG factors, tailored to the insurance business, grounded on risks and opportunities, and in line with the goals of sustainable development. These Principles can provide the global sustainability framework through which the industry can work together to address, among others, the major challenges stemming from the five broad themes that emerged from the survey.

The Principles for Sustainable Insurance can be designed in a way that they are complementary to the existing Principles for Responsible Investment, and can complete a truly holistic global sustainability framework for the insurance industry. The scope and function of the proposed Principles for Sustainable Insurance can act as a holistic best practice framework that addresses a full spectrum of ESG risks and opportunities on the insurance side, akin to the framework afforded by the Principles for Responsible Investment for the investment side.

Finally, insurance associations worldwide are strongly encouraged to actively promote ESG factors among their members in order to accelerate collective action on ESG factors.

Regulatory and stakeholder level

Furthermore, the UNEP FI Insurance Working Group and its Academic Working Group are collectively calling for the following considerations and actions from key stakeholders of the insurance industry:

1. Policymakers and regulators should ensure prudential regulatory or legal frameworks on ESG factors, where appropriate.

2. Civil society institutions should collectively bolster their understanding of the insurance industry such that they can play a full role in ensuring that the insurance industry is sustainable and providing products and services that duly take ESG factors into account.

3. The academic community should continue to advance research on ESG factors and the insurance industry.

* * *

Overall, the key conclusions of this report are that in order to sustain the long-term economic health and resilience of the insurance industry—and unleash its immense capacity to tackle ESG factors as risk managers, risk carriers and institutional investors—material ESG factors must be systematically integrated into underwriting guidelines and product development, and other core insurance processes such as investment management, claims management and sales & marketing.

Equally, this report articulates the insurance industry's assessment that the societal response to managing the global, long-term and systemic risks posed by many ESG factors is underdeveloped. In this vein, it builds a case for the industry to develop 'Principles for Sustainable Insurance' that can act as a dynamic best practice framework, pool information and resources, inform regulators and policymakers, create a global sustainability forum for the industry and its stakeholders, foster inclusiveness across markets, drive innovative solutions, and accelerate collective action on global sustainability challenges.

5

The insurance industry — Large, complex and unique

This section gives an overview of the size of the insurance industry, the multiple roles of an insurer[4], and the complex system in which it operates. Furthermore, it underpins the significance of the UNEP FI global survey on environmental, social and governance (ESG) factors and the insurance business.

World premium volume for life and non-life insurance business combined exceeded USD 4.2 trillion in 2008. Table 1 shows world market share and insurance growth, penetration and density across regions. It also gives an indication of the insurance gap between developed and developing regions, and the underlying challenges and opportunities of inclusive and sustainable development.

Table 1: World insurance in 2008

Region	Premium volume (USD million)	Real growth	Share of world market (%)	Premiums as % of GDP (penetration)	Premiums per capita (USD) (density)
America	1,450,749	-2.4	33.98	7.29	1,552.7
North America	1,345,816	-3.1	31.52	8.54	3,988.8
Latin America and Caribbean	104,933	8.4	2.46	2.53	175.8
Europe	1,753,200	-6.2	41.06	7.46	2,043.9
Western Europe	1,656,281	-6.9	38.79	8.33	3,209.2
Central and Eastern Europe	96,919	9.0	2.27	2.79	299.2
Asia	933,358	6.6	21.86	5.95	234.3
Japan and newly industrialised Asian economies	675,109	3.8	15.81	10.41	3,173.2
South and East Asia	229,036	16.3	5.36	3.20	65.5
Middle East and Central Asia	29,213	4.7	0.68	1.45	110.3
Oceania	77,716	8.6	1.82	7.02	2,271.9

[4] In this report, unless otherwise stated or distinguished, the use of the terms ‘insurer’, ‘insurance’ and ‘insurance company’ is also generally meant to encompass the terms, ‘reinsurer’, ‘reinsurance’ and ‘reinsurance company’.

Africa	54,713	4.9	1.28	3.57	55.6
World	**4,269,737**	**-2.0**	**100.00**	**7.07**	**633.9**
Industrialised countries	3,756,939	-3.4	87.99	8.81	3,655.4
Emerging markets	512,799	11.1	12.01	2.72	89.4
OECD	3,696,073	-3.2	86.56	8.32	3,015.2
G7	2,925,946	-4.4	68.53	8.96	3,930.2
EU, 27 countries	1,616,461	-6.7	37.86	8.28	3,061.3
NAFTA	1,364,839	-3.0	31.97	8.10	3,065.7
ASEAN	45,493	0.4	1.07	2.99	85.1

Source: Swiss Re, Economic Research & Consulting, Sigma No. 3/2009

1. Risk sharing in the insurance industry: One for all, all for one

First, it is important to understand that insurance is not only a *risk transfer* mechanism to compensate financial losses, but also a *risk management* mechanism because insurers carry out *loss prevention* and *loss mitigation* measures in conducting their business.

Several examples from survey respondents:

'For us, this is the maintenance of health and safety standards.' — Director, Underwriting & Technical (Europe)

'Risk survey of all types [improve ESG behaviour and practices] as improvement points identified in these surveys can be made conditions of continued cover. It is in the insured's best interest to take action or risk losing cover. In many instances, the insurer may contribute to activities that improve a company's risk profile.' — Environmental Insurance Broker (Europe)

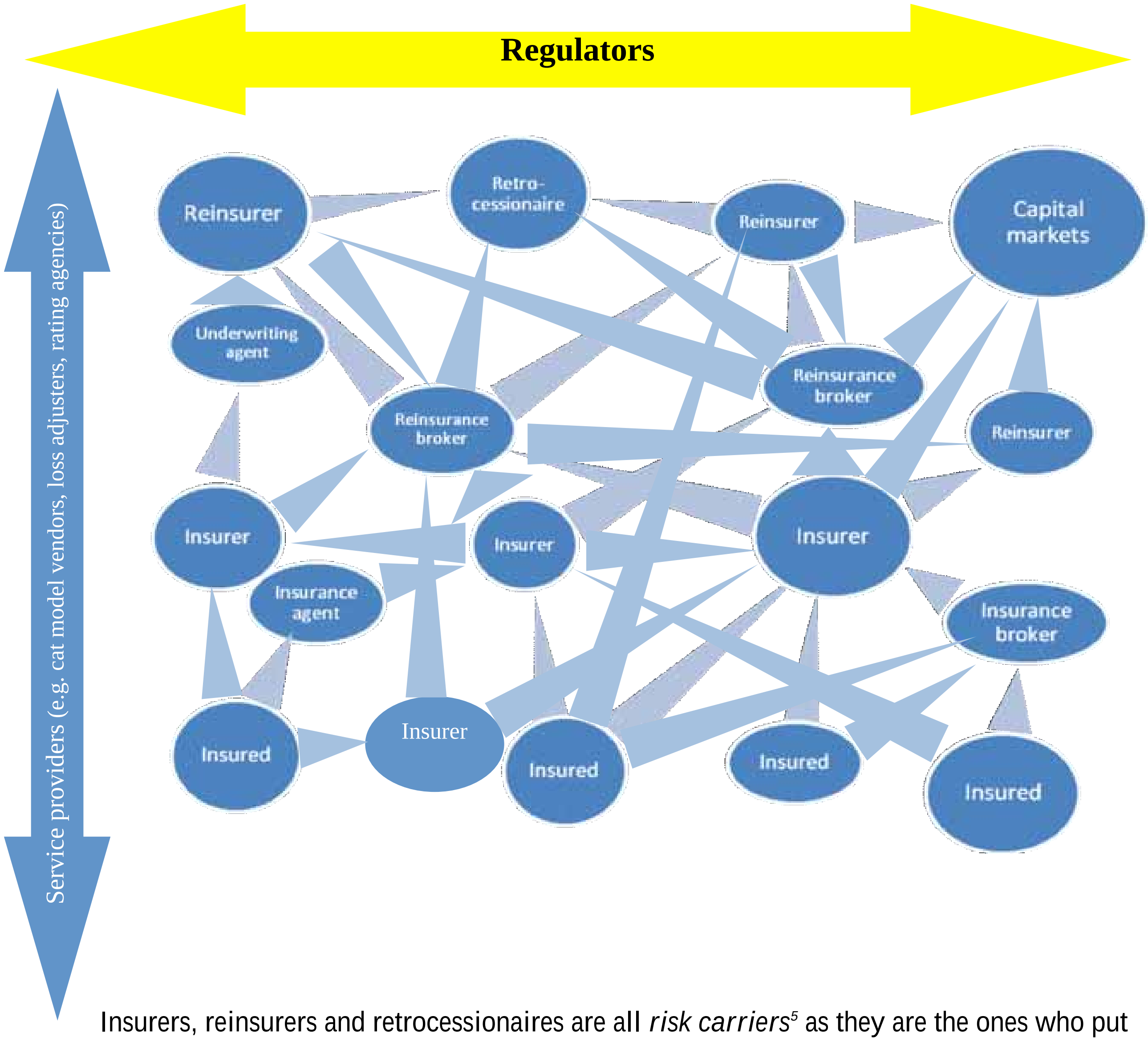
'Loss prevention and consulting are two risk management services that have the capacity to encourage good ESG behavior. This may include sensitivity trainings, assessment of current practices and other disclosures. Education and awareness building, particularly in the areas of ESG factors, are also important components of risk management. This may include corporate governance conferences and educational seminars. Finally, value-added features to a client's insurance offering/program may serve to better align incentives towards positive ESG outcomes. For example, providing a service to advise on the incorporation of green building materials/practices following a property loss is one way to bring value to the insured, potentially reduce future exposures through enhanced energy efficiency, and decrease carbon.' — Senior Vice President (North America)

'ESG factors—such as corruption, crime, terrorism, ageing populations, endocrine disruptors, HIV/AIDS and other pathogens or pandemics, obesity—are considered in the risk evaluation process...' — Chief Life Underwriter (North America)

Since certain risks are too large to be borne by an individual insurer, these risks are spread in a complex risk-sharing system comprising many players, with the underlying principle of 'one for all, all for one' that has supported social and economic development throughout human history.

Figure 1 illustrates the different players that spread risks within the insurance industry through insurance, reinsurance ('insurance of an insurance') and retrocession ('reinsurance of a reinsurance').

Figure 1: How risks are spread in the insurance industry



Insurers, reinsurers and retrocessionaires are all *risk carriers*[5] as they are the ones who put capital at risk and ultimately pay claims. Insurance agents and insurance brokers provide

[5] The risk carrying role can take the form of risks transferred via insurance, reinsurance or retrocession, but the role of a risk carrier is not necessarily limited to one form of risk transfer. For example, while insurers predominantly write insurance business, they can also accept reinsurance business for which their risk carrier role becomes that of a reinsurer.

services to insureds and insurers, with agents representing insurers, and brokers representing insureds. Similarly, reinsurance brokers and reinsurance underwriting agents provide services to insurers, reinsurers and retrocessionaires. The common denominator for agents and brokers in the system is that they are all *intermediaries* who act as channels in spreading risks. There also other service providers (e.g. catastrophe model vendors, loss adjusters, rating agencies), but they are not directly involved in the risk-sharing process.

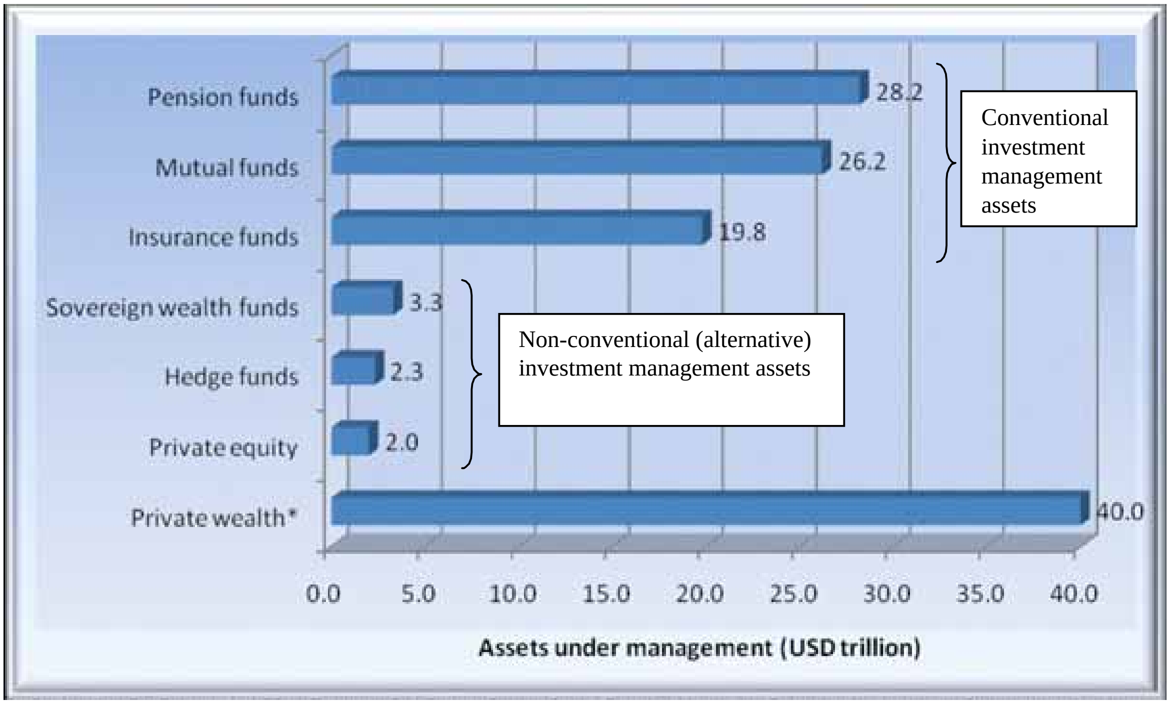
Over the last two decades, the insurance industry has witnessed the emergence of insurance-linked securities (e.g. catastrophe bonds), where risk carriers have transferred peak risks in their portfolios to the capital markets by securitising, for example, their accumulated risk exposure in a specific territory due to natural hazards such as windstorm, flood or earthquake. Finally, this risk-sharing system (and the capital markets) is, of course, supervised by regulators.

2. Insurers as institutional investors

Although this report does not focus on the investment management side of insurance operations, we also highlight its size and own complex system.

Insurers underwrite risks for which they assess premiums that should, in theory, reflect risk experience and exposure. These premiums are pooled and become part of a fund of financial assets, which insurers invest to generate additional income to enhance, among others, their ability to meet their obligations to policyholders (i.e. insurance claims). Therefore, aside from being risk managers and risk carriers, insurers are also institutional investors. Figure 2 illustrates the global fund management industry in 2007 and the assets managed by the insurance industry.

Figure 2: Global fund management industry in 2007



*Around one-third of private wealth is incorporated into conventional investment management
Source: Fund Management 2008, International Financial Services London

The institutional investor role of insurers is of significant importance to insurance operations. Insurers generate income from both sides of the house, *underwriting income* (premiums less claims and other costs) on the insurance side, and *investment income* on the other side.

Figure 3 depicts the institutional investment value chain, with insurance companies forming part of a group of asset owners[6] (including pension funds, sovereign wealth funds, mutual funds, foundations); various players along the chain; and the flow of capital, activities and information.

Figure 3: The institutional investment value chain

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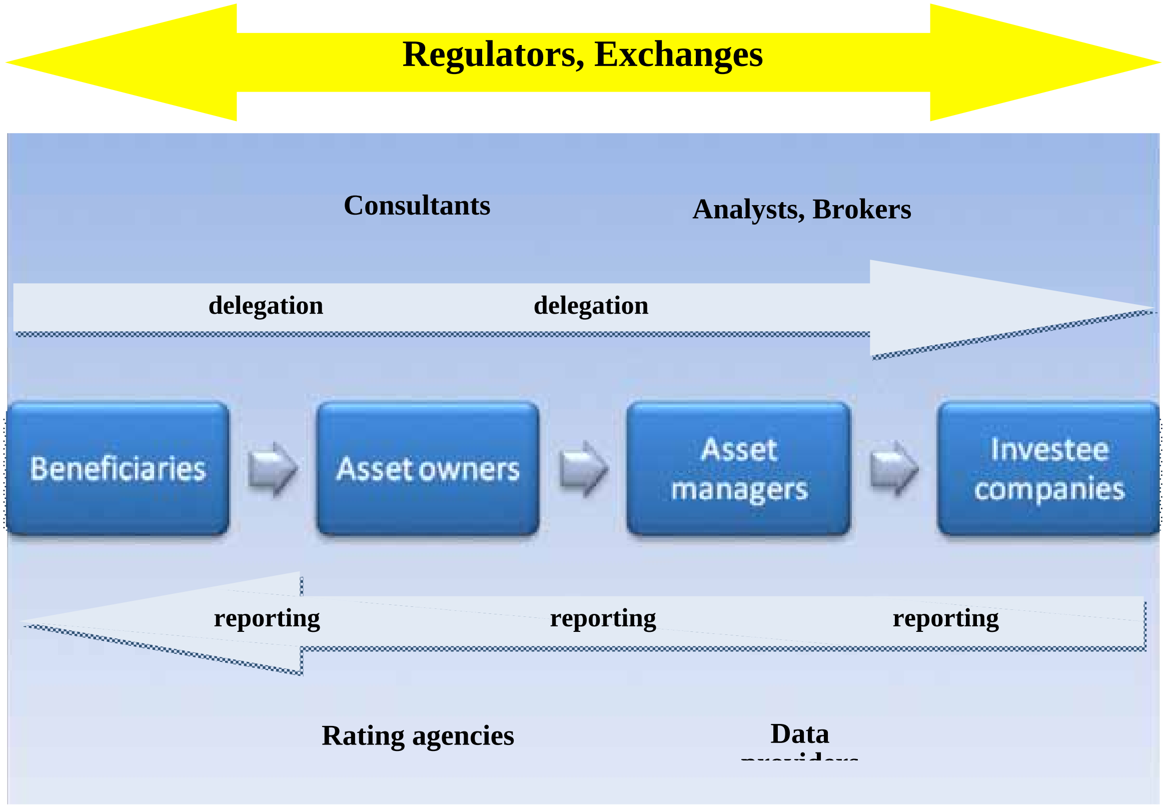
[6] Some insurance companies have separate asset management entities that manage internal and/or external assets. Insurance companies also become investee companies when raising capital for various aspects of their operations.



3. A house view of the insurance industry and ESG factors

Clearly, insurance companies are unique entities. Their insurance and investment operations are highly intricate systems, with many players and functions, creating an industry that is not readily or fully understood by many stakeholders.

It is crucial for insurers to generate income from both sides of the house at all times—prudent and disciplined risk management, underwriting and investment management are key processes to sustain profitability and long-term value creation.

ESG factors are relevant to *both* the insurance and investment sides, and this conveys several key insights:

- The risks posed by ESG factors can undermine the solvency of an insurance company and the long-term economic health of the insurance industry and its partners, ranging from insureds (e.g. households, businesses, governments) to the entities financed by insurance capital. Thus, it is crucial for insurers and regulators to address ESG factors in the insurance business.

- As risk managers, risk carriers and institutional investors, insurance companies have immense capacity to manage ESG risks and opportunities (Figure 4).
- In a highly competitive, fragmented and regulated industry, addressing ESG factors entail overcoming major challenges.

Figure 4: The insurance industry's multiple roles to manage ESG risks and opportunities

With Figure 4 in mind, we now proceed to discuss the results of the global survey.

6

Methodology

1. Survey objectives

The global survey sought to achieve the following objectives:

a. Assess the awareness level of ESG factors in the global insurance industry
b. Understand the integration of ESG factors into insurance underwriting and product development and gather best practice
c. Collect data to help develop a material business case supporting ESG integration into core insurance processes
d. Clarify trends that will guide follow-up research
e. Educate respondents and stakeholders on the importance, and language, of ESG factors and sustainability[7]

It is important to note that the survey was designed mainly for private insurance market players, not government-run insurance schemes.

2. Survey design

ESG is a term that originated from the institutional investment industry.[8] An often cited definition in the investment context is as follows:

ESG
The term that has emerged globally to describe the environmental, social and corporate governance issues that investors are considering in the context of corporate behaviour.

---

[7] See Appendix A: 'Description of primary ESG factors surveyed'.

[8] The origin of the term 'ESG' can be largely attributed to the work of the UNEP FI Asset Management Working Group on responsible investment. See: www.unepfi.org/work_streams/investment/amwg

No definitive list of ESG issues exists, but they typically display one or more of the following characteristics:

- *Issues that have traditionally been considered non-financial or not material*
- *A medium or long-term horizon*
- *Qualitative objects that are not readily quantifiable in monetary terms*
- *Externalities (costs borne by other firms or by society at large) not well captured by market mechanisms*
- *A changing regulatory or policy framework*
- *Patterns arising throughout a company's supply chain (and therefore susceptible to unknown risks)*
- *A public-concern focus*[9]

Based on the term, ESG, the survey used a 'taxonomy of sustainability' (Figure 5) to format its content and organise its results.

The taxonomy has four levels. The first level is the overarching concept of *integrated sustainability*. Integration implies taking into consideration all levels simultaneously.

The next level contains *elements*, comprising the environmental, social, and governance categories indicated.

Below the elements are *factors*, which can be generally described as outcome-based for environmental, stakeholder-based for social, and behaviour-based for governance.

Finally, below the factors are the *issues* that we see around us. These issues are in cloud format, demonstrating that each of them is related to the elements.

This taxonomy was used to structure the data collection as a series of **three surveys** integrated into **one comprehensive survey**. The surveys were divided according to the different levels shown above, only in an inverted fashion (Figure 6). The main purpose for doing so was to facilitate respondent comprehension, starting from concrete and specific ESG issues, through to the more abstract concepts of ESG integration and sustainability.

