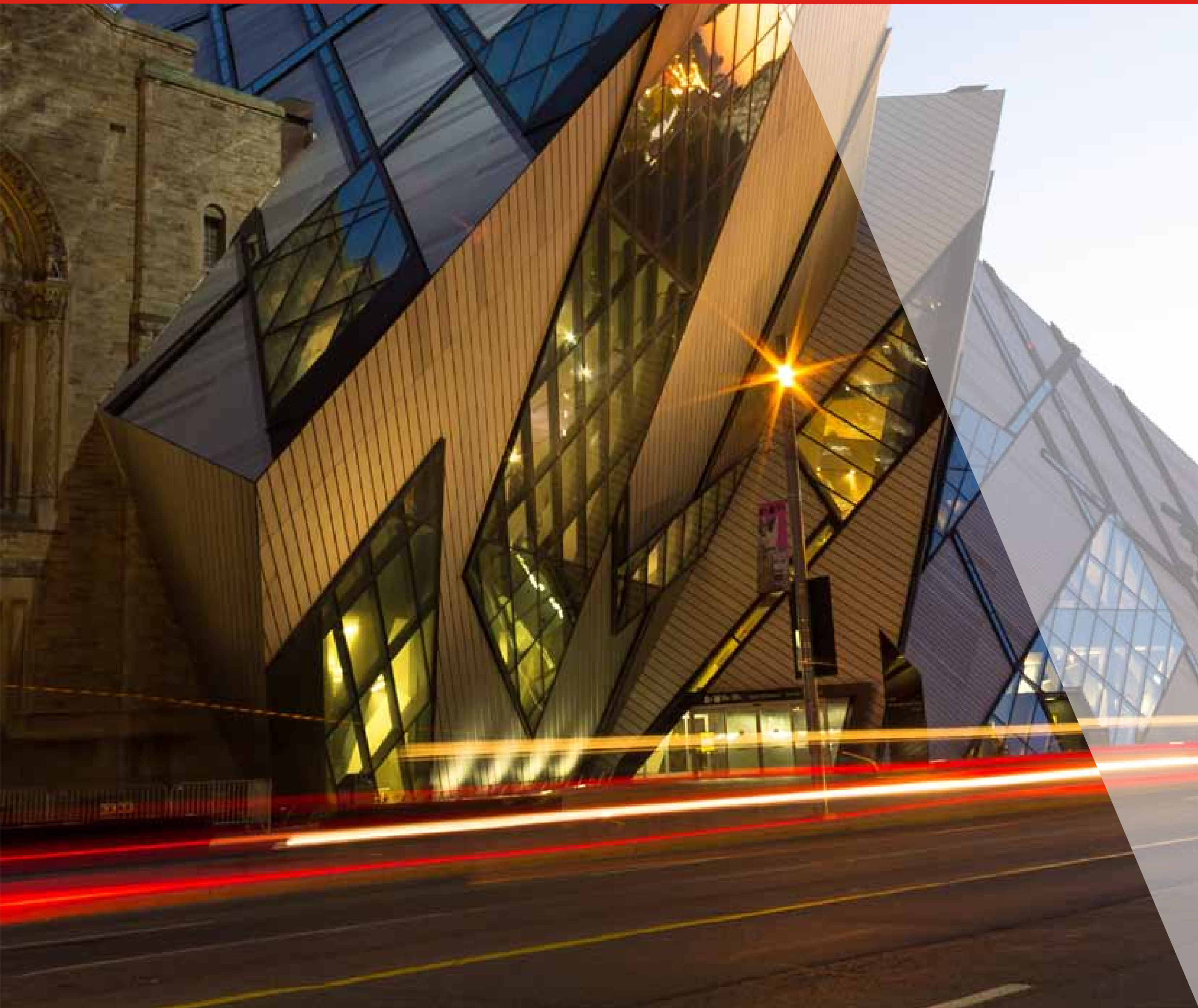
General Assembly Review 2014

THE GENEVA ASSOCIATION



The Geneva Association

The Geneva Association is the leading international insurance think tank for strategically important insurance and risk management issues.