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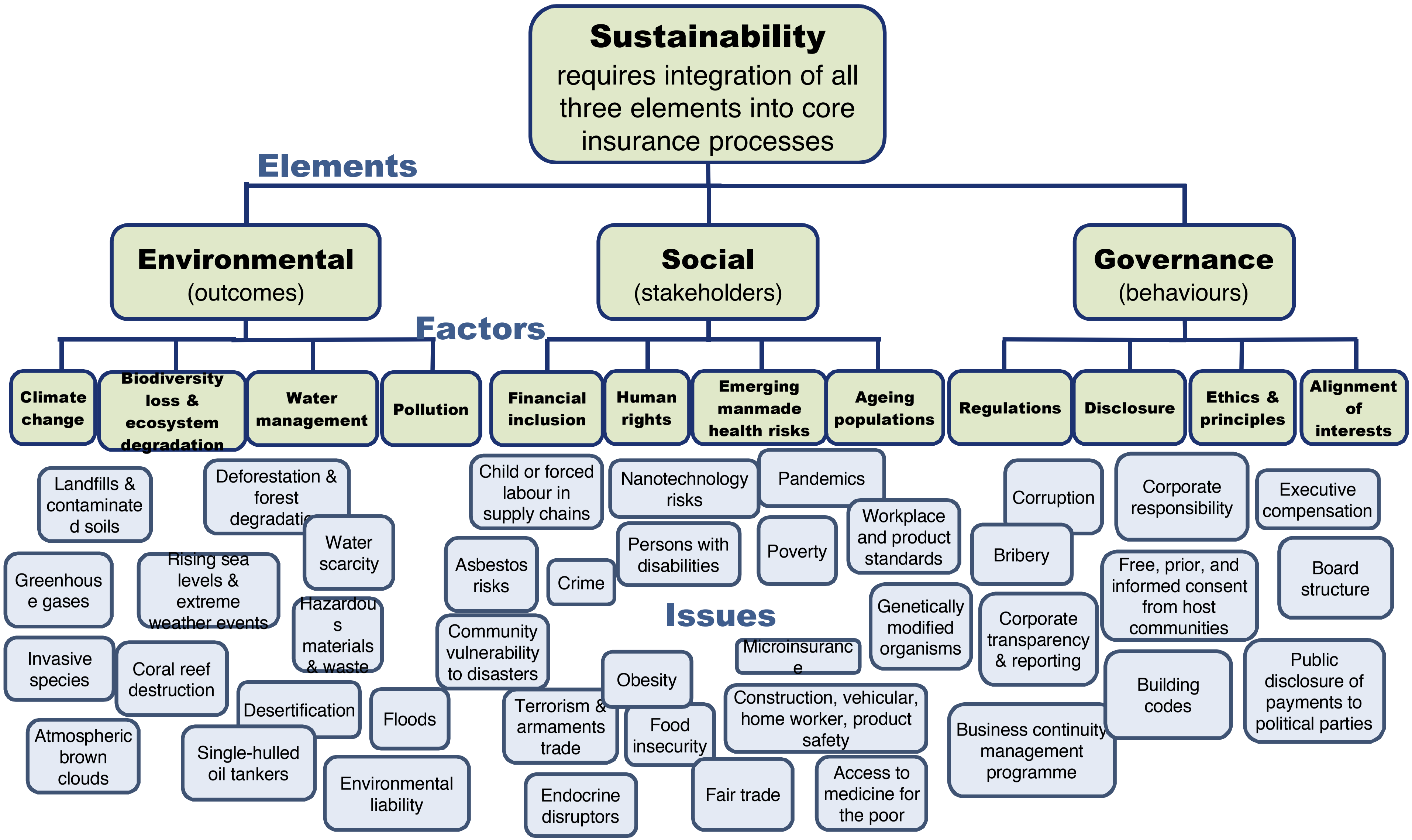
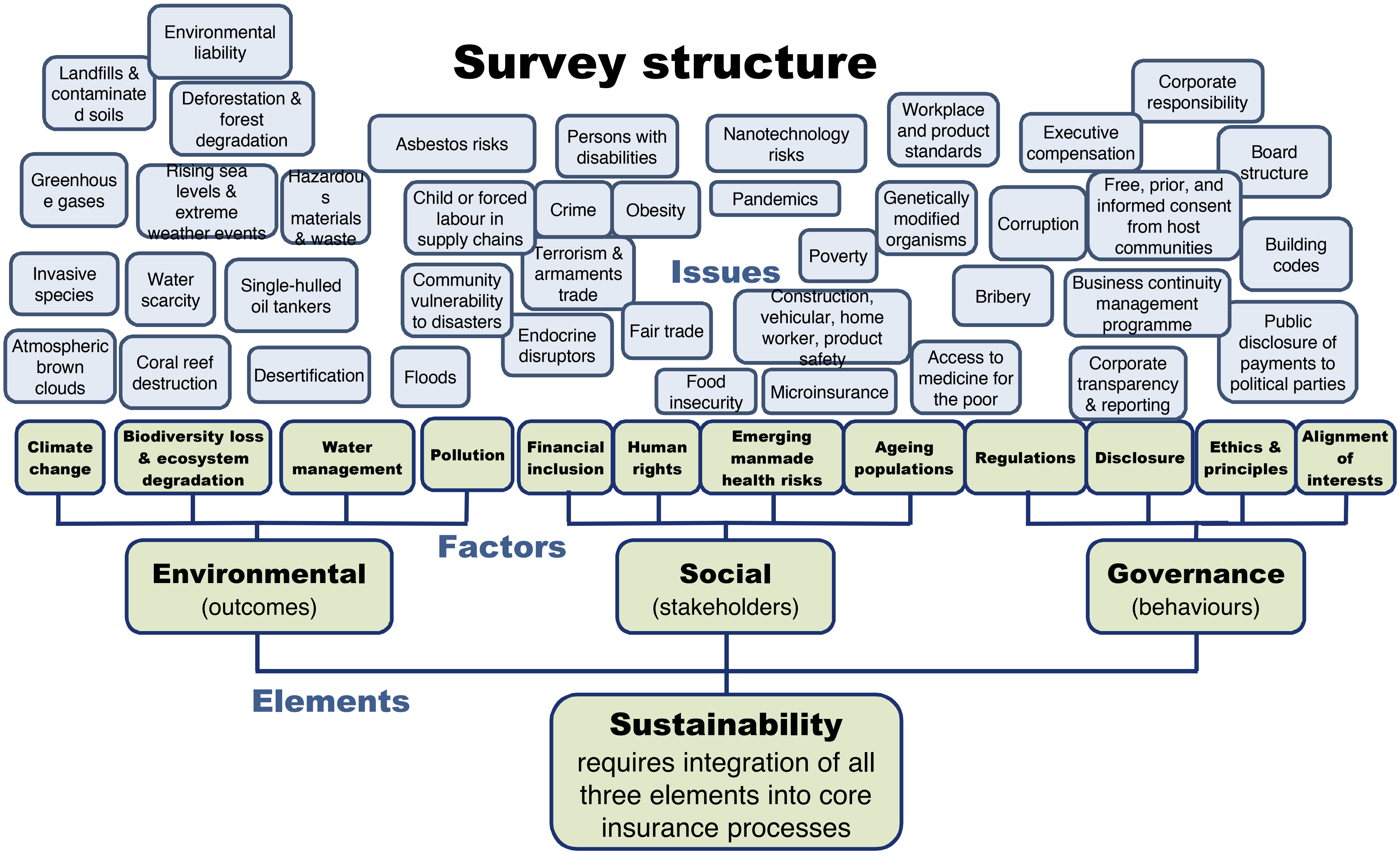
[9] Source: Demystifying Responsible Investment Performance – A review of key academic and broker research on ESG factors (2007), UNEP FI Asset Management Working Group and Mercer
http://www.unepfi.org/fileadmin/documents/Demystifying_Responsible_Investment_Performance_01.pdf

Taxonomy of sustainability



Survey structure



A critical component of the survey was to ask respondents to judge where on an *evolutionary progress scale* they believed ESG factors and issues lay, with *not a factor* being the starting point, and *developed regulatory or legal framework* being the end point. (Figure 7). Secondary research conducted to better inform the survey design demonstrated that ESG factors and issues have a historical and consistent pattern of evolving over time into a subject of insurance, for which the risk management expertise and services afforded by the insurance industry has been crucial. For example, in medieval times, worker safety was of little or no concern. By the 19th century, it had become an important social concern, and continued evolving to the point that it is now a subject of insurance (public and/or private) in many territories. Product liability as a source of litigation or subject of insurance did not gain traction until the mid-20th century, and is nearly ubiquitous now.

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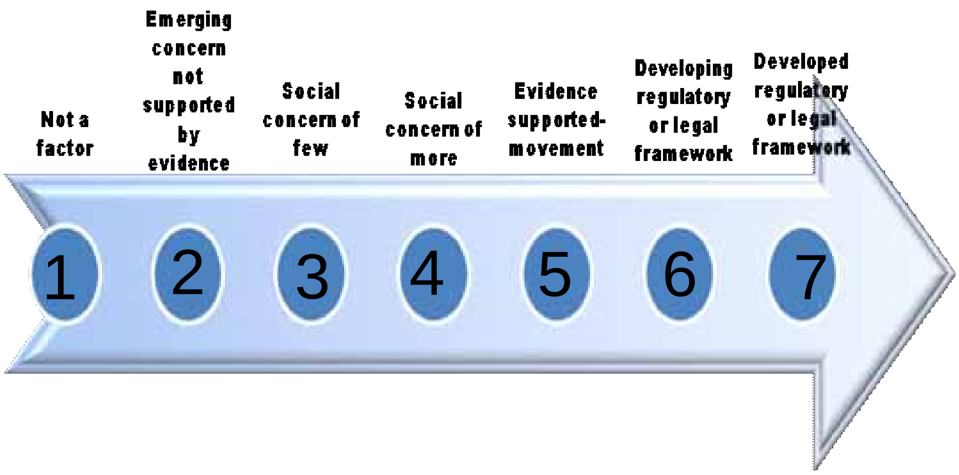
Figure 7: Evolutionary progress scale



In the survey, a distinction was made between 'ESG issues' and 'ESG factors' to help delineate sections for **34 sample ESG issues** (Survey 1) and **12 primary ESG factors** (Survey 2). These ESG factors and issues were derived from earlier work by UNEP FI and its Insurance Working Group[10] and the collective knowledge and experience of the members of the UNEP FI Insurance Working Group and its Academic Working Group.

3. Survey questionnaire structure

- Preliminary information ➔ Respondent and company information (coding purposes)
- Survey 1 ➔ Analysis of 34 sample ESG issues (education and awareness)
- Survey 2 ➔ Analysis of 12 primary ESG factors (risk and product information and perception according to 'E', 'S' and 'G' categories)
- Survey 3 ➔ Analysis of ESG integration in the insurance business (large-scope questions on ESG and the insurance industry)

[10] For example, see: *Insuring for Sustainability – Why and how the leaders are doing it* (2007), UNEP FI Insurance Working Group http://www.unepfi.org/fileadmin/documents/insuring_for_sustainability.pdf

Two styles of questions were used. The first involved quantitative evaluations of the evolutionary progress, financial materiality, risk value, risk transfer, and risk components (frequency, severity, uncontrollability) of ESG factors and issues.

The second type used qualitative assessments on product offerings and risk underwriting metrics to better understand practices that integrated ESG factors and issues.

4. Survey distribution strategy

The survey was distributed through three channels. Each channel targeted different groups of respondents to capture the diversity of views across functional responsibilities (e.g. underwriters and non-underwriters), geographic locations or operations (e.g. developed and developing regions) and stakeholders (e.g. non-insurance professionals), with the overall goal of maximising survey response quality.

- Channel 1 ➔ Chief Executive Officers, Chief Underwriting Officers, Chief Risk Officers, Chief Investment Officers, national and regional heads, line underwriters, product managers, actuaries, corporate social responsibility managers, sales & marketing managers, asset managers, claims managers and other officers of UNEP FI Insurance Working Group member companies worldwide

- Channel 2 ➔ insurance brokers, underwriting agents, insurance associations (e.g. African Insurance Organisation, European Insurance & Reinsurance Federation, General Insurance Association of Singapore), insurance regulators (e.g. International Association of Insurance Supervisors), industry initiatives (e.g. ClimateWise, Microinsurance Network, Principles for Responsible Investment), academic institutions (e.g. UNEP FI Academic Working Group) and other stakeholders (e.g. Ceres, Forum for the Future, International Finance Corporation, ProVention Consortium, Oxfam, WWF)

- Channel 3 ➔ viral distribution methods (e.g. UNEP FI e-bulletin mailing list) to invite members of the insurance industry, the financial sector or general public interested to participate but were not contacted through the first two channels

7

Overview of survey respondent statistics

1. Snapshot of survey results[11]

30,000

As a communications and educational tool, the estimated number of insurance industry employees and stakeholders the threefold survey reached via a multi-channel global distribution strategy, highlighting the importance of ESG factors to the insurance industry and its stakeholders

3,841

Years of cumulative insurance experience of respondents

2,689

Pages of data collected

260

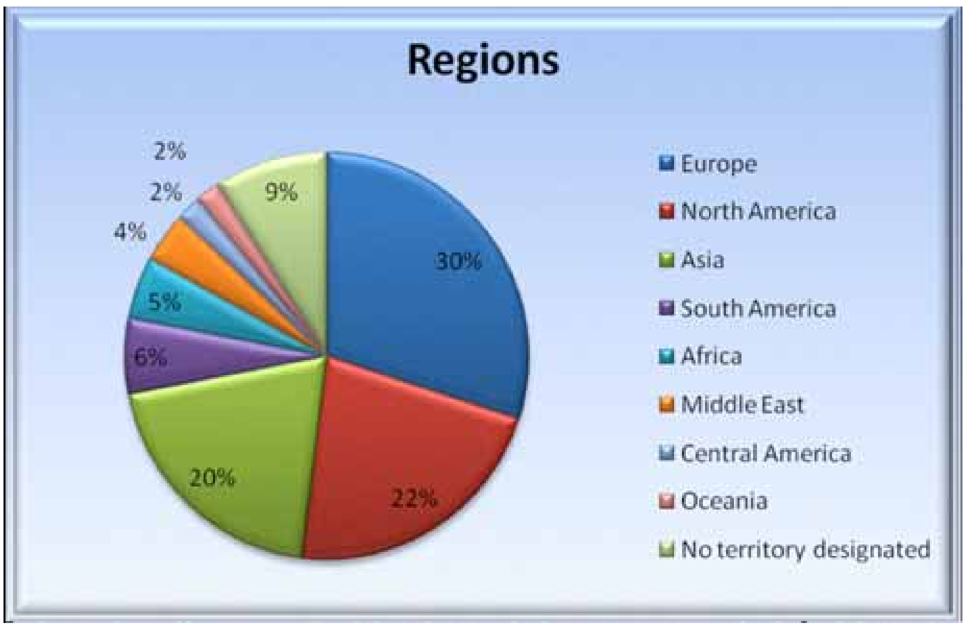
Respondents, of whom 156 completed all three surveys

60

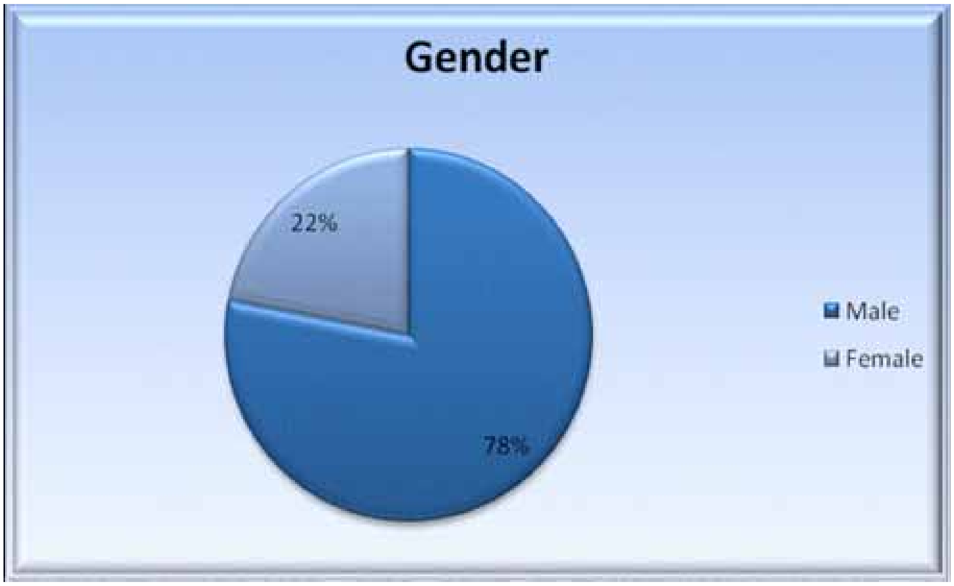
Territories covered

[11] See Appendix B: 'Supplementary and descriptive survey statistics' and Appendix D: 'Survey respondent institutions and territories covered'.

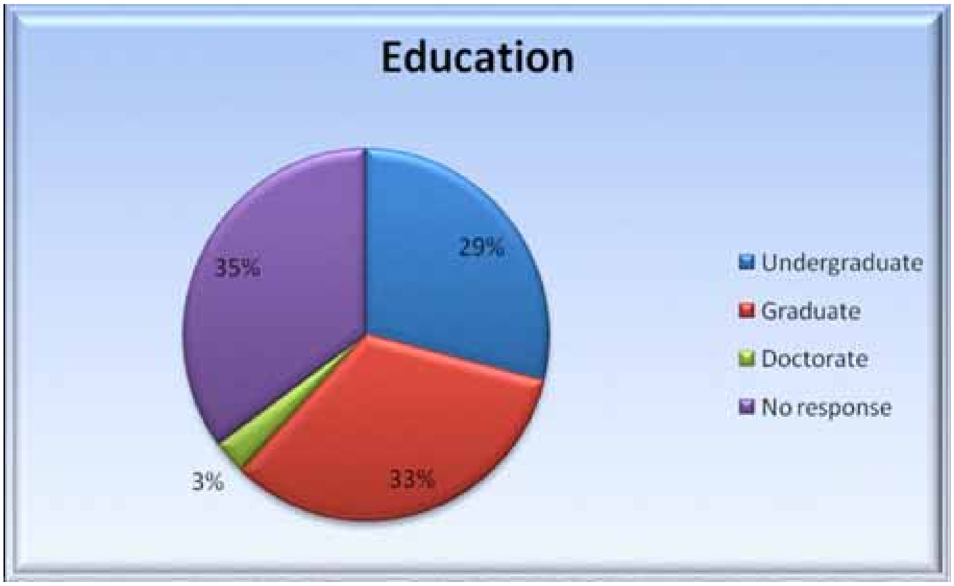
Territories of domicile of survey respondents



2. Respondent statistics



- Average ➔ 43 years
- Age range ➔ 23 to 70 years (76% provided age)




Experience
Actuarial
Underwriting
Insurance
827
2150
3841
0
1000
2000
3000
4000
Years


Employer
17%
7%
1%
5%
5%
3%
62%
Insurer
Reinsurer
Insurance broker
Reinsurance broker
Underwriting agent
Regulator
Other


Functional responsibility
Human resources
Communications / Public relations
Asset management
Knowledge management
Claims
Accounting
Actuarial
Sales & marketing
Board member / CEO / President
Administration
Corporate social responsibility
Product development
Underwriting
2%
4%
5%
5%
5%
6%
10%
11%
11%
12%
13%
18%
30%
0%
5%
10%
15%
20%
25%
30%

8

Key survey findings

The insurance industry is uniquely placed in our economies as a private market mechanism for the sharing of risk, with the global pooling of what would be risks otherwise borne solely by individuals and entities estimated at roughly USD 400 trillion.[12] As this risk pooling is integral to the efficient functioning of markets, economies and societies, the insurance industry is a key focus of regulators and policymakers. The risk pooling afforded is only possible with investors' willingness to put capital at risk; hence, value creation is necessary for its continued existence.

The convergence of public and private interests in the insurance industry is nowhere more apparent than in the risks and opportunities presented by 'sustainability', captured by the ESG factors and issues illustrated in a 'taxonomy of sustainability' (Figure 5).

The global survey had two dominant lines of inquiry:

- First, what is the current state of play on the integration of ESG factors into insurance underwriting and product development, and how can it be enhanced?
- Second, what is required to develop a more purposeful dialogue on the role of the insurance industry in proactively working together to respond to ESG factors?

From the survey results, five broad themes emerged, each of which will be discussed in detail.

An important note—the survey collected judgements, and these judgements do not in themselves necessarily represent an objective truth about how society has responded to a given ESG factor. However, these judgements provided profound insights on the dynamics of ESG factors in relation to various aspects of the insurance business.

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[12] Source: Alba Advisors LLC

Five broad themes

1. ESG factors influence underwriting, and have varying degrees of impact across lines of insurance.

2. Proper management of ESG factors potentially enhances insurance company earnings and long-term company value via avoided loss and new product offerings.

3. Given their assessment of ESG risks, underwriters judge the societal response for many ESG factors as underdeveloped.

4. The evolution of ESG factors in developing regions is different, but there are aspects common globally.

5. Active promotion and adoption of integrated ESG risk management and financing is needed. Actions called for are:

   - Working together within a fragmented insurance industry structure on how to achieve collective industry action on ESG factors.
   - Creating enhanced forums for dialogue on ESG factors within the insurance industry, and between the industry and its stakeholders.
   - Embedding material ESG factors in underwriting guidelines, and building the appropriate skill sets.
   - Addressing ESG communication gaps and barriers within insurance companies.
   - Recognising and respecting divergent interests on ESG factors.