The Geneva Association identifies fundamental trends and strategic issues where insurance plays a substantial role or which influence the insurance sector. Through the development of research programmes, regular publications and the organisation of international meetings, The Geneva Association serves as a catalyst for progress in the understanding of risk and insurance matters and acts as an information creator and disseminator. It is the leading voice of the largest insurance groups worldwide in the dialogue with international institutions. In parallel, it advances—in economic and cultural terms—the development and application of risk management and the understanding of uncertainty in the modern economy.

The Geneva Association membership comprises a statutory maximum of 90 chief executive officers (CEOs) from the world's top insurance and reinsurance companies. It organises international expert networks and manages discussion platforms for senior insurance executives and specialists as well as policymakers, regulators and multilateral organisations. The Geneva Association's annual General Assembly is the most prestigious gathering of leading insurance CEOs worldwide.

Established in 1973, The Geneva Association, officially the "International Association for the Study of Insurance Economics", has offices in Geneva and Basel, Switzerland and is a non-profit organisation funded by its members.

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September 2014
The General Assembly Review 2014

Published by The Geneva Association (The International Association for the Study of Insurance Economics), Geneva/Basel.

Download the electronic version from www.genevaassociation.org.

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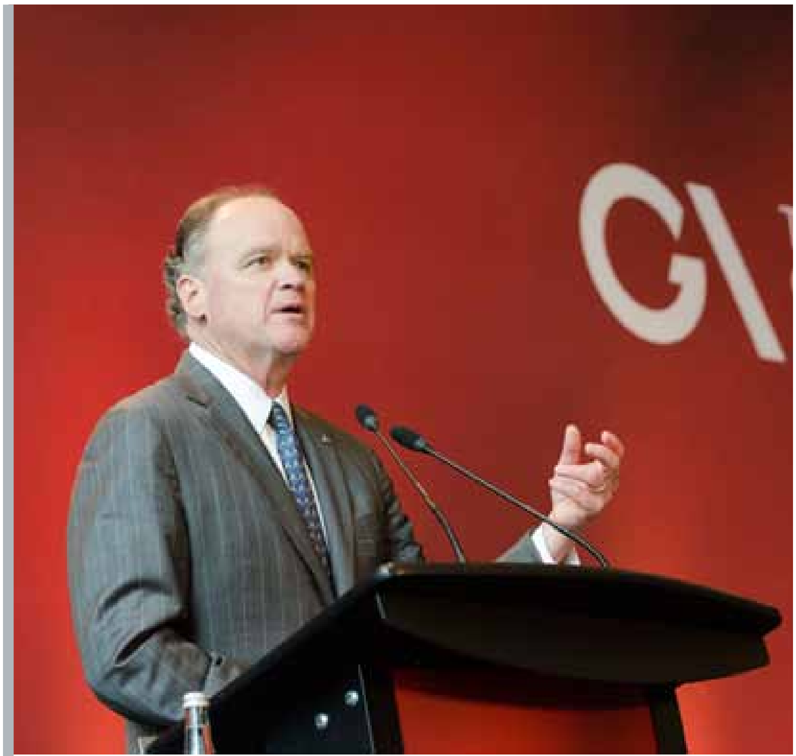
CHAIRMAN'S STATEMENT

The annual General Assembly is the most important meeting on The Geneva Association's calendar. It is a key moment for Members to hear the results of our ongoing research and open up new lines of analysis and discussion. Above all, it is an excellent forum for interaction, not only among the Members but also with some of the leading figures from outside the industry, not least regulators, central bankers, and other global experts.



Mike McGavick
Chief Executive Officer, XL Group plc, and Chairman of The Geneva Association.

This year's meeting took place in Toronto and was graciously hosted by our Canadian Members, Donald A. Guloien (Manulife Financial Corporation), Charles Brindamour (Intact Financial Corporation), Dean A. Connor (SunLife Financial), and Prem Watsa (Fairfax Financial Holdings Ltd.). The programme of meetings and events was superb and, on behalf of all the Membership, I would like to extend my thanks to them all for a truly excellent event.