Theme 1 ➔ ESG factors influence underwriting, and have varying degrees of impact across lines of insurance

Underwriting in an insurance company occurs at two levels:

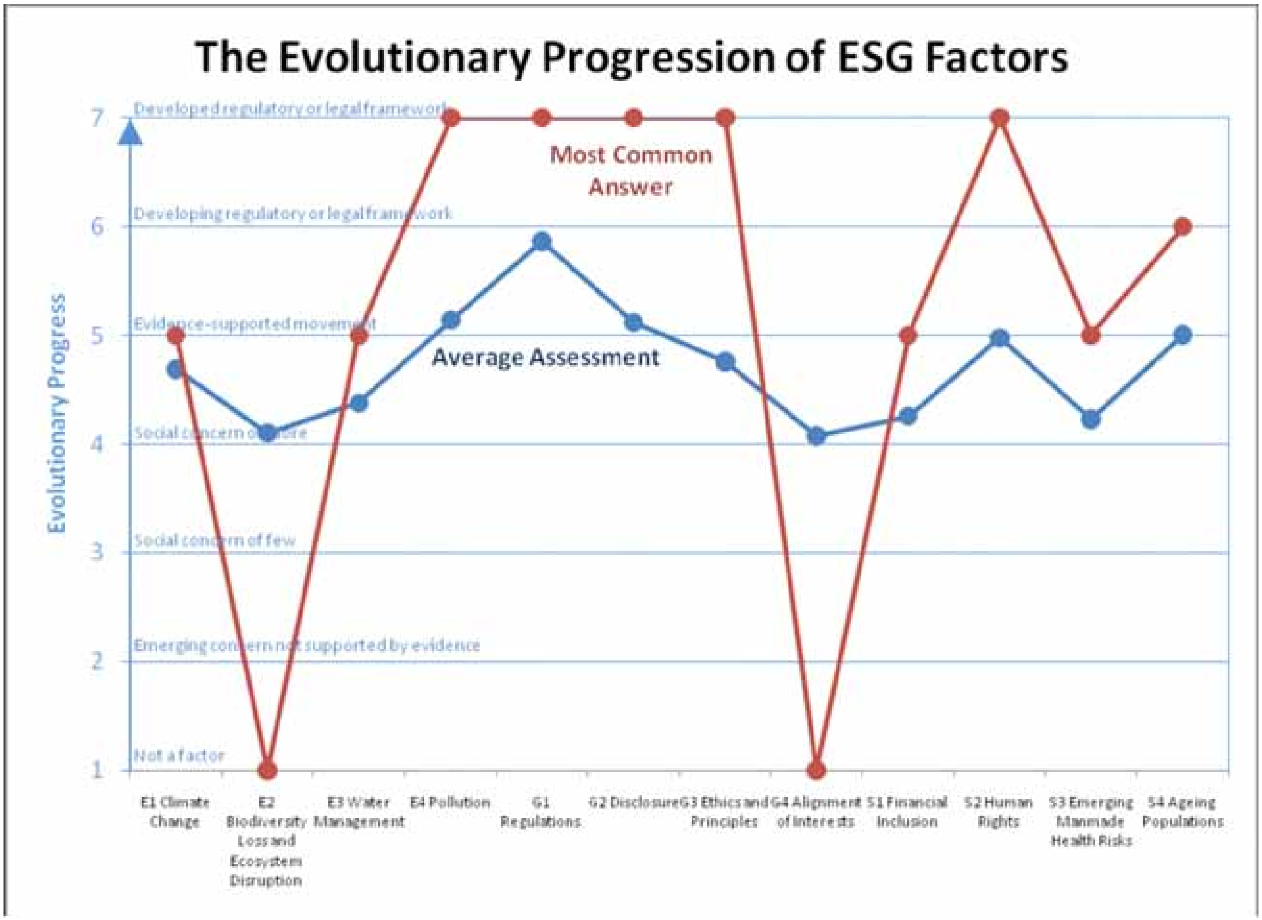
- Macro level ➔ company-wide underwriting guidelines, procedures and manuals that broadly establish the universe of potential clients that might be accepted as insureds (e.g. ‘We will only insure buildings that have automatic fire-protection sprinklers’).

- Micro level ➔ application of the macro to client-specific underwriting situations, and with it, the integration of the life experiences, opinions and, ultimately, judgements of an individual underwriter or a group of underwriters, such as an underwriting committee (e.g. ‘I do not want to insure *that* ‘sprinklered’ building because I have reason to believe the owners are not trustworthy, not ethical’).

A critical component of the survey design was the fact that it captured the individual judgements of underwriters operating at both the micro and macro levels within their organisations. There were many Chief Underwriting Officers in the respondent set. The existing influence of ESG factors in risk underwriting was judged to be substantial and pervasive.

Respondents rated the evolutionary progress of individual ESG factors consistently. Even across the factors surveyed, average assessments were not extremely dispersed. However, the responses for *biodiversity loss & ecosystem degradation* and *alignment of interests* were markedly different. For both, the most common evaluation of each factor's evolutionary progress was *not a factor* (Figure 8).

Figure 8: Evolutionary progress of 12 primary ESG factors



While segmenting respondents by experience, gender, age, employer, insurance market, value chain function, or any other available characteristic did not account for this relatively distinct outcome, it also signals the emergent and dynamic nature of ESG factors, and their varying degrees of impact across lines of insurance. Indeed, some respondents think otherwise.

'Alignment of interests is our number 1 concern in underwriting.' — Global Engineering Underwriter (Europe)

'Good business practice dictates proper alignment of interests among all core constituents in life insurance—such as underwriting, product development, actuarial, marketing, distribution, service and systems/technology. This applies to all our life

insurance product lines.' — Chief Life Underwriter (North America)

'Alignment of interests can improve the risk and reduce loss potentials.' — Chief Property Underwriter (Europe)

'The financial crisis is proving that the fallout from misaligned interests between the financial world and society's needs is global and incredibly painful.' — Insurance association representative (Europe)

'[On risks of biodiversity loss & ecosystem degradation] model effects of, for example, "flash" flooding...' — Director, Underwriting (Europe)

Additionally, 56% of respondents said that *alignment of interests* influence underwriting, while 42% said that *biodiversity loss & ecosystem degradation* influence underwriting.[13]

Biodiversity loss & ecosystem degradation underscores the fundamental challenges associated with 'natural capital', such as valuation. It goes without saying that nature provides human society with a vast diversity of benefits (e.g. food, clean water, healthy soil), and that we are dependent on the continued flow of these 'ecosystem services'. However, most biodiversity and ecosystem benefits are largely public goods with no price, and are therefore rarely detected by our traditional economic compass. This recognises the need to better understand the independence and interdependence of ESG factors, its dynamic and evolutionary nature, and its complex relationship with the insurance business as well as regulatory and legal frameworks.

Furthermore, all respondents see a correlation between the evolutionary progress of an ESG factor and its influence on underwriting activities (Figure 9).

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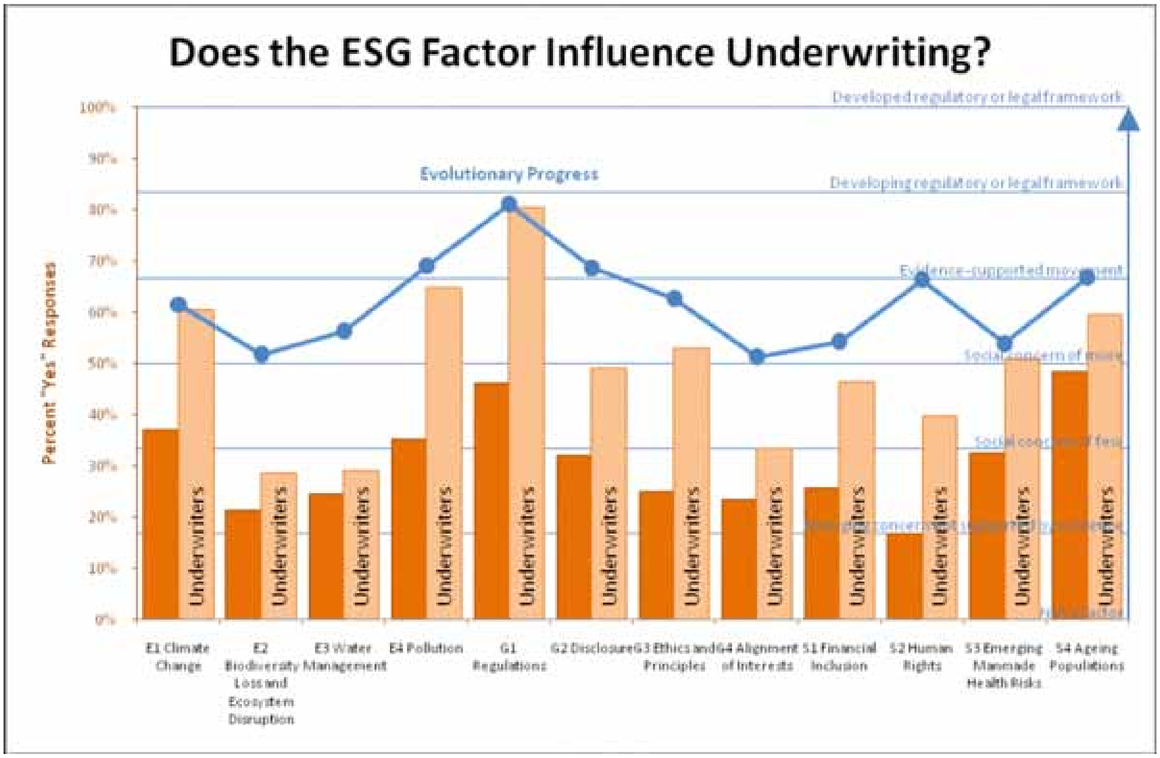
[13] See Appendix B: 'Supplementary and descriptive survey statistics'.

Figure 9: Evolutionary progress and underwriting influence of 12 primary ESG factors



Accordingly, a question concerning causation emerges. Do ESG factors need to progress within society before they become 'insurable', or do they need to be insured to achieve relevance and legitimacy within society?

In either case, the correlation observed by those with underwriting responsibilities is considerably stronger across all ESG factors. While industry professionals may converge on an ESG factor's social prominence, the promotion and knowledge of ESG factors among insurance industry professionals is not uniform, and is also impacted by the lines of insurance they are directly involved in.

Respondents opined in the free text portion of the survey the extent to which an insured's management of ESG factors can signal many of the attributes sought in a preferred client:

'Better management of ESG risks is part of good housekeeping and good risk management and this should be rewarded...' — Chief Operating Officer (Africa)

'Clients who understand the implication of these [ESG] risks are offered better terms.' — Chief Underwriting Officer (Asia)

'Our experience shows that quality management, which would include management of ESG risks, generally represents a better than average insurance risk for which we are able to moderate price and terms. For example, we have a minimum benchmark for health and safety, below which we would not offer cover, above which more favourable terms are available.' — Director, Underwriting (Europe)

‘Companies that have strong policies on ESG are generally better managed in all aspects of their operations including their risk management culture.’ — Director, Risk Management (Europe)

‘Insured’s superior record of efficient management of ESG risks will be considered for future coverage terms and pricing.’ — Regional Compliance Officer (Middle East)

‘We are convinced that sound [ESG] behaviours and practices lead to reduced exposure over time and therefore should be reflected in the insurance relationship.’ — President & Chief Executive Officer (North America)

Many in the insurance industry see a compelling logic, particularly with respect to commercial clients, in interpreting sensitivity to ESG issues as an important input to the risk underwriting process, as an effective means of assessing many of the ‘human element’ issues that go into determining the appropriate price and coverage for the insurance provided.

Yet in a data-driven industry, the absence of a substantial track record in utilising ESG factors as a performance predictor or risk quality was noted as a barrier to both the development of new products and further integration of ESG criteria into formal underwriting guidelines:

‘Lack of relevant research/actuarial analysis that shows that ESG-friendly behaviour leads to superior underwriting results. In other words, how does ESG-related behaviour reduce risk? We are not sure that providing a discounted premium for hybrid vehicles is an actuarially sound practice—we may just be giving away premium and profits to encourage “positive” behaviour, but we have nothing to suggest that hybrid drivers have less accidents.’ — Vice President, Marketing & Communications (North America)

‘The industry looks backward and not forward—these [longer-term risks and opportunities associated with ESG factors] are all future matters. The industry is run by advanced modelling requiring data and a level of accuracy—difficult with these factors to establish that.’ — Head, Strategy (Africa)

‘The reliance on experiential actuarial data to determine the materiality of ESG factors. The insurance industry sees itself only as driven by regulation/legislation and the risks that society itself wishes to take on.’ — Industry association representative (Europe)

‘We need to quantify the ESG risk as much as possible so we can form a product from an idea. Now quantification is a key to doing this. The statistics also need government’s support to create (a product) then we have a ground to calculate the premium.’ — Head, Product Development Division (Asia)

‘...Insurance currently works with historic data. This is not ideal for long-term future reviews.’ — Chief Operating Officer (Africa)

Respondents also articulated that underwriting the ESG performance of insureds is an integral part of their company's own risk management, and seek to manage or avoid the reputational risk associated with having as clients those known for performing poorly on ESG factors:

'The insured and their management of ESG factors are reputational risks to our company underwriting; for example, the human rights violator…' — Life Underwriter (Asia)

'The repercussions can be as severe as forcing the company out of business.' — Product Manager, Global Property (North America)

'An example would be a company that has exploited immigrant workers would not be a good risk for employers' liability/workers' compensation insurance.' — Director, Risk Management (Europe)

'No human rights increases the risk of riots and hence property damage and consequential loss. Assessment of the human rights factor is key in certain industries, like mining.' — Chief Property Underwriter (Europe)

'We do not want to be supportive of irresponsible behaviours or practices. We want to continue to build our brand that is not linked to irresponsible practice.' — President & Chief Executive Officer (North America)

'As a company committed to integrating ESG factors into our own operations, and with a strong Code of Ethics and Conduct that applies to all our operations, it would be against our internal management practices to discover that we had underwritten a company that did not share our values.' — Business Sustainability Manager (Oceania)

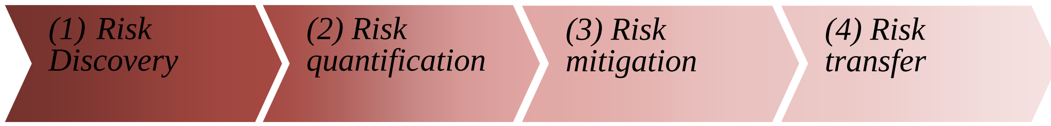
ESG factors have long been an important consideration in insurance underwriting, although the term ESG has not been traditionally used. However, ESG factors have grown in magnitude and prominence over recent years, particularly global and highly political issues such as climate change, human rights, pandemics and corruption. In any case, the important consideration of ESG factors in insurance underwriting is more readily apparent once the earnings model of the industry is fully understood.

Theme 2 ➔ Proper management of ESG factors potentially enhances insurance company earnings and long-term company value via avoided loss and new product offerings

Prior to discussion of the survey results on this theme, a brief review of the insurance industry's value chain is helpful.

Owing in part to the magnitude of the financial leverage and capital deployed in insurance underwriting, the industry has long coped with the reality that value creation is often, and uniquely, the by-product of having successfully avoided value destruction. This is reflected in an abbreviated version of what most would accept as the industry's classic value creation chain:

Figure 10: Value creation in the insurance industry



A key in this process is the provision of risk analysis and mitigation services as an integral component of offering coverage to a potential insured—until the last step in the link, no insurance policy is executed, no uncertainty is transferred, and no insurance company capital is put at risk. And without the steps that precede it, the underwriting of a risk transfer product (insurance) is unlikely to produce a positive economic outcome.

Large-scale value destruction episodes in the insurance industry have by and large been caused by this process chain having gone wrong, of the links having been sequenced in a manner that destroys rather than creates value for the underwriting company, graphically appearing as follows:

Figure 11: Value destruction in the insurance industry

There are numerous examples, many with ESG factors as a critical factor in causation, such as asbestosis, gradual pollution covers, and property exposures in critical windstorm, flood and earthquake zones. While the examples may differ and be drawn from a diverse mix of territories and risk categories, the process for destroying value is common. The industry transfers a risk, as bound by the limits of knowledge at that time, and subsequently discovers that either the parameters or magnitude of the risk itself are very different from those utilised for underwriting and pricing of the insurance product.

Efforts are then made to control the risk on a post-event basis. Quantification, sometimes with the assistance of plaintiff attorneys, finally occurs as the affected underwriters estimate the number and quantum of their losses.

'Interestingly, it does not appear that a consideration of ESG is woven into the strategic DNA of the typical insurer. Rather, the approach is reactive, and responds to environmental, social and governance catastrophes after they occur...In my opinion, an Enterprise Risk Management program is wholly incomplete without a consideration of Environmental, Social and Governance risks, both within the insurer itself, and the clients for whom it is underwriting business.' — General Management Consultant (North America)

Underwriting is a challenging process that entails understanding risk then pricing it. Uncertainties are usually captured in quite specific industry terms of art such as *delayed development* or *delayed emergence*. Generically, the industry refers to new risks affecting policies already issued and/or to be underwritten in the future as ***emerging risks***. It is the connection, symmetry and prior experience of insurers with ESG factors as a critical category of emerging risks that runs as a consistent theme throughout the survey results. One representative comment is as follows:

'Which three (3) ESG factors should be given the greatest priority by the insurance industry now? Why?

'1. Environmental factors, particularly root causes of climate change ([greenhouse] gas emissions, renewable energy, green economy, etc.) There is an urgency to act and to change the behaviors. Insurance industry can support and encourage people that are positively changing their behaviors

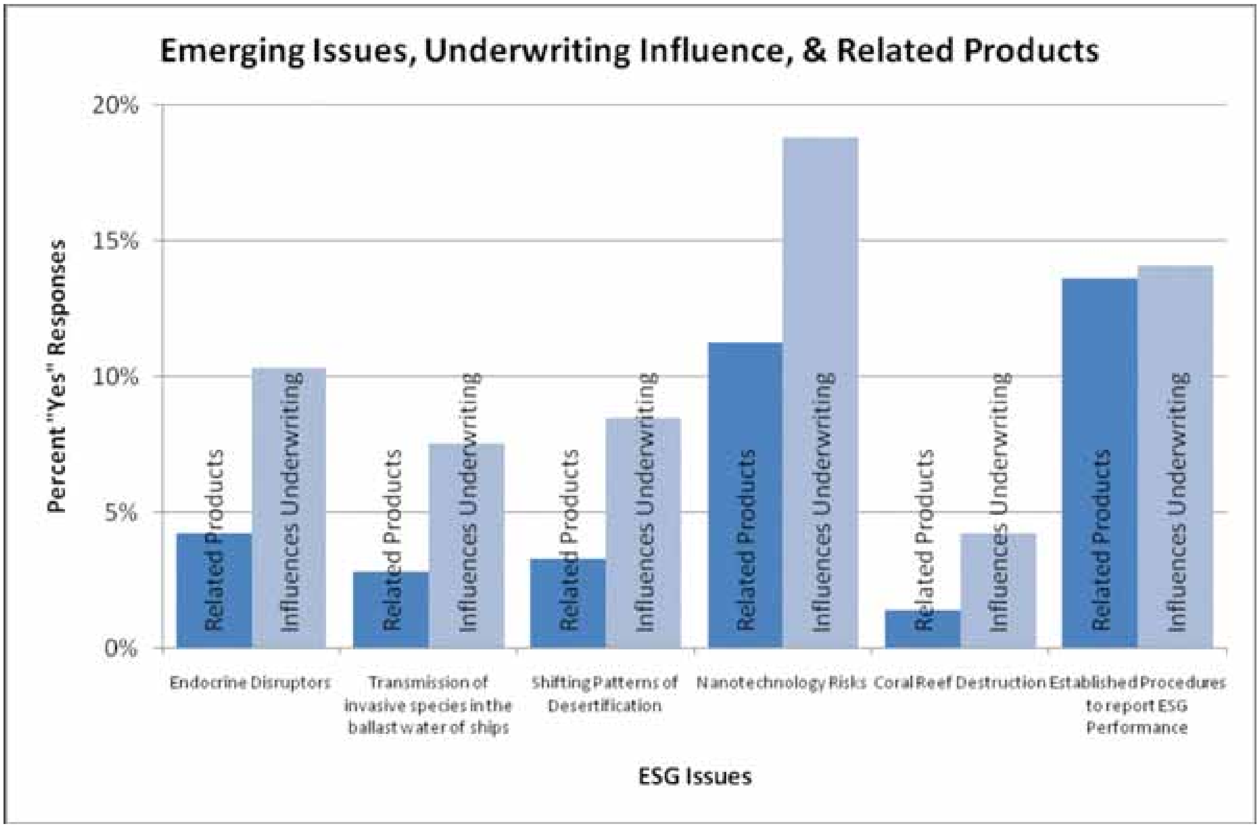
'2. Emerging risks: to avoid a new "asbestosis" syndrome in 20 years

'3. Social responsibility of insurers: be a sustainable actor in risk assessment, prevention (loss control) and also be an example for the community.'

— Underwriter, Head of Technical Products, Property & Casualty (Europe)

Figure 12 shows the six most nascent ESG issues according to respondents, for which the most common answer along the evolutionary progress scale was *not a factor*. For each of these ESG issues, the underwriting influence of the ESG issue is greater than the awareness of related products.

Figure 12: Underwriting influence and related products of six most nascent ESG issues*



*Out of a total of 34 sample ESG issues

This validates the unsurprising view that new product development in the insurance industry is an equally challenging process. Since the formulation and pricing of a product—'a promise to pay'—is the result of detailed analysis of a large body of historical experience and loss data, much of the needed 'raw materials' in the form of exposure data required to understand the risk at hand are in short supply when creating an insurance policy for an entirely new class of business. This challenging process is intensified by global emerging risks such as climate change, biodiversity loss & ecosystem degradation, and technological risks, which require a large volume of historical and scientific data to understand a wide array of risks and to make sound, forward-looking risk assessments, before risk-specific insurance products are developed. Equally, the product development process is linked to legal and regulatory frameworks, which is a key factor in claims management.

Indeed, Figure 12 also highlights the significant finding that *established procedures to report [holistic] ESG performance* by insureds (e.g. companies) are still underdeveloped, even though the most common answer to the ESG factor, *disclosure*, along the evolutionary progress scale was *developed regulatory or legal framework*. An insured's duty to disclose all *material* risk factors—a factor is material if it *influences* the underwriting decision (see Theme 1 above)—conforms with a fundamental principle in the insurance business—the principle of utmost good faith. However, conventional disclosure does not necessarily mean that material ESG factors are *routinely* taken into account, suggesting the need to establish more integrated and holistic reporting procedures to disclose a range of material ESG factors (e.g. risks associated with climate change, nanotechnology, pandemics) for risk management, underwriting and product development purposes. Respondents voiced these views on the disclosure process:

'The entire industry is facing this issue of inadequate disclosure by clients but the results are slow.' — Chief Underwriting Officer (Asia)

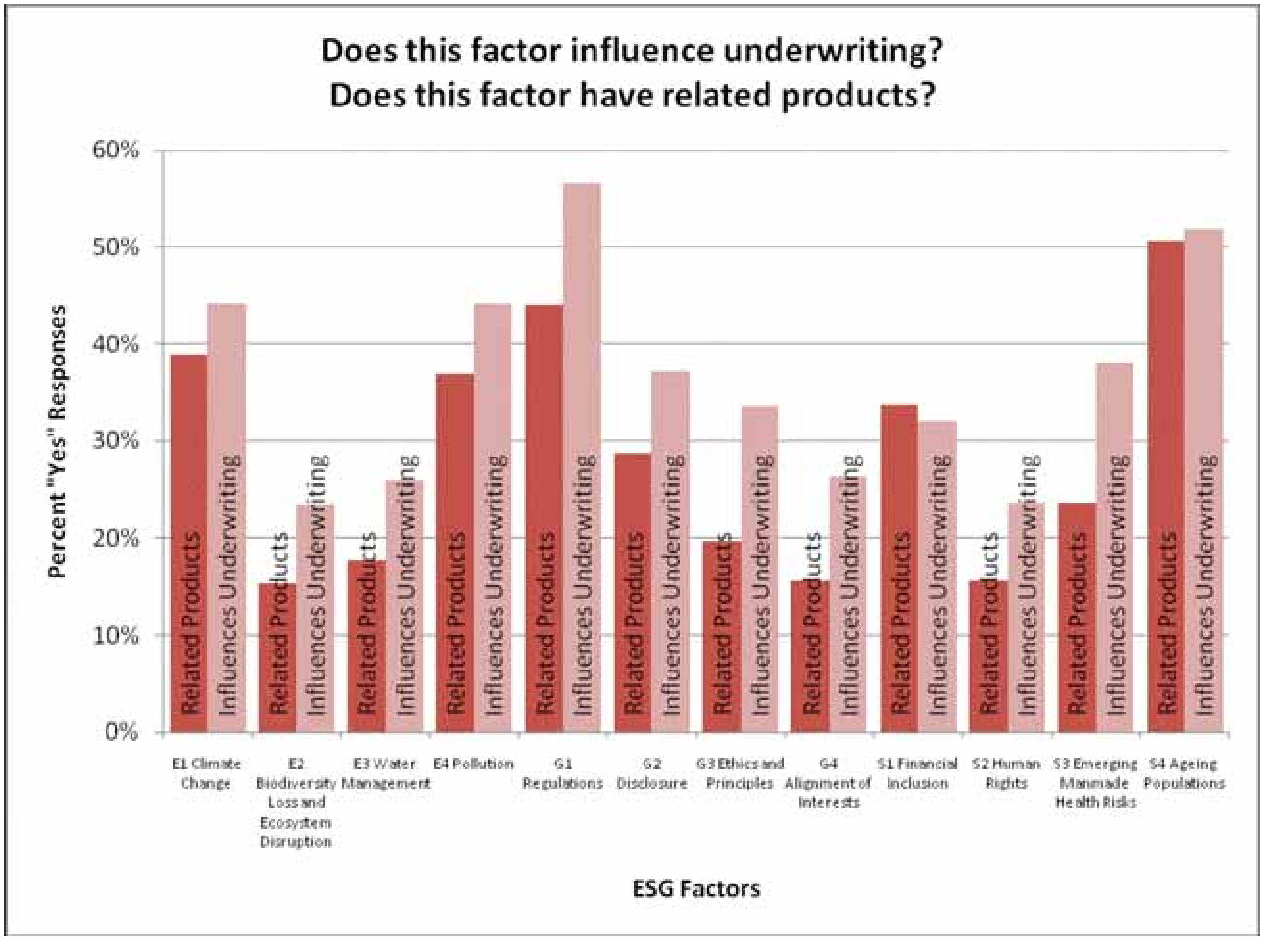
'Disclosure of factual information as listed in general is an indicator to determine that such an insured has or does not have good risk management practices. This is key in assessing risks.' — Chief Property Underwriter (Europe)

'The Insurance Contracts Act requires the insured to disclose all relevant facts a reasonable person would deem material.' — Chief Life Underwriter (Oceania)

Given the various issues mentioned above, the insurance industry is quite cautious in developing new products. Emerging risks, in this context, ESG factors, typically become an influence in the underwriting of existing products first, before they become themselves the subject of new, risk-specific insurance products.

Accordingly, the extent to which the underwriters surveyed indicated both existing and potential product offering opportunities in the context of ESG factors was quite striking. Through their recognition of underwriting influence and awareness of related products (Figure 13), respondents indicated which ESG factors contain product opportunities. The differences suggest that ESG factors, regardless of their evolutionary progress, offer product opportunities.

Figure 13: Underwriting influence and related products of 12 primary ESG factors



Respondents then indicated which lines of insurance they judge these product opportunities reside. Table 2 shows by ESG factor, the lines of insurance where the percentage of respondents attributing the financial materiality of an ESG factor (risk value) exceeds the percentage recognising the availability of ESG-related products (risk transfer).

Table 2: ESG factors with greater financial materiality than available products

ESG factors	Related products (risk transfer)	Line of insurance (financial materiality or risk value)						
		Agroforestry	Casualty	Credit & Surety	Health	Life	Marine, Aviation, & Transport	Property
Climate change	39%	46%			39%		41%	60%
Biodiversity loss & ecosystem degradation	15%	38%	23%		22%		18%	23%
Water management	17%	38%	18%		30%	19%		27%
Financial inclusion	33%					35%		
Ageing populations	50%				52%	60%		
Alignment of interests	15%		23%	18%		16%		18%
Emerging manmade health risks	23%				55%	40%		

Table 2 gives a general indication of potential product opportunities. For example, it suggests that *biodiversity loss & ecosystem degradation* and *water management* present product opportunities across different lines of insurance.

'Environmental liability [is an example of a product opportunity for biodiversity loss & ecosystem degradation].' — Chief Underwriting Officer (Europe)

'[On deforestation and underwriting practices] green building insurance; including reconstruction using sustainable materials and practices.' — Assistance Vice President (North America)

'Provide cover for the impact caused by biodiversity loss and ecosystem degradation to balance sheets of clients...Water management can include fire protection measures, but also continuity planning for large corporates. It is standard procedure in risk management assessment to include water supply. Loss of water cover [is a product opportunity].' — Chief Property Underwriter (Europe)

Respondents also noted the interconnectedness of certain ESG factors:

'[On water management] please see comments in relation to Climate Change as these issues are inter-related...Water management is very topical in [this country] with recent droughts and ill-placed water capture areas. If we are not able to better protect our water supplies (e.g. providing pipelines to move water from one area to another) this issue will become severe for not just those living from the land (farmers, etc.) but also city dwellers who are used to abundant supplies to run their businesses...We currently provide products to protect the ability to continue to pay ongoing farming expenses if the farmer is disabled (temporarily or permanently)...for well run farms there is a genuine need for protection against death and disablement and our life and income replacement policies do fill this need.' — Chief Life Underwriter (Oceania)

Inasmuch as the survey was very comprehensive, covering a wide range of ESG factors across lines of insurance, both life and non-life, the difference between the financial materiality of ESG factors and ESG-related products could be more pronounced had the survey targeted a specific line of insurance. For example, not all underwriters cover multiple lines of insurance and even Chief Underwriting Officers who may oversee multiple lines can be segmented between life and non-life insurance business. Nevertheless, with the vast amount of data collected, a more granular analysis according to functional responsibility can be conducted going forward.

Finally, the survey captured the *current* state of thinking on ESG factors. As ESG factors evolve and generate greater social awareness and prominence, its relationship to different lines of insurance may similarly lead to greater recognition of product opportunities and potential new markets, and drive innovative solutions.

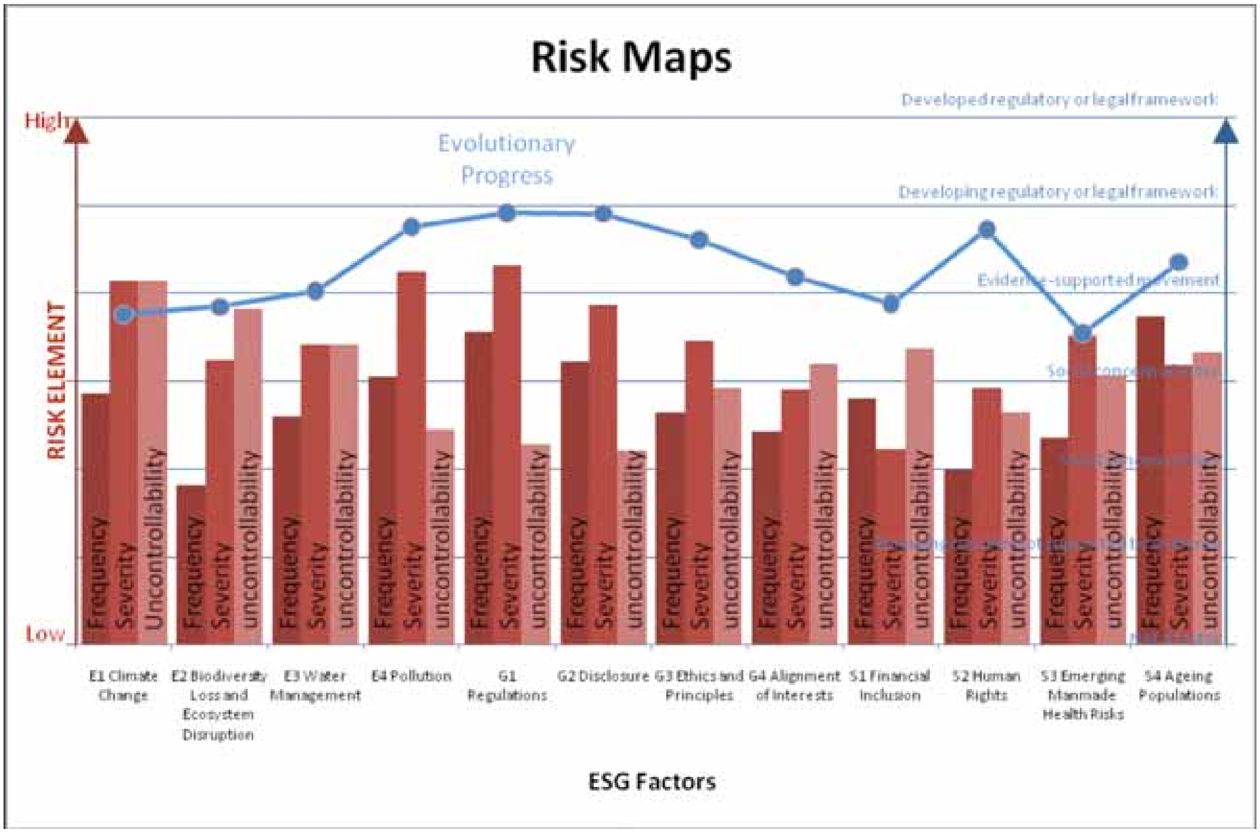
Theme 3 ➔ Given their assessment of ESG risks, underwriters judge the societal response for many ESG factors as underdeveloped

Survey respondents spanned various territories worldwide, and each jurisdiction or region can have its distinct drivers and barriers with respect to ESG factors. This section therefore presents a global assessment.

As mentioned under the methodology section of this report, a critical component of the survey was to ask respondents to judge where on a seven-point evolutionary progress scale they believed ESG factors lay, with *not a factor* being the starting point and *developed regulatory or legal framework* being the end point.

Additionally, respondents were asked to evaluate the same body of ESG factors—now framed as *risks*—with respect to their potential frequency, severity, and uncontrollability (Figure 14). One of the more profound insights from the survey was the extent to which underwriters judged ESG risks to have significant loss potential, and yet the societal response on the evolutionary progress scale was indicative of societal response 'lagging' the underwriters' assessment of the risk involved.

Figure 14: Risk components of 12 primary ESG factors and average assessment of evolutionary progress



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 risks 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. This is significant because it is a fact that the insurance industry is highly regulated, and the survey statistics reveal that *regulations* is the number one factor influencing underwriting (Figure 13), and the number one factor in terms of risk severity (Figure 14).

'All lines of business get affected by this [regulations] and this is being factored regularly in our underwriting guidelines.' — Chief Underwriting Officer (Asia)

The responsibility of insurers entails economic considerations as well as being part of civil society, and the data suggests that the dynamic characteristics of ESG risks need an equally dynamic framework to bridge the gap and guide an industry-led response to many global ESG risks where prudential regulatory or legal frameworks are underdeveloped.

How can such a framework be formulated? Examples of early models are the ClimateWise Principles (Box 1) and the Principles for Responsible Investment (Box 2).

Box 1: The ClimateWise Principles

The management of ESG risks is a critical part of the enabling environment that allows insurers to offer their products and services. In the absence of enough regulatory risk management, the emerging risk from major ESG factors can be too large to properly manage or respond to as a single business. Therefore, on these key factors, the insurance industry can take collaborative voluntary steps to better manage and understand the risks. However, it is clear that a key requirement to reducing the uncontrollability of an emerging risk lies in regulation as only this certainty can provide the proper framework by which risk can be measured and underwritten.

For example, a key ESG risk that was judged by the respondents to this survey as frequent but lacking the right level of regulation to properly control the risk is climate change. Climate change is judged as a substantial material risk by a significant proportion of underwriters and that is why the insurance industry developed and signed up to the ClimateWise Principles.

The ClimateWise Principles were launched in September 2007 by HRH The Prince of Wales. The six Principles represent a truly holistic approach to using all aspects of insurers' core operations to help reduce the risk of climate change:

1. **Lead in risk analysis**
2. **Inform public policy making**
3. **Support climate awareness amongst our customers**
4. **Incorporate climate change into our investment strategies**
5. **Reduce the environmental impact of our business**
6. **Report and be accountable**

This industry initiative now has over 40 insurance companies from Africa, Asia, Europe and North America signed up, and each year the members report on their activities as part of their commitment to ClimateWise. The second year independent review of the ClimateWise Principles will be published in the autumn of 2009.

The leadership demonstrated by this type of voluntary approach to tackle a potential systemic risk to the economy can develop the understanding of the key issues and responses that are needed. A key issue in really managing climate risk is Principle 2, which advocates working with policymakers to ensure that the right regulation is in place for the insurance industry to manage the risk effectively and efficiently.

Another concrete example of a voluntary, industry-led initiative—addressing a wide range of ESG factors and directly applicable to the investment management operations of insurance companies—is the United Nations-backed Principles for Responsible Investment.

Box 2: The Principles for Responsible Investment

The Principles for Responsible Investment (PRI) is an investor initiative in partnership with UNEP FI and the UN Global Compact. The PRI was established as a framework to help investors achieve better long-term investment returns and sustainable markets through better analysis of ESG issues in the investment process and the exercise of responsible ownership practices.

Institutional investors (e.g. pension funds, government reserve funds, insurance and reinsurance companies, foundations) have a duty to act in the best long-term interests of their beneficiaries. PRI signatories believe that ESG issues can affect the performance of investment portfolios (to varying degrees across companies, sectors, regions, asset classes and through time), and also recognise that applying the Principles may better align investors with broader objectives of society.

The Principles were drafted by a group of the world's largest institutional investors, supported by a 70-person multi-stakeholder group of experts from the investment industry, intergovernmental and governmental organisations, civil society, and academia. The process was convened by the UN Secretary-General and coordinated by UNEP FI and the UN Global Compact. The PRI initiative itself was launched in April 2006 by then UN Secretary-General Kofi Annan, and was endorsed by current UN Secretary-General Ban Ki-moon in 2007.

The six interconnected, ESG-focused Principles, including a menu of possible actions to implement each Principle, act as a framework for global best practices in responsible investment:

1. **We will incorporate ESG issues into investment analysis and decision-making processes.**
2. **We will be active owners and incorporate ESG issues into our ownership policies and practices.**
3. **We will seek appropriate disclosure on ESG issues by the entities in which we invest.**
4. **We will promote acceptance and implementation of the Principles within the investment industry.**
5. **We will work together to enhance our effectiveness in implementing the Principles.**
6. **We will each report on our activities and progress towards implementing the Principles.**

A key success factor has been supporting signatories in implementing the Principles, for which there are a wide range of work streams:

- **The PRI Engagement Clearinghouse** → web-based intranet providing signatories with a mechanism to share information and proposals on shareholder and other engagement activities they are conducting, or would like to conduct with other signatories
- **The PRI Reporting and Assessment Tool** → comprehensive annual survey of signatory implementation activities, analysing and identifying best practice, areas for improvement and barriers to implementation, as well as providing signatories with an overview of what leaders in the field are doing, helping signatories assess and report on their own progress; an accountability mechanism
- **The PRI in Practice Implementation Blog** → online knowledge base with implementation resources such as interviews with key industry practitioners, book reviews and issue briefs
- **The PRI in Person Annual Event** → event bringing together signatories to brainstorm implementation strategies, to network, and to find partners for collaboration
- **The PRI Small Funds Initiative** → assistance for resource-constrained signatories by pooling resources and sharing knowledge
- **The PRI in Emerging Markets and Developing Countries Project of UNEP FI** → regional and country-specific approaches to recruitment, collaboration and implementation support in emerging markets and developing countries
- **The PRI Academic Network** → global community of academics that advances responsible investment research and education, and a platform for interaction between the academic and practitioner communities
- **Asset class-specific working groups** → currently covering private equity, property (through the UNEP FI Property Working Group)
- **Regional working groups** → spanning Africa, the Asia-Pacific and Latin America, with country networks in Brazil, South Korea and South Africa now established

A core work stream is the PRI Engagement Clearinghouse, which has not only driven collaborative efforts to improve company behaviour on ESG issues, but has also brought investors together to engage with policymakers, to discuss emerging issues, and to seek support for shareholder resolutions. In 2009, over 8,800 companies were reached by collaborative engagements on issues such as water scarcity, human rights, ESG disclosure and reporting, slave labour in supply chains, child labour, climate change, corporate governance, transparency, corruption, executive compensation, labour rights, and regulations.

Since the formative years that led to the PRI, we have seen more innovation and evolution in responsible investment than in any other similar time span in history—ESG-inclusive mandates by asset owners, new ESG-focused investment products (e.g. climate change funds, water funds), investment consulting firms focusing on ESG, ESG integration across asset classes (e.g. public equity, private equity, property, fixed income, hedge funds, forestry, microfinance), climate change data on Bloomberg data terminals, a Chartered Financial Analyst Institute guide on ESG analysis, and initiatives on long-term investing such as the Marathon Club.

To date, over 600 signatories from the investment community, collectively representing over USD 18 trillion in assets under management, have committed to implement the Principles for Responsible Investment—the global benchmark for responsible investing.

- Measurable loss
- Non-catastrophic loss, or a catastrophic loss within the economic scale of the insurance industry to bear (e.g. hurricane, at least for now, vis-à-vis war)

One might legitimately consider any number of ESG factors (e.g. climate change, nanotechnology risks) as outside the scope and scale of the insurance industry as the sole mechanism for response. And going back to the earlier discussion on emerging risks, to what extent should the industry be held liable to pay claims for which it never actually had the capacity to price a risk-based premium at the time the policy was issued?

Additionally, it could be argued quite coherently that insurance, the pooling of risks, may ***not*** be the appropriate societal response for a given ESG factor if it creates a perverse incentive for behaviours that should not be rewarded, and that stifle innovation.

With an article titled, *A Catastrophe of Its Own,* this case was recently made strongly by The National Wildlife Foundation in arguing against the provision of federal government flood insurance in the United States. One excerpt:

'…by providing insurance in high-risk flood zones, FEMA encourages building that inevitably will burden taxpayers with costly, repetitive insurance claims while causing habitat destruction…'

Survey respondents echoed a similar view:

'...one thing is very clear—as long as cheap, government subsidized and easily available insurance is available, irresponsible coastal development will continue. That said, I think this question gets at a very key issue—how does one create a product that encourages responsible risk taking, while minimizing the chances of irresponsible human behavior. Many times risk management professionals put too much faith in a policy, which is a piece of paper and forget the very complex psychological processes that surround human actions.' — General Management Consultant (North America)

'Federal flood and wind pools are examples of public insurance coverages that may inadvertently encourage the risky behavior of building in areas exposed to hurricanes. By not correctly pricing the risk, this government intervention is a disruption to the market, or market failure, which may cause additional harm in the event of extreme weather. These events may become more severe as the climate changes and extreme weather becomes more frequent...Climate Change is an example of an Environmental factor that may present risks over time that become uninsurable. Similar to the example of providing property insurance in flood and hurricane zones, some areas may eventually become uninhabitable due to rising sea levels or frequent and extreme weather events.' — Senior Vice President (North America)

Given this context, the early inferential conclusions suggested by the survey responses on the issue of societal response to ESG factors are:

- Unsurprisingly, those who manage risk as a vocation are more likely to see the risk potential in ESG factors than the public at large.

- The absence of an appropriate level of societal response to the risk potential embedded in a given ESG factor may suggest an insurance mechanism as an appropriate response, but this may not necessarily hold true in every case.

- A clear measure of industry and societal recognition of ESG risks, along with dynamic frameworks (e.g. ClimateWise Principles, Principles for Responsible Investment), can facilitate better understanding, management and insurability of ESG risks in the private insurance market.

Theme 4 ➔ The evolution of ESG factors in developing regions is different, but there are aspects common globally

Human tragedies and economic losses in developed and developing regions due to natural hazards have produced exceptionally stark contrasts (Table 3).

Table 3: Examples of deadliest and costliest natural disasters

Year	**Loss event**	**Country/Region**	**Overall losses* (USD)**	**Insured losses* (USD)**	**% of insured losses vs. overall losses**	**Fatalities**
Developing region:						
1991	Cyclone, storm surge	Bangladesh	3 billion	100 million	3.3%	139,000
2008	Cyclone Nargis	Myanmar	4 billion	unavailable	unavailable	84,500
Developed region:						
1992	Hurricane Andrew	US	26.5 billion	17 billion	64.2%	62
2005	Hurricane Katrina	US	125 billion	61.6 billion	49.3%	1,322
Developing region:						
2004	Earthquake, tsunami	South Asia	10 billion	1 billion	10.0%	220,000
2005	Earthquake	Pakistan, India	5.2 billion	5 million	0.1%	88,000
Developed region:						
1994	Earthquake	US (Northridge)	44 billion	15.3 billion	34.8%	61
1995	Earthquake	Japan (Kobe)	100 billion	3 billion	3.0%	6,430

*Original values; as at January 2009
Source: *Natural disasters 1980 – 2008*, Munich Re, Geo Risks Research, NatCat Service

Survey data indicate significant differences in the assessment of ESG factors depending on a respondent's country of operations being in a developed region or a developing region, but also suggest common aspects.

The striking contrast in insured losses in the examples cited in above was embodied by an ESG factor in the survey—*financial inclusion*. Most households in developed regions have *access* and sufficient financial resources to buy insurance, but this is not the case for many countries in developing regions. For example, at the time of the Indian Ocean Tsunami, less than 12% of the affected households in Indonesia, and less than 2% in Sri Lanka, were insured against the losses produced.[14] As shown in Figure 13 below, *financial inclusion* is the only ESG factor where the views between respondents in developed and developing regions converge.