As the development of new regulations for the re/insurance industry moves from theoretical discussion into reality, Canada represented a highly appropriate venue for the Assembly, having been one of the most stable and best performing economies during the financial crisis. One of the architects of that stability was Mark Carney, now Governor of the Bank of England and at the time Governor of the Bank of Canada. We were pleased to welcome him to the meeting as our first keynote speaker and panellist.

We were also pleased to be able to welcome former Vice President of the United States and Chairman of Generation Investment Management Al Gore as a keynote speaker for another essential research topic for the Association—extreme events and climate risks—and as a panellist for our related discussions.

In the articles that follow, you will find a synopsis of the discussions that took place over the course of the two-day meeting. With articles from our keynote speakers, including ten chief executive officers as well as our leading regulatory and governmental counterparts, this 2014 *General Assembly Review* provides an insight into the importance and substance of the discussions held at the Assembly.

Another important note: as forecast in Toronto, I was also pleased to recently announce the appointment of Anna Maria D'Hulster as Secretary General and Managing Director of The Geneva Association. On behalf of the Membership, I would like to welcome Anna Maria to the Association and look forward to the experience, knowledge, and energy she will bring to the role. In the coming months, Anna Maria will be travelling extensively and visiting Members. As you encounter her, I urge you all to provide your feedback on the Association's work and areas for future research, as well as your most pressing concerns, in order that we remain the voice of our Membership on global re/insurance issues.

Finally, the baton has been passed from our Canadian Members in Toronto to the Monetary Authority of Singapore and Asia Capital Re as sponsors of the 2015 Assembly in Singapore. I look forward to seeing many of our Members at what promises to be an exciting meeting in the heart of Asia, 13–16 May 2015.

Members convened in Toronto, 14-17 May, for the 41st General Assembly of The Geneva Association.

SYNOPSIS OF KEYNOTE SPEECH: MARK CARNEY

GOVERNOR OF THE BANK OF ENGLAND AND CHAIRMAN OF THE FSB

Insurers and insurance are vital to the pursuit of financial stability and, by extension, strong sustainable and balanced growth. An effective insurance sector is vital to an open and resilient financial system that serves the needs of the real economy. By spreading and managing risks, our insurers safeguard companies and individuals from perils they could not otherwise shoulder. They increase the resilience of the economy to the unexpected and make entrepreneurship and trade more viable.

Nevertheless, the insurance sector faces challenges in adjusting to the post-crisis landscape. The macro-economic situation, including the prolonged period of low rates that is necessary to support a sustained expansion, is making some types of traditional insurance business less viable. These challenges come alongside post-crisis regulatory reforms and legislative changes that challenge insurers' business models.

As a result, robust supervisory standards—as internationally consis-tent as possible—will be needed to ensure that the benefits insurance provides to the economy can endure.

Mark Carney
Governor of the Bank of England and Chairman of the FSB.

There are two main elements to the regulatory environment: fixing the clear failings revealed by the financial crisis—including institutions that are considered "too big to fail"—and setting up an open global system that underpins global prosperity. As far as possible, these aims require common standards that are fit for purpose; and confidence that the interconnections between institutions are understood so that the financial system as a whole can be as robust and resilient as possible.

Insurers themselves have been better able to weather crises than some other financial institutions, in part due to the specific features of the insurance business model. Insurers take premiums now to pay claims in the future—so are inherently less vulnerable to liquidity shocks. Insolvency in insurance takes time to manifest and a wind-down, when it happens, has historically been more orderly than for other financial institutions. However, the global financial crisis showed that the actions of some individual insurers could have broader spill-over effects, meaning that some insurers or insurance markets are themselves systemic.

Furthermore, the challenges in today's market could lead insurance companies towards new classes of business, into less traditional types of investments, or to seek new opportunities in emerging markets. This is not necessarily a problem, but regulators must be vigilant to the risks inherent in any such moves. Regulators and supervisors must be alert to the risks business models and strategy could pose to policyholders or the wider financial sector and be ready to step in.