'[On financial inclusion] catastrophic losses are our main area of concern.' — Chief Underwriting Officer (Asia)

'Insurance to the poor: help the world's poor be able to plan further ahead in order to escape the poverty trap.' — Chief Life and Savings Officer (Europe)

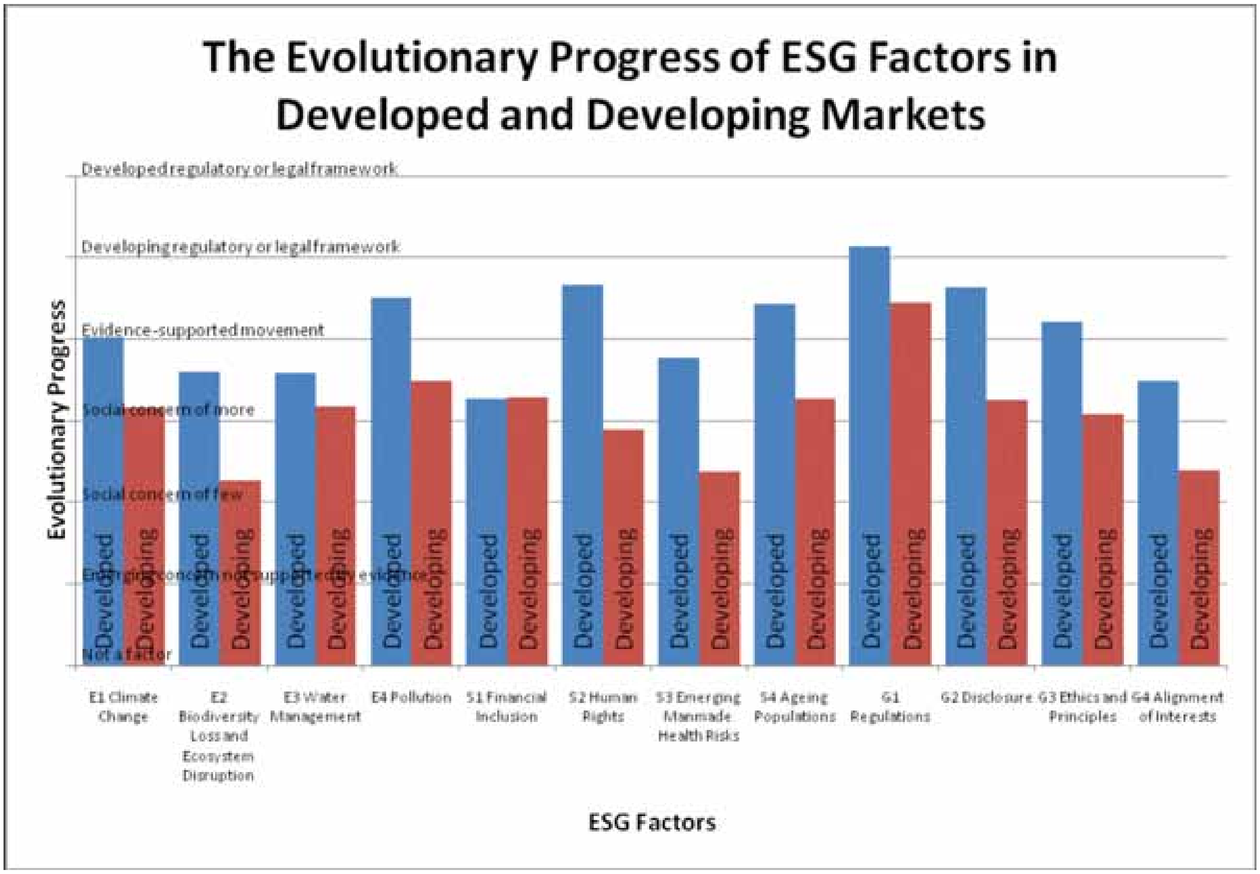
'Microinsurance — there is a market for these products...This will need a new product and new business model.' — Vice President (Africa)

'Climate change — immediate impact on the safety of communities worldwide. Wealth distribution — unless we stop the move to fewer and fewer controlling more and more of the world's wealth, we will never achieve equilibrium. Education — our future depends on the ability to provide hope and opportunity to all.' — President & Chief Executive Officer (North America)

Figure 15 reveals that ESG factors are more formalised (i.e. more advanced along the evolutionary progress scale) in developed markets, which is intuitive and unsurprising.

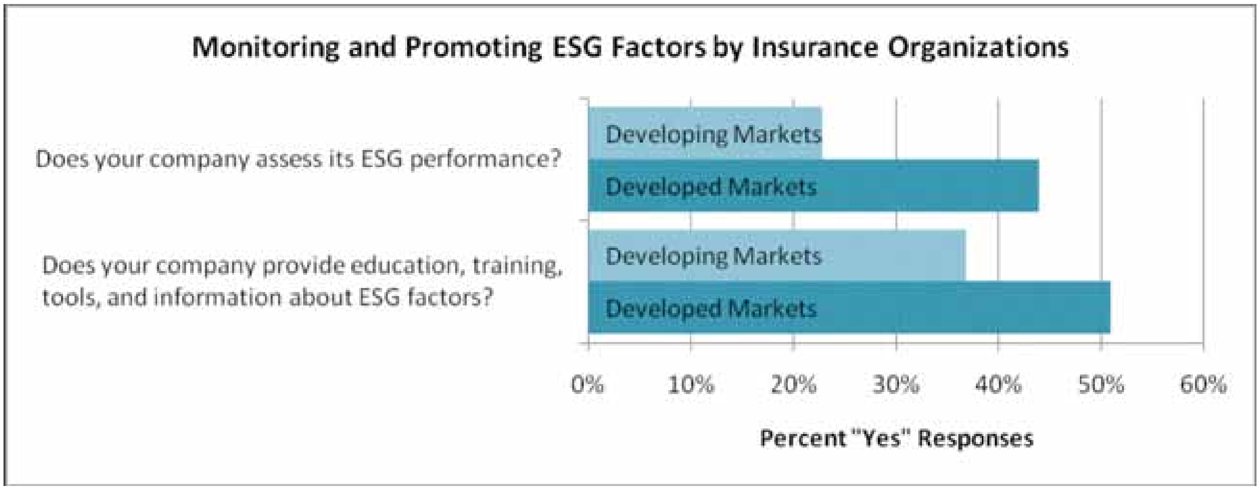
Figure 15: Average assessment of evolutionary progress of 12 primary ESG factors in developed and developing markets

[14] *Managing tsunami risk in the aftermath of the 2004 Indian Ocean Earthquake & Tsunami* (2006), RMS http://www.rms.com/Publications/IndianOceanTsunamiReport.pdf



Furthermore, companies based in developed markets assess their ESG performance and enhance their organisational capacity to address ESG factors considerably more than those in developing markets (Figure 16).

Figure 16: Organisational assessment and promotion of ESG factors in developed and developing markets



As shown in Table 1, the levels of world market share, insurance penetration and insurance density are all significantly higher in developed markets, implying greater organisational resources to assess ESG performance and provide ESG education and training. In developing markets, the economic situation, political climate, level of education and financial literacy, and other factors can create major constraints.

Most respondents cited the importance of ESG education, training and information, and many respondents, particularly those in developing markets, indicated that it does not cascade organisational levels, or there is a lack of it or none at all.

'We need first of all to build capacity in this regard. Without adequately trained resources there is nothing much we can do.' — Chief Operating Officer (Africa)

Additionally, it is important to remember that ESG is a relatively new term compared to the generic, 'emerging risks' (see Theme 2) more familiar to respondents globally. Thus, while certain ESG-related performance assessments, criteria, training and education may already be in place, these may not necessarily have been pieced together as 'ESG' by respondents. In any case, this is why one of the key survey objectives was to educate respondents and stakeholders on the importance and language of ESG. Over time, there will likely be greater comprehension and wider acceptance of ESG in a holistic sense, and that the concept of 'ESG integration' in insurance processes will continue to deepen and progress.

There were also a few responses suggesting that addressing ESG factors is peripheral or tilted towards philanthropy:

'I am aware that our company support some social activities. Objective is to achieve positive underwriting profit. ESG is not an underwriting objective.' — Manager, Underwriting (Asia)

'Even though it is something that we should look around, still profit would be the highest priority. However, if our business size grows, I am sure we would focus more on other aspects.' — Senior Manager (Asia)

However, most respondents viewed ESG factors as an integral part of risk management, competitive strategy, business innovation and sustainability, and corporate social responsibility:

'Holistic risk management, seizing business opportunities, meeting stakeholders' expectations.' — Head of Climate Centre (Europe)

'Customer centricity; Best practices in risk management; Compliance with governmental regulations.' — Chief Life Underwriter (North America)

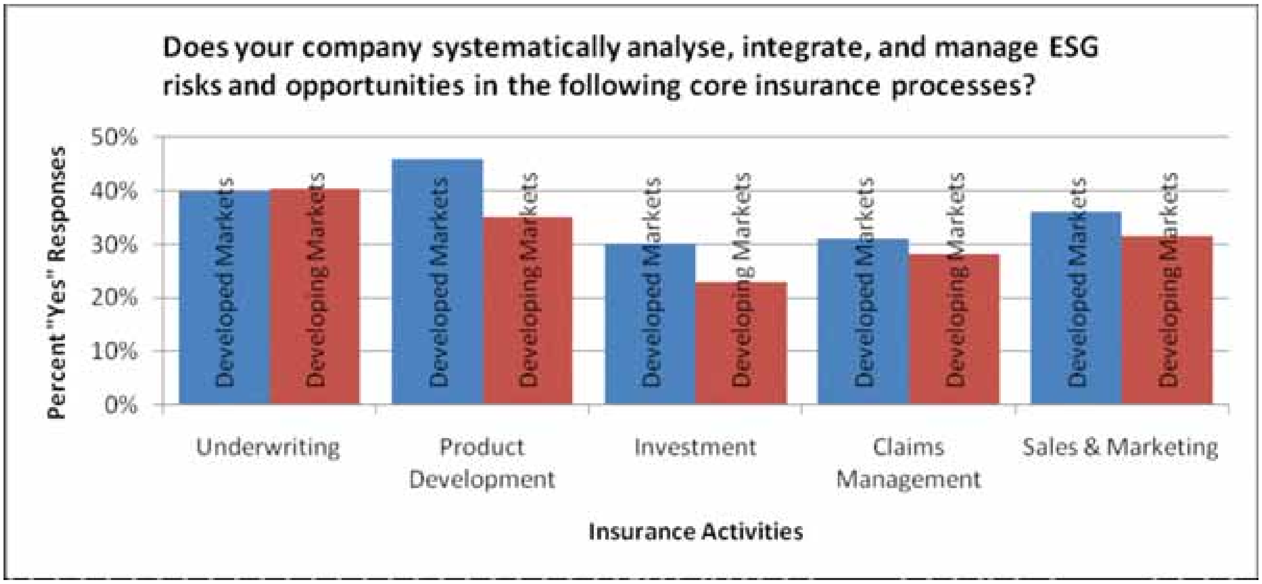
'Our motivations are to control claims and costs of doing business as well as to develop a sustainable business.' — Chief Operating Officer (Africa)

'[This company] believes the viable long term strategy is that of a socially responsible one.' — Head of Products and Pricing (Europe)

'[This company] is highly aware of the importance of taking action towards sustainable practices. Locally the company has a good reputation within the insurance market and wants to be benchmarking when it comes to developing sustainable products and sharing knowledge with its stakeholders, including employees, about sustainability. It is well known by the company that there is no way to have a successful business within a not sustainable society.' — Chief Executive Officer (Latin America)

Despite the situation described above, it is interesting to see the survey result that the level of ESG integration in all core insurance processes surveyed does not differ significantly between developed and developing markets (Figure 17).

Figure 17: Level of ESG integration in core insurance processes in developed and developing markets



Here, the survey captured a disconnection.

In developed markets, ESG factors are more formalised, and there is greater organisational assessment of ESG performance and greater efforts to build organisational capacity to address ESG factors. However, the difference in the level of ESG integration in all core processes between developed and developing markets is not statistically significant. Why?

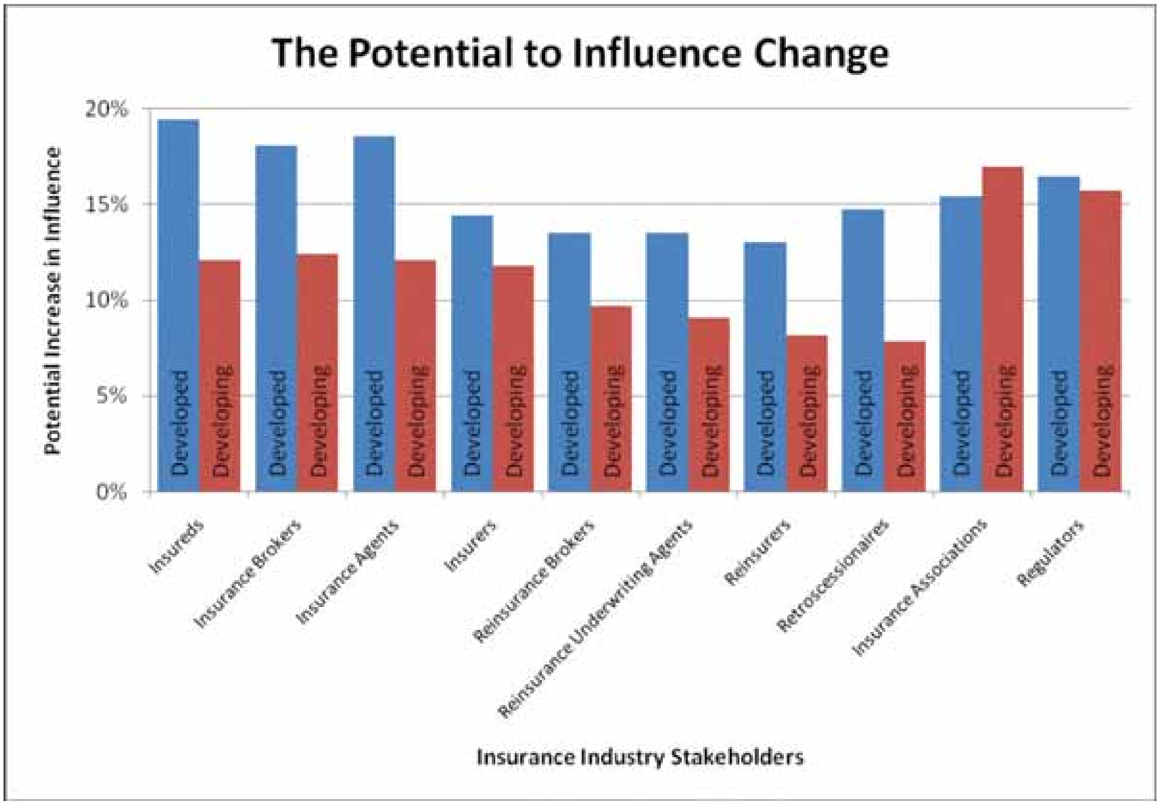
Here are possible explanations, followed by an associated insight.

Possible explanations:

1. External agents possess greatest influence in promoting ESG factors in developing markets

   In developing markets, external agents appear to have the greatest influence in promoting ESG factors. Survey results indicated that the potential increase in influence stemming from most insurance industry value chain participants is considerably lower in developing markets. The exceptions were insurance associations and regulators—both external to the industry value chain (Figure 18).

Figure 18: Potential influence to promote ESG factors in developed and developing markets



One might therefore conclude that the ESG integration efforts of insurance companies in developing markets (e.g. assessing and monitoring ESG performance and providing education and training to employees) are likely driven by or dependent on external agents. For example, companies in developing markets, particularly domestic companies, have generally less resources to systematically address ESG factors on their own.

Equally, this situation gives credence to the important role of other external agents such as civil society institutions, and international and supranational organisations in bolstering their understanding of and support for the insurance industry with respect to the integration of ESG factors into core insurance processes.

2. ESG factors are global issues

Many ESG factors are global issues, although in varying degrees of prominence and evolution (see Figure 15). For example, while ageing populations is a major issue in developed markets, it is not exclusively a developed market issue. Equally, while financial inclusion (specifically, the provision of insurance products to low-income people, widely known as microinsurance) is a major issue in developing markets, it is not exclusively a developing market issue. An increasingly globalised world has led to greater interconnectedness, which is applicable to many ESG factors, such as child or forced labour in supply chains as a human rights issue.

‘Does your company systematically analyse, integrate, and manager ESG risks and opportunities in its core insurance processes?

‘No. It should. This is a rude awakening to what have become real life issues.’ —Chief Operating Officer (Africa)

3. The nature and scope of ESG-related strategies and policies can differ significantly between domestic and international players

A considerable number of respondents were from international players headquartered in developed regions, whose corporate strategies and policies transcend territorial borders. Therefore, the answers of a respondent in a subsidiary or branch office in a developing country but whose parent company is domiciled in a developed country would likely, and understandably, have reflected certain group-wide ESG-related strategies and policies cascaded by the parent company. The answers may be significantly different from a respondent based in the same developing country but with a company that only has domestic operations. This suggests that there could be greater (or less) distinction in the level of ESG integration if responses are segmented and analysed at a more granular level. This also brings to light the significant capacity and influence of international players to address ESG factors, and even more, those that are truly global players (see ‘The crucial role of “universal risk carriers” in addressing ESG factors’ under Theme 5).

4. The risk-sharing nature of insurance business inherently carries ESG factors across markets

As illustrated in Chapter 5, the insurance business entails a complex risk-sharing system involving many players. Insurance companies have reinsurance arrangements that spread risks more widely in order to, among others, reduce their exposure to large losses, increase their financial stability, and enhance their capacity to underwrite risks. Reinsurance is therefore integral to the insurance business, and many professional reinsurance companies operate internationally to enhance the diversification of their portfolios. Such diversification also holds true for international insurers. Hence, the international nature of the insurance and reinsurance business inherently transfers risk knowledge and risk management expertise, which can have an impact on the level of ESG integration across markets.

‘International reinsurers which have exposure in developing countries [can promote thinking and action on ESG factors].’ — Chief Operating Officer (Africa)

‘[ESG factors are not integrated into formal underwriting criteria] unless required by reinsurance.’ — Board Member/Underwriter (Middle East)

[Underwriting practices on nanotechnology risks are] in line with the underwriting policy imposed by reinsurers.’ — Head, Reinsurance Administration (Europe)

[A barrier to the development of products that would promote positive ESG outcomes is the] lack of reinsurance support to spread the exposure.’ — Product Manager,

Global Property (North America)

'Underwriters have access to internal guidelines as well as reinsurance manuals for underwriting.' — Chief Life Underwriter (Oceania)

'We assess a ceding company's underwriting guidelines and practices and audit their files.' — Senior Vice President (North America)

5. Insurance companies structure and monitor activities according to product lines, which encapsulate generic core insurance process and provide the gateway to material ESG factors

Table 4 shows for which lines of insurance ESG factors are more financially material in developing markets relative to developed markets.

Table 4: Difference in financial materiality of 12 primary ESG factors in developed and developing markets

ESG factor	Line of insurance								
	Agroforestry	Casualty	Credit & Surety	Engineering	Health	Life	Marine, Aviation & Transport	Motor	Property
Climate change									
Biodiversity loss & ecosystem degradation									
Water management									
Pollution									
Financial inclusion									
Human rights									
Emerging manmade risks									
Ageing populations									
Regulations									
Disclosure									
Ethics & principles									

Alignment of interests									

more financially material in developing markets

less financially material in developing markets

In developing markets, all ESG factors were assessed to be more financially material to credit & surety, health, and life products than in developing markets. Accordingly, the financial materiality for all other products is greater in developed markets.

Insurance companies structure and monitor activities according to product lines, not ESG factors, which can cut across multiple lines as illustrated above. Thus, product lines encapsulate related core processes (i.e. underwriting, product development, claims management, and sales & marketing) on the insurance side, which are generic processes in insurance companies worldwide, and provide the gateway to material ESG factors.

This brings to light the associated insight below on the core process not mentioned in the preceding paragraph—investment management.

Associated insight:

ESG integration appears to be weakest in investment management

In both developed and developing markets, the level of ESG integration was assessed to be lowest in investment management. As mentioned in Chapter 5 of this report, the investment management side of the insurance business model is equally of significant importance.

This survey result may have been largely influenced by the fact that most respondents have non-investment functional responsibilities. Nevertheless, it underscores the importance and practicality of a framework that sets a best practice benchmark. In this vein, the integration of ESG factors into investment analysis and decision-making is precisely the focus of the Principles for Responsible Investment discussed under Theme 3. The investment aspect is also covered by the ClimateWise Principles with regard to climate change. Indeed, in the first annual review of ClimateWise, the implementation of Principle 4—incorporate climate change into investment strategies—was highlighted as a key area that needs considerable improvement among many insurance company signatories.

'...Insurance industry including reinsurance should play a major role in addressing ESG challenges and mitigating the effects of change in factoring ESG issues into their investment decisions and corporate initiatives.' — Senior Manager (Asia)

'Applying their [insurers'] knowledge of risk management in their investment strategies... Align their investment strategies much more closely to their knowledge of future risks.' — Insurance association representative (Europe)

'See: financial crisis (control the asset management department).' — Chief Executive Officer (Europe)

'Shareholders [should work with company management in] building up mutual understanding aimed at the introduction of ESG criteria as an additional factor to be considered in the company's investment policy.' — Head, Reinsurance Administration (Europe)

'As an investor, an insurance company should have a long term view. Investments in forestry may be considered as an alternative to current investments.' — Principal Officer (Europe)

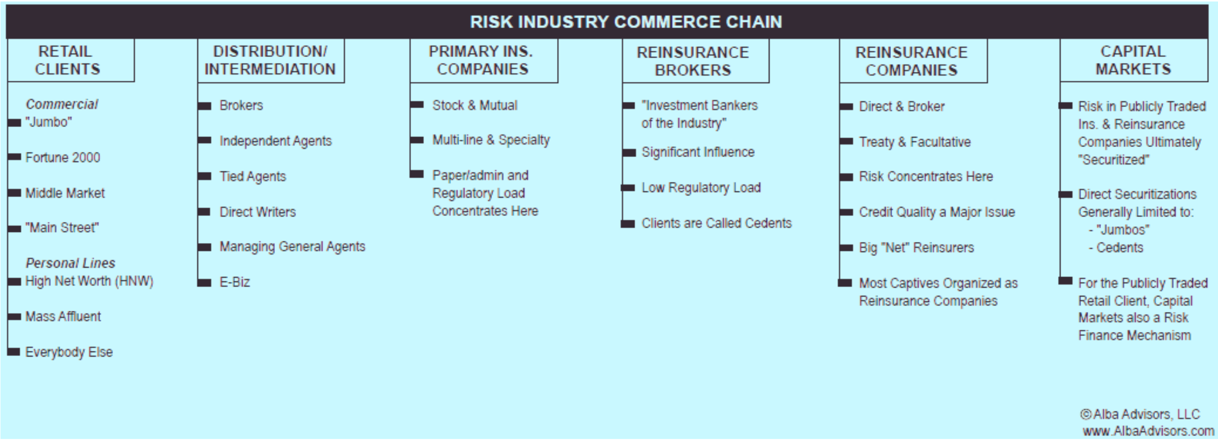
Theme 5 ➔ Active promotion and adoption of integrated ESG risk management and financing is needed

The interpretation of the survey results benefited and will continue to benefit from the collection of diverse expertise and views within the UNEP FI Insurance Working Group (IWG) and its Academic Working Group (AWG), which jointly contributed to the survey design and execution. The following discussion reflects survey respondent data in part, but also in good measure, the informed views of the IWG and AWG in attempting to craft a framework for the active promotion and adoption of ESG risk management and financing. Such an undertaking has greater merit if it serves to achieve two mutually reinforcing goals—the continued economic health of the insurance industry, and a contribution to the public good. Five critical actions emerge to advance systematic integration of ESG factors into insurance underwriting, product development and other core insurance processes.

1. Working together within a fragmented insurance industry structure on how to achieve collective industry action on ESG factors

The insurance industry has a highly fragmented structure and highly competitive playing field. Numerous parties, often having disparate interests, are required to cooperate to attract potential clients and get transactions executed and insurance policies issued. The insured deals with an agent or broker, who in turn places coverage with a primary insurance company, whose own risk transfer mechanism (i.e. reinsurance) is handled by a reinsurance broker (or an underwriting agency), placing coverage with reinsurance companies motivated by yet another set of shareholder interests. Figure 19 provides a graphic representation of the risk industry commerce chain:

Figure 19: The risk industry commerce chain



This industry structure creates three issues that must be addressed to more successfully integrate ESG factors as a fundamental component of risk underwriting:

a. The impaired knowledge and information exchange on ESG factors

At the account-specific, micro level, this means that the reinsurer ultimately providing the needed capacity (capital) for a given risk may be unaware that a particular insured is engaged in a series of human rights violations (e.g. child or forced labour) that presents a reputational risk for all in the chain of commerce providing the client insurance products. At the macro level, the data accumulation required to properly assess the risk then price a new insurance product is highly unlikely to reside in sufficient quantities in one entity. This is particularly true with new categories of risk. In many cases, anti-trust regulations preclude the data exchanges which might otherwise facilitate the development of insurance products for early stage, often ESG-driven risks. Many respondents voiced the need for sufficient data on ESG factors:

'Transparency and the free flow of information (subject to legal and contractual obligations) can help both the insurance industry in best assessing the risks it is taking on, and promote wider ESG improved behaviour, by ensuring that risk-related activities are subject to independent review and assessment.' — Director, Group Actuarial & Underwriting Services (Europe)

'The industry should share data and insights across boundaries. Influence government and its own stakeholders through appropriate policy conditions. In partnership with government and other social institutions provide spread cover from the bottom to the top of the pyramid as all are systemically linked and raise the risk profile of a community or a system.' — Head, Strategy (Africa)

'Fund and engage in open research and communication in a non-competitive manner.' — Principal Officer (North America)

And there are companies being proactive on the data gathering process:

'We engage in an ongoing process of "trend identification", regularly utilizing outside consultants to help identify future challenges that can feed into the product development process and prepare us for emerging risks and crises. We also have a strong Innovation team within our Product Development division that seeks to assess future challenges. Finally, a strong Research and Development team and mechanisms to stay in tune with the latest news, updates and announcements on ESG issues is very important. For instance, our team has a daily email delivered to us with links to all climate change and renewable energy related articles culled from major publications.' — Senior Vice President (North America)

b. The reduced ability to manage systemic risks inherent in many ESG factors

If a risk is large enough, effective diversification is not so much a risk management technique as it is the process by which the risk becomes systemic (e.g. simplistically, homeowners in one country default on their mortgages, and another country's banking system is severely impaired). As a by-product of the financial leverage deployed, and the fact that its core function is the pooling and sharing of risks, the insurance industry is uniquely positioned to contribute to either the creation or management of systemic risks, many of which are believed to be ESG factor-related (e.g. climate change). Effective systemic risk management requires mechanisms for exchanging data and early insights on developing systemic risks structured such that the public good driver carries the same motivation as the economic drivers for the entities involved.

'What is needed is a transfer of the basic elements of risk modelling, assessment and monitoring utilized in underwriting in the insurance industry to all sectors of the financial services industry.' — Head of Climate Centre (Europe)

c. The crucial role of 'universal risk carriers' in addressing ESG factors

Decades of sustained profitability and capital growth have led to the evolution of large, influential and omnipresent insurers and reinsurers that have penetrated insurance markets worldwide and implanted themselves in the financial system and the broad economy. For these 'universal risk carriers', the negative externalities associated with many ESG factors (e.g. activities of insured companies and individuals that emit greenhouse gases and induce climate change; deforestation and destruction of habitats resulting in loss of ecosystem services; health issues and pandemics) have the potential to adversely impact their underwriting profitability and investment returns in many territories, and threaten their long-term company value. Since many global ESG factors are inherently longer term and pose systemic risks, then it could be in the best interests of universal risk carriers to quantify the cost of negative externalities linked to the ESG performance of their insureds.

'There is an increasing awareness [of longer-term risks and opportunities typically associated with ESG factors] but probably not yet enough real knowledge. This needs to be deepened to better understand correlations and interdependencies as well as long-term effects of certain behaviours (e.g. carbon emissions). Quantification is of particular interest in the insurance industry.' — Global Aviation Underwriter (Europe)

'We are still too short term in our own perspectives and I don't think the industry has embraced its ESG responsibilities yet.' — President & Chief Executive Officer (North America)

'Lack of long-term strategy vs. short-term results.' — Chief Executive Officer (Europe)

One can therefore argue that these universal risk carriers must adopt a very long-term strategic perspective since sustainable value creation is largely dependent on the long-term health of markets and economies, and that it would be prudent for them to ensure proactive and collective action on systemic ESG risks. As one respondent put it:

'Emerging manmade health risks can influence a whole economy...' — Chief Property Underwriter (Europe)

This long-term strategic perspective for universal risk carriers is rooted to the 'universal owner hypothesis'[15] developed for large and highly diversified institutional investors who own a wide range of asset classes across sectors and markets. These investors effectively own a slice of the broad economy; hence, the term, 'universal owner'. The universal owner hypothesis has underpinned collaborative action by investors on ESG factors, including many of the world's largest pension funds that are signatories to the Principles for Responsible Investment.

This report unveils the concept of universal risk carriers, for which we encourage further research as it could be a powerful incentive for long-term thinking and collective action within the insurance industry, and conceivably in conjunction with the investment industry, on ESG factors.

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[15] See, for example, 'Universal ownership: Exploring opportunities and challenges' (2006) Center for the Study of Fiduciary Capitalism, Saint Mary's College of California and Mercer Investment Consulting; and 'Putting the Universal Owner Hypothesis into Action: Why large retirement funds should want to collectively increase overall market returns and what they can do about it' (Raj Thamotheram and Helen Wildsmith)

Related links:
http://www.stmarys-ca.edu/fidcap/docs/2006_MIC_UO_Report_FINAL.pdf
http://www.rotman.utoronto.ca/icpm/files/Putting%20the%20Universal%20Owner%20Hypothesis%20into%20Action_Raj%20Thamotheram%20and%20Helen%20Wildsmith.pdf
http://www.stmarys-ca.edu/fidcap/
http://academic.unpri.org/index.php?option=com_content&task=view&id=16&Itemid=39

Many respondents believe that long-term and systemic ESG risks can only be successfully tackled by working together and having the resolve to do it:

'How can the insurance industry help identify future challenges within the financial system, mitigate systemic risks, and avert crises (e.g. the potentially highly complex and profound "natural resources crisis" arising from the unsustainable use of a wide range of natural resources such as the climate, biodiversity ecosystems, and water)?

'It should be managed as industry issue rather than company issue to increase the impact to society and at the same time lower the cost per company by way of cost sharing.' — Chief Financial Officer (Asia)

'Only through collective action and government backing.' — Corporate Responsibility Manager (Europe)

By fully embracing our responsibility to do so. We cannot continue to mask the effects of the deterioration of our planet by providing products and services generating a top and bottom line for us but continuing to allow bad practice. We have to take firmer stands on these issues and work to improve trends...' — President & Chief Executive Officer (North America)

2. Creating enhanced forums for dialogue on ESG factors within the insurance industry, and between the industry and its stakeholders

Survey results revealed that ESG factors influence underwriting, and the degree to which underwriters see a disconnection between the societal response to a given ESG factor and the loss potential embedded in it. This suggests the need for more effective forums to address a wide range of ESG factors, alongside many of the issues arising from a fragmented industry. Survey respondents made cogent observations:

'I believe that, first, insurers, intermediaries and supervisors should have frequent institutional dialogue about important industry issues, including but not limited to ESG factors. If this takes place through the principal regional and world trade organizations or federations, as well as at a national level in every country, we would be seeing more initiatives that would drive positive change.' — Executive Vice President (Latin America)

'The industry as a whole does not seem united on this issue [sufficiently considering long-term ESG risks and opportunities]…By bringing together all to be affected parties and trying to arrive at some practical solution.' — Chief Underwriting Officer (Asia)

'Need for a forum with main players exchanging on ESG issues.' — Vice President, Corporate Actuarial (Europe)

'Several insurance companies around the world are creating discussion forums and

investing on partnerships in order to contribute for research and knowledge dissemination about ESG risk management and by doing so, companies can also fore come (sic) emerging risks regarding the environmental, social and economic pillars.' — Chief Executive Officer (Latin America)

Such a dialogue could:

a. Provide a 'safe' forum for the exchange of data and information and best practice, as well as insights. For example, insurance underwriting is as much the product of informed judgement as it is the application of rigorous mathematical models.

b. Foster the development of private-public partnerships to address the unique dynamics of an industry providing a public good via a private market mechanism.

c. Provide a venue for the emergence of early leaders and champions, entrepreneurial ventures able to effectively demonstrate the revenue and long-term company value enhancement opportunities arising from the appropriate management of ESG factors.

d. Heighten the public's awareness of ESG factors—a critical need in changing public policy.

e. Build institutional capacity necessary for insurance companies—particularly domestic insurers in developing countries—to effectively embed ESG factors across core operations and different lines of insurance.

f. Provide a neutral ground for the insurance industry to interact with its various stakeholders (e.g. policymakers, regulators, civil society organisations, academia), particularly for global ESG factors that pose systemic risks and require further research, effective regulatory or legal frameworks, and collaborative action.

3. Embedding material ESG factors in underwriting guidelines, and building the appropriate skill sets

In practice, there are informal and formal underwriting guidelines within an insurance company, the informal being an underwriter's personal judgements, the formal being the documented underwriting guidelines of the company. The two are not necessarily in step with each other.

The survey results indicate that material ESG factors have made it into the informal underwriting guidelines 'in the head' with much greater speed and efficiency than they have been integrated into the formal underwriting guidelines by which insurance company employees are actually asked to work.

This is a real, missed opportunity that must be addressed to accelerate progress in understanding and managing material ESG factors across different lines of insurance.

The issue to be managed is the very large set of data points and analysis that goes into underwriting any given risk, and the demands it places on the underwriter's time and resource in generally lean organisations. For example, admirable though it may be, is there any reasonable expectation or value creation from a boiler and machinery underwriter attempting to contemplate the impact of the client's 'corporate transparency' on the pressure vessel exposure risk submitted for underwriting? A formal process of mapping specific lines of insurance to ESG factors would have the same underwriter quite legitimately contemplating the latent climate change impacts of the boiler being underwritten. The systematic assessment of risk via underwriting guidelines, which the industry is highly accustomed to and often adept at, could be utilised and improved to embed in the underwriting process those ESG factors that are material to the line of insurance involved. This promotes both the economic health of the industry and the public good.

Yet as skilled as underwriters are, the reality is that many ESG factors such as ageing populations, biodiversity loss & ecosystem degradation, climate change, financial inclusion, and emerging manmade health risks, entail enhanced skill sets, involve regulatory and legal challenges, and require greater knowledge and exposure data in order for the risks to be properly underwritten. These issues are often more pressing and acute in developing regions.

A Chief Underwriting Officer clearly articulated the need for enhanced skill sets and covered several ESG factors:

'With the ageing population and the tendency for people to stay in the workforce longer, there is growing pressure in the market to increase the entry ages of our products. To do this we have had to educate our underwriters on the risks involved in underwriting older lives and how to identify issues such as early dementia.

'[On emerging manmade health risks] with the complex Critical Illness products in [this market] which cover heart conditions and cancers we are finding the underwriters need to be better educated and equipped to ensure the risk is appropriately priced. We are seeing an increase in claims on this product type.

'[On climate change] education of underwriters in this area is essential and ongoing.'

— Chief Life Underwriter (Oceania)

4. Addressing ESG communication gaps and barriers within insurance companies

Under Theme 4, the finding that investment management as the core process with the lowest level of ESG integration across markets suggests that communicating ESG factors within insurance companies themselves can be enhanced.

Possible ESG communication gaps or barriers that exist between underwriters and investment managers, which are in separate sides of core insurance company operations, is one of many examples where organisational silos can impede ESG integration.

Underwriters and corporate social responsibility managers is another link that can benefit from greater and regular ESG communication.

On the insurance side of the operations, core processes (e.g. underwriting, product development, claims management, sales & marketing) can be centralised or decentralised in organisational units set up according to business segments (e.g. life, non-life, marine & aviation, non-marine, reinsurance) and by line or sub-line of insurance (e.g. engineering, health, marine hull). There are also cross-cutting units (e.g. corporate responsibility, investor relations, corporate communications, human resource), so there are many possible links. The organisational structure varies from one company to another but the potential for ESG to be compartmentalised must be recognised and addressed. This is particularly important as under Theme 4, it was highlighted that ESG is a relatively new language for the insurance industry, thus, organisation-wide ESG integration entails addressing communication gaps and overcoming barriers in order to speak the same language.

5. Recognising and respecting divergent interests on ESG factors

Referring to the 'insurance industry' has as much useful specificity as referring to the 'manufacturing industry'. The fragmented structure of the insurance industry and its highly competitive playing field entail that interests will often diverge, and in most commercial decisions, there will be winners and losers.

As such, the enhanced forums called for in this report will be a useful means of identifying those areas of common ground to be seized for mutual benefit, as well as those areas of clearly divergent interests to be more effectively managed once defined.

One survey respondent spoke succinctly that whatever public good might be served by new ESG-related products, ultimately, the question to be asked is:

'Do they really make economic sense and have a relevant market?' — Senior Vice President/Underwriter (Europe)

This was partly validated by another, but with a certain degree of optimism that the tide is starting to change:

'Lack of market awareness among brokers, the insureds and the public which is directly related to the lack of market demand for these types of products—although this is now slowly changing. For example, there is an increasing demand for green buildings, which insurance products can help promote.' — Chief Operating Officer & Senior Vice President (North America)

Indeed, some companies have already set strategic objectives and allocated resources to specifically address ESG risks and opportunities:

'[This unit] works to identify, evaluate and develop new products and services that both respond to these emerging risks and also help mitigate the threat of climate change. The firm also has a fully established microinsurance program.' — Senior Vice President (North America)

Regulators have a particularly difficult balance to maintain. At times, insurance coverage availability and the claims-paying ability (capital adequacy and solvency) of the insurance companies they supervise present quite conflicting objectives. For example, high premiums preclude financial inclusion, whereas inadequate premium rates (price is not commensurate to risk) can ultimately lead to insurance company insolvency, the potential for unpaid claims, and insurers withdrawing a certain coverage or from a market altogether.

There are also 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, spanning decades and continues 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 ESG issues are 'safe' or 'comfortable' for insurance companies 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. Without addressing these structural issues, it will be difficult to seize the benefits arising from a public-private partnership in response to the universe of largely long-term and systemic risks inherent in many ESG factors.

9

Recommendations

Taking into account the key findings of the global survey and our collective industry and academic experience as members of the UNEP FI Insurance Working Group and Academic Working Group, we recommend the following steps at the company, industry, and regulatory and stakeholder levels going forward.

I. Company level

Effective ESG risk management and financing entail the systematic integration of material ESG factors into company-wide policy and core insurance processes (e.g. underwriting, product development, investment, claims management, sales & marketing).

Key starting points

1. Establish a clear mandate and strategy from the Board and senior management to identify and integrate material ESG factors into core insurance processes.

2. Provide ESG education, training, tools and information to employees in order to develop the appropriate skill sets. This entails effectively communicating ESG information across the entire organisation (e.g. both the insurance and investment sides of operations) and between organisational units (e.g. underwriting, product development, claims management, sales & marketing, investment management, corporate responsibility, investor relations).

3. Review formal underwriting guidelines across all lines of business and integrate material ESG factors.

4. Review product pipeline and assess the potential for ESG-related products, including risk management services that promote ESG behaviour and practices among insureds.

5. Assess and monitor the company's own ESG performance (direct) and the ESG performance of the company's insurance and reinsurance portfolios, investment portfolios, and supply chain (indirect).

6. Disclose the company's direct and indirect ESG performance in a transparent, standardised and comparable manner (e.g. annual report, corporate social responsibility report, website).

II. Industry level

In order to effectively promote and adopt ESG risk management and financing at the industry and global levels—and to accelerate collective action on ESG factors—we believe that the insurance industry should develop and adopt a set of 'Principles for Sustainable Insurance' focused on ESG factors, tailored to the insurance business, grounded on risks and opportunities, and in line with the goals of sustainable development. We believe these Principles can provide the global sustainability framework through which the industry can work together to address, among others, the major challenges stemming from the five broad themes that emerged from the survey, which we restate below:

Five broad themes of the global survey

1. ESG factors influence underwriting, and have varying degrees of impact across lines of insurance.

2. Proper management of ESG factors potentially enhances insurance company earnings and long-term company value via avoided loss and new product offerings.

3. Given their assessment of ESG risks, underwriters judge the societal response for many ESG factors as underdeveloped.

4. The evolution of ESG factors in developing regions is different, but there are aspects common globally.

5. Active promotion and adoption of integrated ESG risk management and financing is needed. Actions called for are:

    - Working together within a fragmented insurance industry structure on how to achieve collective industry action on ESG factors
    - Creating enhanced forums for dialogue on ESG factors within the insurance industry, and between the industry and its stakeholders
    - Embedding material ESG factors in underwriting guidelines, and building the appropriate skill sets
    - Addressing ESG communication gaps and barriers within insurance companies
    - Recognising and respecting divergent interests on ESG factors

Principles for Sustainable Insurance

We believe that the proposed Principles for Sustainable Insurance can be designed in a way that they are complementary to the existing Principles for Responsible Investment, and can complete a truly holistic global sustainability framework for the insurance industry.

As discussed under Theme 3, investor signatories to the Principles for Responsible Investment seek better long-term investment returns and sustainable markets through better analysis of ESG factors in their investment process and their exercise of responsible ownership practices. For insurance companies, by enhancing value creation through the proper management and integration of material ESG factors in their insurance *and* investment operations, they can potentially enhance long-term, sustainable company value from the perspective of investors as well. This virtuous cycle can unleash the immense capacity of the insurance industry to address ESG factors as risk managers, risk carriers, and institutional investors.

'[The company integrates ESG factors through an] Internal Risk Management Framework that is embedded across all operations that identifies and manages all risks associated with the business. Emerging/existing ESG factors identified through this process will be embedded as appropriate i.e. natural perils risk/climate change. Company Code of Ethics, commitments to environmental sustainability, sustainability, supplier selection guidelines, Corporate Strategy underpinned by our Business Sustainability Strategy which is driven by 5 E, S, G and financial levers.

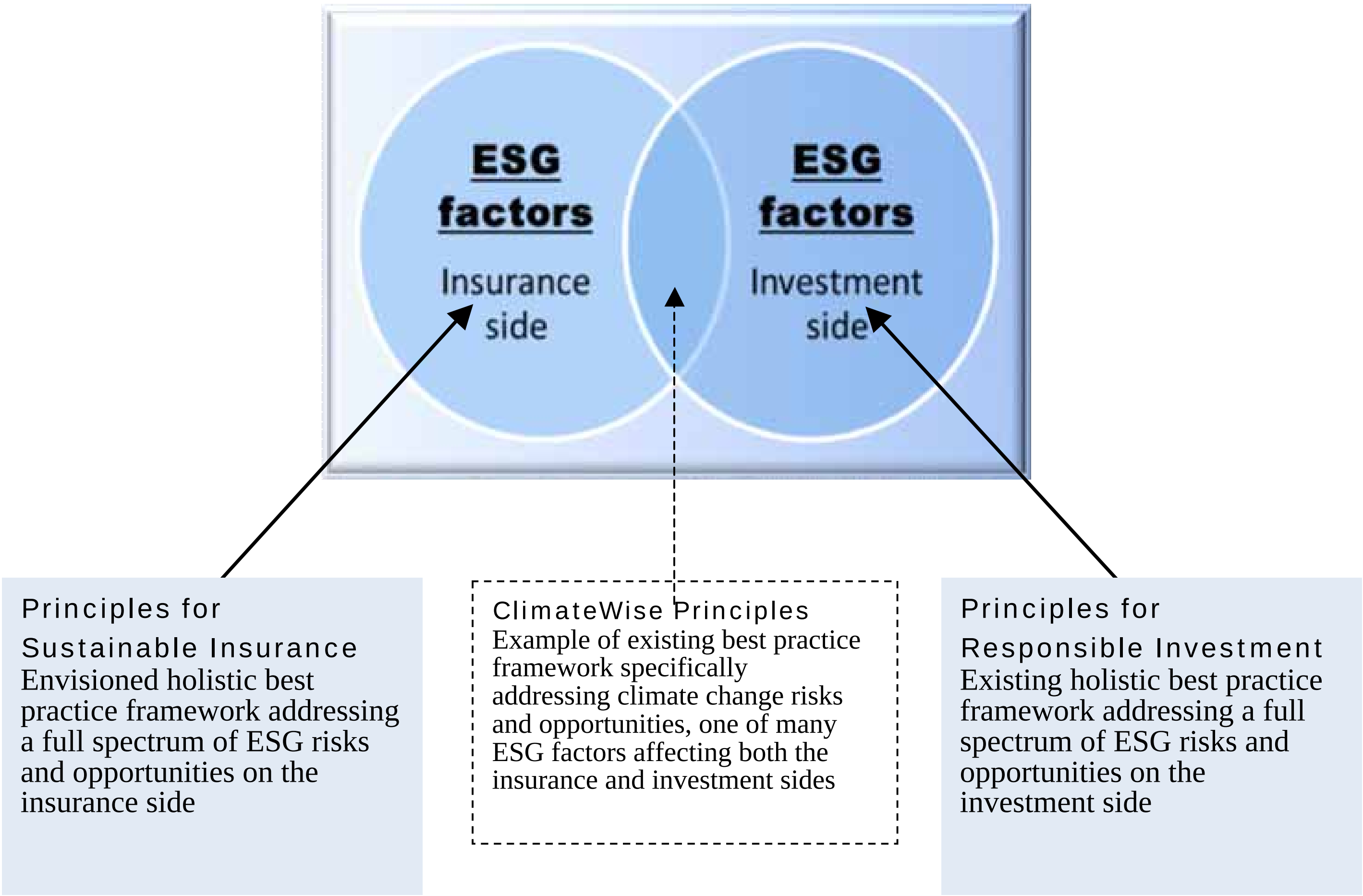
'Active identification and management of all risks and opportunities in order to ensure long-term sustainability of the organisation so that we can continue to provide insurance products to the communities that we operate in AND provide a satisfactory rate of return for our shareholders [are the company's motivations to integrate ESG factors].' — Manager, Business Sustainability (Oceania)

'[The company's motivation to integrate ESG factors is the] long-term viability and success of the business in a changing landscape increasingly shaped by ESG factors.' — Head, Strategy (Africa)

ESG factors influence underwriting, can have varying degrees of impact across lines of insurance, and can affect both the insurance and investment sides of insurance company operations. Figure 20 illustrates what the scope and function of the proposed Principles for Sustainable Insurance might look like, acting as a holistic best practice framework that addresses a full spectrum of ESG risks and opportunities on the insurance side. This is akin to the scope and function of the existing Principles for Responsible Investment, acting as a holistic best practice framework that addresses a full spectrum of ESG risks and opportunities on the investment side. Meanwhile, the ClimateWise Principles is an example of an existing best practice framework that specifically addresses climate change risks and opportunities, one of many ESG factors affecting both sides.

Figure 20: A truly holistic global sustainability framework for the insurance

industry



The survey is telling us that ESG factors influence underwriting and that underwriters judge ESG factors to have significant loss potential in terms of their risk frequency, severity and uncontrollability. Equally, underwriters judge that the societal response to ESG factors is lagging and that prudential regulatory or legal frameworks are underdeveloped.

The proposed Principles for Sustainable Insurance can therefore bridge such societal, regulatory and legal gap in a proactive way, acting as a global sustainability framework that can guide the industry towards best practice, pool information and resources, inform regulators and policymakers, create a global sustainability forum for the industry and its many stakeholders, foster inclusiveness across markets, drive innovative solutions, and accelerate collective action.

ESG factors are not static and can change over time. Similarly, the Principles can be designed in a way that it would act as a dynamic framework for the industry to assess and monitor the evolution of current and emerging ESG factors. Nevertheless, the magnitude of the ESG factors highlighted in this report requires the urgent need for the industry to better understand and manage these global risks.

UNEP FI—the largest and oldest public-private partnership between the United Nations and the global financial sector—was instrumental in the conception and delivery of the Principles for Responsible Investment, which swiftly became the global benchmark for responsible investing. Similarly, UNEP FI, through its Insurance Working Group, is poised to lead the development of Principles for Sustainable Insurance, and to establish a global network of insurers committed to integrating ESG factors into core insurance processes and to working together to tackle global sustainability challenges. We will continue to pursue this goal in the coming year.

Finally, we strongly encourage insurance associations worldwide to actively promote ESG factors among their members in order to accelerate progress. Many respondents cited insurance associations, among other industry and non-industry organisations, as important in driving collective action on ESG factors.

III. Regulatory and stakeholder level

Furthermore, we are collectively calling for the following considerations and actions from key stakeholders of the insurance industry as we believe these are crucial to the effective advancement of sustainable insurance thinking and practice globally:

1. Policymakers and regulators should ensure prudential regulatory or legal frameworks on ESG factors, where appropriate

   For example, potential frameworks that could enable greater transparency and disclosure from companies across sectors (including insurance) on their holistic ESG performance can help insurance companies assess their indirect ESG performance embedded in their insurance, reinsurance and investment portfolios and their supply chains. Such frameworks should be explored in close consultation with the insurance industry and must carefully consider all aspects of insurance operations given the unique and multiple roles of insurance companies as risk managers, risk carriers and institutional investors, as well as the complex systems in which insurance companies operate. Accordingly, these frameworks should be prudent, effective and efficient, and should enable, not stifle, innovation.

   'Insurance is extremely reactive to changes in regulation and realignments of incentives. Thus, important stakeholders to promote ESG factors include the government, state and federal regulatory agencies, and the insurance regulators.' — Senior Vice President (North America)

   Over the years, ESG-related mandatory disclosure requirements[16] have stemmed from different jurisdictions such as:

[16] See Appendix C: 'Examples of ESG-related mandatory disclosure requirements' for more information on the three examples cited above.

- France (2001): The ‘New Economic Regulations’ Act (*Les Nouvelles Régulations Économiques*)
- United Kingdom (2006): The Companies Act 2006
- United States (2009): The climate change disclosure requirement of the National Association of Insurance Commissioners

At the same time, investors are increasingly calling for mandatory ESG-wide disclosure frameworks.

In July 2009, the Social Investment Forum (SIF) in the United States, a 400-member association comprising socially and environmentally responsible investment professionals and institutions, submitted a proposal to the US Securities and Exchange Commission (SEC)[17], which frames how a mandatory ESG disclosure should look like. The SIF action was preceded by its January 2009 letter to then US President-elect Barack Obama, which ‘listed mandatory corporate environmental, social and governance (ESG) or “sustainability” reporting as a top priority’ (SIF, 2009).

The July 2009 letter to the SEC states that:

‘There is increasing demand from international investor and accounting bodies for corporate sustainability reporting. The best illustration of this trend is the growing number of signatories to the United Nations’ Principles for Responsible Investment (PRI). Launched in 2006, the PRI today counts more than 560 global investment institutions with more than $18 trillion in assets under management as signatories. PRI signatories pledge to integrate consideration of ESG issues into investment decisions and ownership practices. They recognize that social and environmental issues can be material to the financial outlook of a company and therefore to shareholder value.’

The SIF proposal calls on the SEC to require ‘issuers to provide annual disclosures of environmental, social and governance (ESG) or “sustainability” information’ and has two principal components:

- Standardised sustainability disclosures
- Materiality guidance and risk disclosures

The proposal also cites government-mandated ESG disclosure requirements around the world in recent years, including the European Commission’s announcement in February 2009 to convene several meetings through March 2010 to help decide EU policy on ESG disclosure.[18]

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[17] The full SIF letter and proposal can be viewed at: www.socialinvest.org/documents/ESG_Letter_to_SEC.pdf
[18] The US Environmental Protection Agency also shared with UNEP FI and the Principles for Responsible Investment a comprehensive survey that lists examples of ESG policies and programmes promoted by national governments, international organisations, institutional investors, and related organisations worldwide. This document, titled, *Global survey of environmental, social and governance policies with national government, international organisations and*

2. Civil society institutions should collectively bolster their understanding of the insurance industry such that they can play a full role in ensuring that the insurance industry is sustainable and providing products and services that duly take ESG factors into account

As mentioned in the joint UNEP FI Insurance Working Group and Academic Working Group message for this report, we sought the input of civil society institutions on the survey design and scope, and requested them to participate in the survey and to promote it. This survey therefore recognises the important role of civil society institutions and shows how collaborative efforts can facilitate greater understanding between the industry and its stakeholders.

'Clients of an insurance company are one of the most important stakeholders when it comes to risk management. Insurance products are all about guaranteeing the client's assets protection, covering property losses, health plans, or making a financially steady retirement possible. Clients with environmental, economic and social awareness will perform a key role in managing risks regarding climate change consequences, financial recourses responsible use and by encouraging others to think and act upon these matters, insurance clients can become active agents for a responsible ESG management.

'Non-governmental organizations all have the common mission of working to address social, environmental and economic issues as well as having a relevant influence on public opinion. An insurance company that sees NGOs as important stakeholders can work to support their purposes, having a strong partner in risk management.'
— Chief Executive Officer (Latin America)

'NGOs engaging in particular areas of ESG with a solid reputation could be strong partners to deal with (e.g. human rights organisations in dealing with certain countries), environmental organisations with regard to climate change and pollution.'
— Global Aviation Underwriter (Europe)

3. The academic community should continue to advance research on ESG factors and the insurance industry

The fact that our global survey was the first of its kind shows that there is a great deal of room for research on ESG factors and the insurance industry.

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institutional investors, is updated regularly and can be viewed at: www.unpri.org/files/MKane-GlobalESGSurvey-July2009.pdf

For example, the survey revealed that many underwriters view an insured's proper management of ESG factors as integral to an insured's overall risk management philosophy and practice, and signals better risks that can merit better policy terms and conditions. However, underwriters also indicated that using ESG factors in a systematic fashion to enhance the underwriting process, to assess its impact on underwriting results, and to develop new products requires further data and research.

On a macro level, this report also unveiled the concept of 'universal risk carriers' based on the 'universal owner hypothesis' for large and highly diversified institutional investors. This concept could be a powerful incentive for long-term thinking and collective action within the insurance industry, and conceivably in conjunction with the investment industry, on ESG factors.

Many respondents voiced the need for more research and educational programmes on ESG factors and the important role of academia, which includes instilling a holistic understanding of ESG risk management and financing in the next generation of insurers. As the UNEP FI Insurance Working Group stated in its inaugural report, *Insuring for Sustainability*:

'Knowledge is the key to understanding risks and managing them effectively.'

We encourage the academic community to build on the research foundation set by this report, and to follow the leadership demonstrated by the members of the UNEP FI Academic Working Group.

10

Summary conclusion

As members of the UNEP FI Insurance Working Group and Academic Working Group, we believe that ESG factors are part of a full spectrum of risks and opportunities, and part of prudent, responsible and sustainable underwriting and product development.

In line with its provision of risk management services and insurance products, and as major institutional investors, we also believe that the insurance industry must help identify future challenges within the financial system, mitigate systemic risks, and avert crises, including the potentially highly complex and profound 'natural resources crisis' arising from the unsustainable use of a wide range of natural resources such as the climate, biodiversity and ecosystems, and water.

We believe that through the systematic integration of material ESG factors into core insurance processes, insurance companies—along with the individuals and entities that they protect and the entities that they invest in—will be able to sustain their economic activities and play their roles in the creation of a more sustainable global economy that invests in real and inclusive long-term growth, genuine prosperity and job creation, in line with UNEP's Green Economy Initiative[19] and the broad objectives of its 'Global Green New Deal':

- Make a major contribution to reviving the world economy, saving and creating jobs, and protecting vulnerable groups
- Reduce carbon dependency and ecosystem degradation, putting economies on a path to clean and stable development
- Further sustainable and inclusive growth, achieve the Millennium Development Goals, and end extreme poverty by 2015

[19] www.unep.org/greeneconomy

We believe that implementing the key findings and recommendations of this report will help create a sustainable insurance industry that would accelerate the transformational process to a green, inclusive and sustainable global economy.

In conclusion, we believe that the insurance industry—whose core business is to manage risk—must lead in understanding a rapidly changing risk landscape and address global sustainability issues with rigour and innovation. The scale of these issues is too big for any one institution to tackle—it requires collective action and long-term solutions.

As one chief underwriter survey respondent said:

‘*Future-proof thinking. Plan better. Learn from mistakes of the past.*’

This is not only a call for the insurance industry to rise to the challenge, but also a recognition of its vital role as an early warning system for society, as a catalyst for finance and investment, and as a pillar of economic prosperity and sustainable development.

11

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12

Appendix A

Description of primary ESG factors surveyed

The following are extracts from the 2009 UNEP FI global survey questionnaire on the understanding and integration of environmental, social and governance factors in insurance underwriting and product development.

I. Environmental factors

Companies and individuals practising environmental management are more aware of potential environmental risks and litigation which may arise, improve their ability to utilise more efficiently and acquire new resources, stimulate innovation and the development of new products, and usually occupy a more dynamic competitive position in their market. An insured's concern for the environment can make a preferred underwriting risk, and can help create new product opportunities For example, motor insurance encouraging pollution reduction or offsetting carbon emissions, insurance for 'green-certified' buildings or the upgrade to 'green standards', insurance for renewable energy projects such as wind farms, and insurance for carbon stored in forests.

The insurance industry has considerable experience with the impacts that can result from the failure to properly underwrite environmental factors. Distinct challenges emerge from those environmental concerns with longer latency periods resulting in delayed loss emergence and development patterns (e.g. gradual seepage and pollution resulting in environmental liability and harmful effects on human health). The difference in time between the recognition of harm and the attribution of cause can create a significant variance between expected and actual underwriting results.

The environment is an area where the insurance industry has demonstrated a unique ability to develop methods to assess and underwrite a properly managed risk. We are interested in hearing your thoughts on the current or potential current market situation for developing environmental products.

This section divides environmental factors into four primary and interrelated categories:

- Climate change
- Biodiversity loss & ecosystem degradation
- Water management
- Pollution

Environmental factor 1 ➔ Climate change

How does the insured manage the risks associated with climate change (e.g. increased frequency and severity of floods, hurricanes, windstorms, droughts, and other weather-related events), including its management of its greenhouse gas emissions?

The issue of climate change is defined by the United Nations Framework Convention on Climate Change as "a change of climate which is attributed directly or indirectly to human activity that alters the composition of the global atmosphere and which is in addition to natural climate variability observed over comparable time periods."

Environmental factor 2 ➔ Biodiversity loss & ecosystem degradation

How does the insured manage the risks of and associated with biodiversity loss and ecosystem degradation?

The degradation of an intact ecosystem (e.g. forests, coral reefs, soils, wetlands) affects the dynamic and complex interaction of plant, animal, and micro-organism communities and their non-living environment; the services it provides people (e.g. food, freshwater, climate regulation, erosion control, timber); and biodiversity (i.e. the quantity and variability of living organisms), which underpins the supply of ecosystem services.

An example is the conversion of natural habitats—such as forests—to croplands, urban and industrial lands.

This leads to damage or extinction of plant and animal species, resulting in reduced populations and distribution of biodiversity in many instances; as well as direct and indirect impacts on water, soil, and air quality.

Environmental factor 3 ➔ Water management

How does the insured manage the risks associated with water in terms of quantity, quality, and access?

In many regions around the world, water resources have become so depleted or contaminated that they are unable to meet ever-increasing demands, becoming a major impediment to socio-economic development.

Water management issues are multi-faceted—from water supply and basic sanitation, to business and financial risks (e.g. losses due to disruption of operations, increased costs due to water treatment).

Environmental factor 4 ➔ Pollution

How does the insured manage the risks of pollution?

Pollution arises from the discharge or release of toxic materials, as well as other pollutants (e.g. fertiliser runoff and pharmaceuticals from human excretion), that affect land, water, and/or air.

An example is ‘dead’ bodies of water (e.g. lakes, rivers) resulting from acid rain or through dumping of industrial waste.

II. Social factors

Social factors emphasise an insured’s relationships with its many stakeholders—from employees, customers, and shareholders; to suppliers, communities, and governments. In the language of insurance, the aggregated social factors inherent in a given risk are often referred to as the “moral hazard.” Better understanding of stakeholder concerns provides important knowledge and reputational benefits which, in turn, can reduce reputational risk and the probability of claims.

Moreover, social factors are often an early indicator of an emerging risk and/or a new product opportunity for the insurance industry.

In addition to the example of worker safety cited earlier in this survey, other instances of what were once perceived as ‘just’ social factors and later evolving into areas of direct relevance to the insurance industry are:

- The social factors addressed by life and health insurance
- Product safety concerns as manifested in product liability insurance
- Microinsurance schemes (i.e. insurance for low-income people) now underway, particularly in developing countries
- Supply chains that involve child or forced labour
- Writing business in countries whose governments are widely perceived to be corrupt and oppressive (e.g. serious and/or systematic violations of fundamental human rights)

This section divides social factors into four primary categories:

- Financial inclusion
- Human rights
- Emerging manmade health risks
- Ageing populations

Social factor 1 ➔ Financial inclusion

What is your view on the provision of insurance products to low-income people—widely known as microinsurance—who customarily do not have access to the services offered by formal financial institutions such as insurance companies and banks?

Microinsurance is defined by the Consultative Group to Assist the Poor (CGAP)* Working Group on Microinsurance (now known as the Microinsurance Network) as 'the protection of low-income people in exchange for regular premium payments proportionate to the likelihood and cost of the risk involved.'

*The CGAP is an independent policy and research centre dedicated to advancing financial access for the world's poor. It is supported by over 30 development agencies and private foundations who share a common mission to alleviate poverty.

Social factor 2 ➔ Human rights

How does the insured manage the risks of and associated with human rights violations—encompassing its employees, customers, suppliers, and the communities and countries where it operates?

Examples are abusive workplace conditions, gender or racial discrimination, child or forced labour in supply chains, forced relocation of communities, and governments widely perceived to commit human rights abuses.

The Universal Declaration of Human Rights (UDHR) proclaimed in 1948 by the United Nations General Assembly is the most widely accepted codification of universal human rights. The preamble to the UDHR calls on "every individual and every organ of society" to respect and promote the rights set out in the UDHR including:

- The right to life, liberty and security of person
- The right to freedom from torture
- The right to freedom from slavery
- The right to recognition and equality before the law
- The right to freedom from retroactive penal legislation
- The right to freedom of thought, conscience and religion
- The right to freedom of opinion and expression
- The right to freedom of peaceful assembly and association
- The right to property
- The right to decent work

Note: The International Bill of Human Rights forms the foundation of many laws, conventions and treaties on human rights and comprises three fundamental instruments:

1. The Universal Declaration of Human Rights 1948, which sets out the core human rights;

2. The International Covenant on Civil and Political Rights 1966 ('first generation of human rights'); and

3. The International Covenant on Economic, Social and Cultural Rights 1966 ('second generation of human rights').

A 'third generation of human rights' has emerged in recent years including, for example, environmental rights and other collective rights such as the right to development.

Social factor 3 ➔ Emerging manmade health risks

How does the insured manage emerging manmade health risks?

Emerging manmade health risks primarily arise from new technologies. Examples are the risks posed by nanoparticles (arising from nanotechnology), genetically modified organisms, electromagnetic fields, endocrine disruptors, and obesity.

Social factor 4 ➔ Ageing populations

What is your view on the provision of insurance products to ageing populations?

Ageing populations is a demographic change occurring mainly due to declining fertility and increasing longevity. For example, the lifelong income of ageing populations is becoming an issue of social and economic sustainability, particularly in many developed countries. According to the United Nations, in more developed regions, 20% of the population is already aged 60 years and over, and that proportion is projected to reach 33% in 2050. In developed countries as a whole, the number of older persons (aged 60 years or over) has already surpassed the number of children (persons aged under 15 years), and by 2050, the number of older persons is expected to be more than double the number of children.*

*Source: World Population Prospects – The 2006 Revision, Population Division, Economic and Social Affairs Department, United Nations Secretariat (2007)

III. Governance factors

Governance factors concern the ways in which an insured's managerial behaviours are controlled via regulations, monitoring of processes, alignment of interests, organisational values, codes of ethics, business principles, and transparency requirements.

Governance practices shape the relationships between owners, managers, and the stakeholders in marketplaces and communities in which they operate. Good governance can directly reduce the risks of expensive litigation and the adverse impacts to specific lines of business such as directors' and officers' liability insurance. Good governance may also be a 'marker' for management behaviours with the potential of indirectly impacting, positively or negatively, other lines of business.

To help organise the complex relationship between good governance, client performance, underwriting, and product development, we have identified four primary and interrelated governance factors:

- Regulations
- Disclosure
- Ethics & principles
- Alignment of interests

Governance factor 1 ➔ Regulations

Does the insured adhere to national, regional, and/or international regulatory frameworks, and what degree of consistent compliance does the insured demonstrate?

Examples are adherence to national building codes, workplace and product safety standards, and environmental liability regulations.

Governance factor 2 ➔ Disclosure

Does the insured disclose factual information to its stakeholders in a transparent, consistent, and timely manner?

Such disclosure allows the objective assessment of the performance and impacts of the insured's operations, provides a sufficient level of accountability, and safeguards reporting integrity.

Examples are disclosure of greenhouse gas emissions, human rights management framework, executive compensation, board structure, and shareholder rights.

Governance factor 3 ➔ Ethics & principles

Does the insured implement codes of ethics and/or business principles that consistently demonstrates a duty of care to its stakeholders and meets or exceeds any relevant standards, and is supported by applicable reporting and assessment mechanisms?

Examples are fair trade standards and guidelines; the Organisation for Economic Co-operation and Development (OECD) Guidelines for Multinational Enterprises; the OECD Principles of Corporate Governance; and the UN Global Compact Principles encompassing the areas of human rights, labour, environment, and anti-corruption.

Governance factor 4 ➔ Alignment of interests

Does the insured employ practices that ensure aligned interests between its internal and external stakeholders in the conduct of its operations?

The progress of multiple stakeholders toward a common goal requires aligned interests—conflicts of interest can produce behaviours that reward the few at the expense of the many.

Examples of practices that contribute to the alignment of interests are free, prior, and informed consent from host communities in which the insured operates or will operate (e.g. large-scale industrial projects involving power generation, mining, forestry, water); and executive compensation linked to long-term corporate performance.

13

Appendix B

Supplementary and descriptive survey statistics

I. Respondent statistics

Table 1 lists summary information about the three surveys and respondents and shows that the differences between the surveys' respondents are not statistically significant. The combined surveys produced almost 2,700 pages of data.

Table 1: Survey respondents

	ESG issues (Survey 1)	**ESG factors (Survey 2)**	**ESG elements (Survey 3)**
Total respondents	213	167	156
Total territories/regions represented	57	53	53
Average insurance experience (years)	15.0	14.9	14.8
Average underwriting experience (years)	8.1	8.0	8.0
Average actuarial experience (years)	3.2	3.3	3.4
Average age (years)	43	43	43
Female respondents	21%	22%	21%
Male respondents	79%	78%	79%

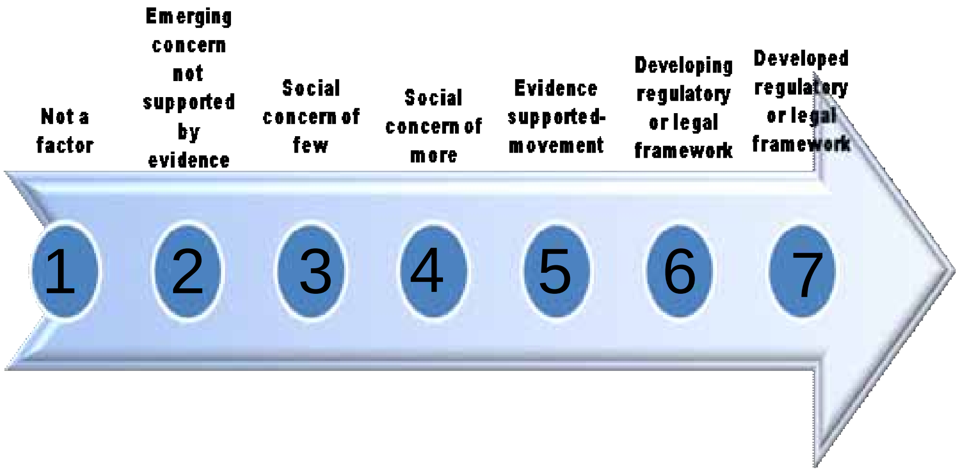
Channel 1 produced 33% of the respondents while Channels 2 and 3 produced 40% and 27%, respectively. For Channel 1, 74% of invitees produced at least one response.

Because Channels 2 and 3 used an unknown quantity of referrals, their response rates are not known.

II. Descriptive statistics

Descriptive statistics on the *evolutionary progress* of ESG issues and issues (based on a seven-point Likert scale) are presented in Tables 2 and 3, respectively. For both tables, values represent progress along the scale as evaluated by respondents.

Figure 1: Evolutionary progress scale



It is important to note that while factors and issues were categorised as 'environmental', 'social" or 'governance', a factor or issue can actually cut across two or all three categories. For example, climate change has environmental and social impacts, as well as governance components (e.g. disclosure of greenhouse gas emissions and climate change risks).

Table 2: Statistics on the evolutionary progress of 34 sample ESG issues
(total number of respondents = 213)

	Sample ESG issue	Issue category	Mode (most common answer)	Mean	Median	Standard deviation	Sample variance
1	General safety (e.g. construction, vehicular, home, product, and worker safety)	Social	7	5.700	7	1.818	3.306
2	Crime	Social	7	5.634	7	1.898	3.601
3	Persons with disabilities	Social	7	5.286	6	1.782	3.177
4	Proper handling of hazardous materials and wastes	Environmental	7	5.216	6	2.128	4.529
5	Corruption (e.g. bribery, extortion)	Governance	7	5.202	6	2.115	4.473
6	Terrorism, armaments trade	Social	7	5.117	6	1.943	3.774
7	Asbestos risks	Social	7	4.681	6	2.432	5.916

8	Pathogens or pandemics (e.g. HIV/AIDS, 'Mad Cow' Disease, Avian Flu, Severe Acute Respiratory Syndrome (SARS)	Social	7	5.131	5	1.735	3.011
9	Landfills and contaminated soils	Environmental	7	4.559	5	2.142	4.587
10	Proper disclosure of payments to political parties	Governance	7	4.484	5	2.358	5.562
11	Child or forced labour in supply chains	Social	7	4.460	5	2.287	5.231
12	Access to medicine for the poor	Social	7	4.413	4	2.060	4.244
13	Ageing populations	Social	6	4.718	5	1.902	3.618
14	Access to insurance for the poor	Social	6	4.052	4	1.838	3.379
15	Community vulnerability to manmade and natural disasters	Social	5	4.840	5	1.849	3.418
16	Business continuity management programme (including worker preparedness)	Governance	5	4.718	5	1.897	3.600
17	Obesity	Social	5	4.164	5	1.676	2.808
18	Deforestation and forest degradation	Environmental	5	4.052	5	2.077	4.313
19	Rising sea levels and increasing frequency of extreme weather events	Environmental	5	4.047	4	1.656	2.743
20	Water scarcity	Environmental	5	4.033	4	1.934	3.739
21	Carbon footprint of companies and individuals	Environmental	5	4.023	4	1.912	3.655
22	Executive compensation linked to long-term corporate performance	Governance	5	3.944	4	1.944	3.780
23	Key stakeholders on Board (e.g. public and/or employee representatives)	Governance	1	4.094	4	2.243	5.029
24	Food insecurity	Social	1	3.948	4	1.986	3.945
25	Atmospheric brown clouds (i.e. regional scale plumes of air pollution)	Environmental	1	3.826	4	2.054	4.220
26	Free, prior, and informed consent from host communities (e.g. on large-scale industrial projects)	Governance	1	3.793	4	2.098	4.401
27	Genetically modified organisms	Social	1	3.770	4	2.032	4.131
28	Single-hulled oil tankers	Environmental	1	3.756	4	2.231	4.978
29	Established procedures to report ESG performance	Governance	1	3.493	4	2.032	4.128
30	Coral reef destruction	Environmental	1	3.131	3	1.945	3.785
31	Nanotechnology risks	Social	1	3.127	3	1.969	3.875

32	Transmission of invasive species in the ballast water of ships	Environmental	1	2.995	3	2.004	4.014
33	Shifting patterns of desertification	Environmental	1	2.995	3	1.766	3.118
34	Endocrine disruptors	Social	1	2.901	3	1.946	3.787

Table 3: Statistics on the evolutionary progress of 12 primary ESG factors

	Primary ESG factor	Factor category	Mode (most common answer)	Mean	Median	Standard deviation	Sample variance	No.
1	Regulations	Governance	7	5.863	7	1.659	2.754	168
2	Pollution	Environmental	7	5.140	6	2.076	4.312	179
3	Disclosure	Governance	7	5.120	6	2.073	4.299	167
4	Human rights	Social	7	4.977	6	2.173	4.720	173
5	Ethics & principles	Governance	7	4.760	5	2.019	4.075	167
6	Ageing populations	Social	6	5.006	5	1.687	2.846	170
7	Climate change	Environmental	5	4.686	5	1.681	2.826	188
8	Water management	Environmental	5	4.376	5	2.003	4.014	181
9	Financial inclusion	Social	5	4.257	5	1.777	3.158	175
10	Emerging manmade health risks	Social	5	4.231	4	1.757	3.086	173
11	Biodiversity loss & ecosystem degradation	Environmental	1	4.104	4	2.048	4.192	183
12	Alignment of interests	Governance	1	4.078	4	2.068	4.277	167

Table 4 presents quantitative measures indicative of risk value and risk transfer for 34 sample ESG issues. **Error! Reference source not found.**5 presents the same information for 12 primary ESG factors and standardised statistics describing risks components (frequency, severity, uncontrollability).

Table 4: Statistics on underwriting influence and related products of 34 sample ESG issues

	Sample ESG issue	Issue category	Percentage of respondents	
			Who believe this issue influences underwriting (risk value)	Who are aware of related products (risk transfer)
1	General safety (e.g. construction, vehicular, home, product, and worker safety)	Social	62%	58%

2	Crime	Social	58%	46%
3	Pathogens or pandemics (e.g. HIV/AIDS, 'Mad Cow' Disease, Avian Flu, Severe Acute Respiratory Syndrome (SARS)	Social	53%	35%
4	Community vulnerability to manmade and natural disasters	Social	51%	43%
5	Proper handling of hazardous materials and waste	Environmental	49%	38%
6	Terrorism, armaments trade	Social	49%	37%
7	Ageing populations	Social	48%	48%
8	Persons with disabilities	Social	48%	40%
9	Asbestos risks	Social	44%	26%
10	Business continuity management programme (including worker preparedness)	Governance	43%	42%
11	Landfills and contaminated soils	Environmental	38%	30%
12	Rising sea levels and increasing frequency of extreme weather events	Environmental	38%	30%
13	Obesity	Social	38%	22%
14	Corruption (e.g. bribery, extortion)	Governance	38%	19%
15	Access to insurance for the poor	Social	35%	34%
16	Single-hulled oil tankers	Environmental	28%	20%
17	Food insecurity	Social	23%	18%
18	Atmospheric brown clouds (i.e. regional scale plumes of air pollution)	Environmental	23%	14%
19	Carbon footprint of companies and individuals	Environmental	21%	22%
20	Nanotechnology risks	Social	19%	11%
21	Genetically modified organisms	Social	19%	9%
22	Key stakeholders on Board (e.g. public and/or employee representatives)	Governance	18%	17%
23	Access to medicine for the poor	Social	17%	9%
24	Water scarcity	Environmental	16%	8%
25	Child or forced labour in supply chains	Social	15%	5%
26	Executive compensation linked to long-term corporate performance	Governance	14%	15%
27	Established procedures to report ESG performance	Governance	14%	14%
28	Free, prior, and informed consent from host communities (e.g. on large-scale industrial projects)	Governance	13%	10%
29	Proper disclosure of payments to political parties	Governance	12%	7%
30	Deforestation and forest degradation	Environmental	11%	6%
31	Endocrine disruptors	Social	10%	4%

32	Shifting patterns of desertification	Environmental	8%	3%
33	Transmission of invasive species in the ballast water of ships	Environmental	8%	3%
34	Coral reef destruction	Environmental	4%	1%

Table 5: Statistics on underwriting influence, related products and risk components of 12 primary ESG factors

Primary ESG factor		Factor category	Percentage of respondents		Risk components (standardised)		
			Who believe this factor influences underwriting (risk value)	Who are aware of related products (risk transfer)	Frequency	Severity	Uncontrollability
1	Regulations	Governance	79%	60%	1.464	1.154	-1.196
2	Ageing populations	Social	73%	70%	2.084	0.191	-0.634
3	Pollution	Environmental	71%	56%	-0.135	0.924	-0.590
4	Ethics & principles	Governance	67%	31%	-0.515	0.024	-0.283
5	Disclosure	Governance	61%	44%	0.195	0.259	-1.313
6	Emerging manmade health risks	Social	61%	37%	-0.911	0.420	0.357
7	Climate change	Environmental	59%	45%	0.525	1.491	1.979
8	Alignment of interests	Governance	56%	29%	-0.414	-0.772	-0.585
9	Financial inclusion	Social	54%	54%	0.430	-2.063	-0.165
10	Human rights	Social	53%	36%	-0.917	-1.100	0.162
11	Biodiversity loss & ecosystem degradation	Environmental	42%	31%	-1.263	-0.499	1.144
12	Water management	Environmental	42%	25%	-0.543	-0.029	1.124

Table 6 shows correlations between various characteristics of ESG risks. Uncontrollability of ESG risks is inversely correlated to their evolutionary progress. This suggests that more evolved ESG risks are more controllable; or more controllable ESG risks evolve further along the scale. Also, the weakest associations of uncontrollability are to related products and influence underwriting. This suggests that uncontrollable events (a common trait of many ESG risks), do not preclude insurability; or insurability does not necessarily improve controllability.

Table 6: Correlations between characteristics of ESG risks

	Evolutionary progress	**Related products**	**Underwriting influence**	**Frequency**	**Severity**
Related products	0.26944				
Influence underwriting	0.30326	0.55358			
Frequency	0.20452	0.14501	0.15479		
Severity	0.23002	0.13394	0.24522	0.41922	
Uncontrollability	(0.28699)	(0.12220)	(0.10477)	(0.25005)	(0.26251)

Out of the 561 possible correlations between 34 sample ESG issues, all but two are statistically significant ($p < 0.0001$).

Out of the 66 possible correlations between 12 primary ESG factors, all but seven are statistically significant ($p < 0.0001$).

Consequently, we conducted principal component analysis to determine if the evolutionary progress among the 34 sample ESG issues or among the 12 primary ESG factors were interdependent. As **Error! Reference source not found.**2 and 3 below show, the overwhelming proportion of covariance for both ESG issues and ESG factors is explained by one component. Hence, we confirm that each ESG issue and factor within the survey taxonomy represents a distinct concept.

Figure 2: Scree plot ➔ 34 sample ESG issues

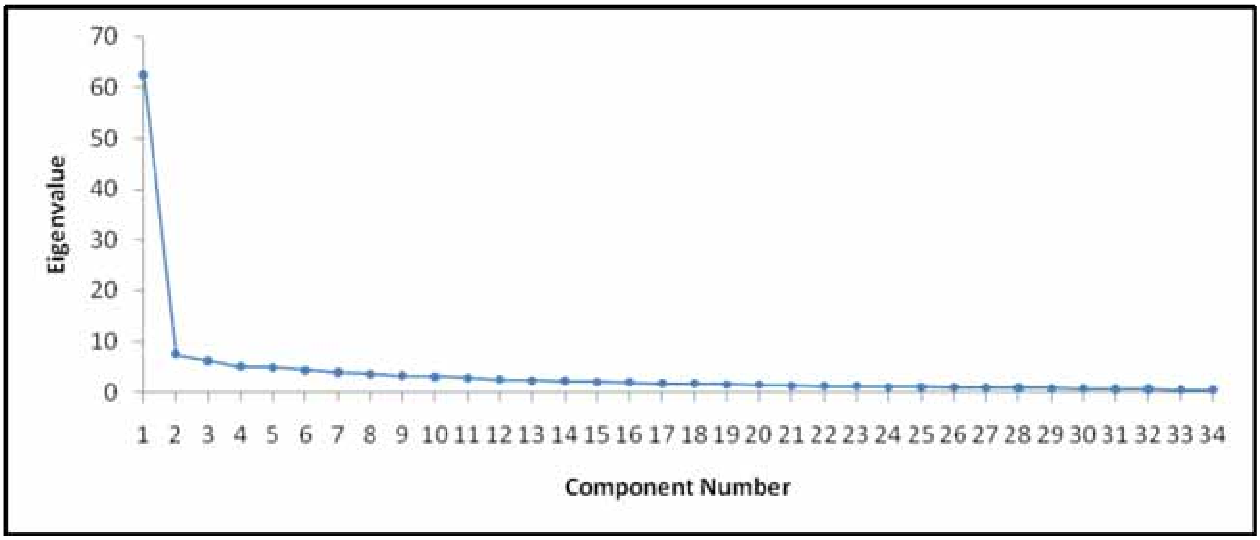
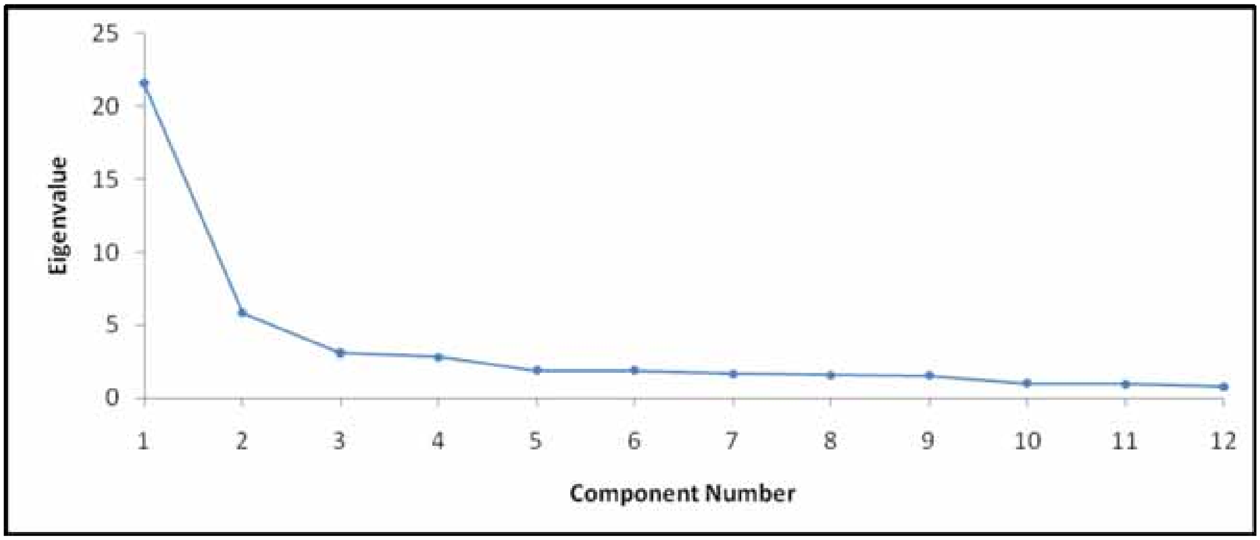


Figure 3: Scree plot ➔ 12 primary ESG factors



14

Appendix C

Examples of ESG-related mandatory disclosure requirements

I. France (2001) ➔ The 'New Economic Regulations' Act

In May 2001, the French Parliament passed the 'New Economic Regulations' Act (*Les Nouvelles Régulations Économiques*, the 'NRE'), which represented a major update of French corporate law. The NRE covers companies listed on the French stock exchange, and includes a requirement for these companies to disclose in their annual reports a wide range of information on the social and environmental impacts of their business activities.

Social reporting under the NRE has broad categories spanning human resources, community involvement and labour standards, which detail information such as remuneration, employment indicators, gender equality, health and safety, training, integration of persons with disabilities, social and cultural activities, community relations, contribution to regional development and employment, subcontractors' and subsidiaries' compliance with International Labour Organization standards, and subsidiaries' impact on regional development and local communities.

On environmental reporting, the NRE requires information such as water, raw material and energy consumption, energy efficiency, renewable energy use, land use, emissions (air, water, soil), pollution (noise, odour), waste processing, impact on biological balance, environmental evaluation and certification, expenditures to prevent environmental consequences of business activities, environmental training and information for employees, resources devoted to reduce environmental risks, provisions and guarantees for environmental risks, and environmental objectives set for subsidiaries.

So far, no company has been penalised for non-compliance.

II. The United Kingdom (2006) ➔ The Companies Act 2006

The following is a legal commentary extract from the 2009 report of the UNEP FI Asset Management Working Group, 'Fiduciary responsibility – Legal and practical aspects of integrating environmental, social and governance issues into institutional investment'.[20]

Under current United Kingdom company law legislation, the Companies Act 2006 (the '2006 Act') imposes duties on company directors to report on the environmental and social impacts of their business activities.[21]

The 2006 Act also codifies the duties of company directors from 2008, replacing previous directors' common law and statutory duties, including the fiduciary duties of company directors,[22] with a list of statutory duties which company law directors must discharge, including a duty under section 172(1) to have regard to the impact of the business of the company on the community and the environment.

In the Department of Trade and Industry (DTI) guidance on the duties of company directors[23], Margaret Hodge, Minister of State for Industry and the Regions states:

'There was a time when business success in the interests of shareholders was thought to be in conflict with society's aspirations for people who work in the company or in supply chain companies, for the long-term well-being of the community and protection of the environment. The law is now based on a new approach. Pursuing the interest of shareholders and embracing wider responsibilities are complementary purposes, not contradictory ones.'

The DTI Companies Bill guidance on the duty of directors to promote the success of the company under section 172 of the 2006 Act, which is the principal replacement duty for the common law fiduciary duties of company directors, also adds that 'success' is to be judged in terms of long-term increase in the value of the company rather than short-term gains.[24]

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[20] See http://www.unepfi.org/fileadmin/documents/fiduciaryII.pdf

[21] Section 417 of the Companies Act 2006

[22] Sections 172-177 of the Companies Act 2006

[23] DTI Companies Bill Guidance (June 2007) p 2

[24] DTI Companies Bill Guidance p 7

III. The United States (2009) ➔ The climate change disclosure requirement of the National Association of Insurance Commissioners

In March 2009, a mandatory climate change risk disclosure requirement was issued by the National Association of Insurance Commissioners (NAIC) in the United States, 'a voluntary organization of the chief insurance regulatory officials of the 50 states' which 'serves the needs of consumers and the industry, with an overriding objective of supporting state insurance regulators as they protect consumers and maintain the financial stability of the insurance marketplace' (NAIC, 2009). This is the first mandatory climate change risk disclosure requirement in the world for insurance companies to 'disclose to regulators the financial risks they face from climate change, as well as the actions the companies are taking to respond to those risks' (NAIC, 2009).

In the NAIC news release, Pennsylvania Insurance Commissioner, Joel Ario, who chairs the NAIC Climate Change and Global Warming Task Force, said:

'Climate change will have huge impacts on the insurance industry and we need better information on how insurers are responding to the challenge. As regulators, we are concerned about how climate change will impact the financial health of the insurance sector and the availability and affordability of insurance for consumers. This disclosure standard will give regulators the information we need to better understand these risks.'

Insurance companies with annual premiums of USD 500 million or more are required to complete an annual Insurer Climate Risk Disclosure Survey, with the first reporting deadline being 1 May 2010.

The news release goes on to say that 'the scope of issues covered by the new disclosure requirement is broad, reflecting the many ways in which climate change will impact the insurance industry. In addition to reporting on how they are altering their risk-management and catastrophe-risk modeling in light of the challenges posed by climate change, insurers will also need to report on steps they are taking to engage and educate policymakers and policyholders on the risks of climate change, as well as whether and how they are changing their investment strategies.'

Indeed, a related news release by Ceres, a leading US network of investors, environmental groups and other public interest organisations working with companies to address sustainability challenges, underpinned the importance of ESG risks not only to the insurance industry, but also to the investment industry and other stakeholders. In the news release, Jack Ehnes, CEO of the California State Teachers Retirement System, the second largest public pension fund in the US and a major insurance industry investor, said:

'One painful lesson of the current economic meltdown is the need for increased attention to corporate risk management. These disclosure requirements will finally create consistent and comparable information for investors to determine the real steps insurers have taken to assess important risks.'

15

Appendix D

Survey respondent institutions and territories covered

We are indebted to the employees of the following institutions for contributing their time, effort and expertise in responding to the pioneering 2009 UNEP FI global survey on the understanding and integration of environmental, social and governance factors in insurance underwriting and product development. The nature and scope of the survey made it the first of its kind ever conducted.

Institutions

Territories

United Nations Environment Programme Finance Initiative (UNEP FI)

UNEP FI is a strategic public-private partnership between UNEP and the global financial sector. UNEP works with over 180 banks, insurers and investment firms, and a range of partner organisations, to understand the impacts of environmental, social and governance factors on financial performance and sustainable development. Through a comprehensive work programme encompassing research, training, events and regional activities, UNEP FI carries out its mission to identify, promote and realise the adoption of best environmental and sustainability practice at all levels of financial institution operations.

Learn more at: www.unepfi.org
E-mail: fi@unepfi.org

UNEP FI Insurance Working Group

The UNEP FI Insurance Working Group is a strategic alliance of insurers and reinsurers that work together to understand the impacts of environmental, social and governance (ESG) factors on the insurance business and sustainable development, and to advance the integration of ESG factors into core insurance processes.

Member institution	Head office
Achmea	Netherlands
Allianz	Germany
Aviva	United Kingdom
AXA	France
Chartis International	United States
Folksam	Sweden
HSBC Insurance	United Kingdom
Insurance Australia Group	Australia
Interamerican Hellenic Insurance Group	Greece
Lloyd’s	United Kingdom
MAPFRE	Spain
Munich Re	Germany
RSA Insurance Group	United Kingdom
Swiss Re	Switzerland
Storebrand	Norway
The Co-operators Group	Canada
Tokio Marine Nichido	Japan
XL Insurance	Bermuda

UNEP FI Academic Working Group

The UNEP FI Academic Working Group was established by the UNEP FI Insurance Working Group to support its research on the impacts of environmental, social and governance factors on the insurance business and sustainable development.

Lead academic institution

Fox School of Business, Temple University	United States

Advisory academic institutions

Earth Institute, Columbia University	United States
Glasgow Caledonian University	United Kingdom
International Institute for Applied Systems Analysis	Austria
Institute for Catastrophic Loss Reduction	Canada
University of Cambridge	United Kingdom
University of Karlsruhe	Germany
University of Oxford	United Kingdom
University of Verona	Italy

Learn more at: www.unepfi.org/work_streams/insurance
E-mail: insurance@unepfi.org

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