Capital is a major part of this, and the work of the IAIS is taking forward international standards that will provide a consistent baseline for assessing the solvency of the biggest insurers. But even with tough capital requirements, some insurance companies will still fail from time to time. The intent of global policymakers is not to regulate to prevent failure: companies that make mistakes should face market discipline. Rather the role of regulators is to make sure that failing insurers don't harm their policyholders, cost the taxpayer money or disrupt markets for insurance. This task is harder where insurance companies operate internationally and therefore greater collaboration among regulators around the world is needed to address these challenges.

Finally, it must be remembered that regulation is also not just about minimising the risks insurers pose. It's also about allowing them to play a positive role both as a stabiliser and risk management mechanism for individuals, institutions and even governments, as well as a source of long-term finance for the economy.

Global supervisors will be mature in their approach to these challenges, and if they learn that regulation at the national, regional or even global level is holding back insurance companies from contributing to growth, they will not hesitate to refine their approach.

SYNOPSIS OF KEYNOTE SPEECH: AL GORE

FORMER U.S. VICE PRESIDENT AND CHAIRMAN OF GENERATION INVESTMENT MANAGEMENT

Former U.S. Vice President Al Gore is a well-known author and environmental activist. He is Co-founder and Chairman of Generation Investment Management, Founder of The Climate Reality Project, and the co-recipient, with the Intergovernmental Panel on Climate Change, of the Nobel Peace Prize in 2007 for his work in climate change activism. The following article provides a short synopsis of his speech.

Al Gore
Former U.S. Vice President and Chairman of Generation Investment Management.

The Vice President opened his speech with an observation on the apparent lack of global urgency in response to climate change. Human beings are made up in a way that protects them from imagining that they could lose what is most precious to them. They could not live with the anxiety—imagining that they could lose the beautiful set of conditions that has fostered the flourishing of humankind and human civilisation on Earth. The sheer scale of the events that climate change represents is difficult for people to comprehend.

However, climate-related events are becoming increasingly extreme and more frequent, Mr Gore said, citing The Geneva Association's report on the warming of the oceans and the effect this warming has on the frequency and intensity of rainfall and storms. Interestingly, Mr Gore pointed out what many people criticised most about *An Inconvenient Truth*[1] was the simulation of a hurricane making landfall in New York. It was considered totally unrealistic—but then came Hurricane Sandy and the flooding of New York itself. He also cited Typhoon Haiyan, also known as Typhoon Yolanda, which struck the Philippines in

1 *An Inconvenient Truth* is a documentary film directed by Davis Guggenheim depicting Al Gore's campaign to educate citizens about global warming. Released in 2006, it won an Academy Award the following year for Best Documentary, as well as a host of other awards.

2013, as another powerful example of one of the strongest tropical cyclones ever recorded.

The warming of the oceans is causing a higher degree of evaporation that is pumping more moisture into the air—there is 4 per cent more humidity in the Earth's atmosphere today than just 30 years ago. This creates "rivers of vapour" in the sky causing more extreme downpours and flooding events, and the mudslides that follow are more extreme. The U.K. has experienced devastating floods for the second year running; Pensacola, Florida recently saw two feet of rainfall in 24 hours.

While cold days and tail events still happen, the entire curve is moving towards the warmer side, and extreme heat events are now 100 times more common than they were only 30 years ago. Droughts are more common and are becoming deeper. In California, wildfires are growing in frequency and intensity and 100 per cent of the state is in drought today—25 per cent in exceptional drought. Europe will not be spared either.

Mr Gore commended the insurance industry for its show of leadership in signing the Climate Risk Statement.[2] "The insurance industry has long ago taken the initiative on climate risk, and with this statement commits to do even more. As an industry, it has the capacity to work with policymakers on the mitigation of climate-related risks. If market forces are leveraged and elected officials and regulators are engaged wisely, insurers have so much to offer and can help the world deal with this serious issue. Most people don't want to think about long-term risk. Now that our world is facing the gravest risks it has ever faced, the world should turn to insurers for advice. In turn, insurers must be more vocal about the challenges they see," said Mr Gore.

Morning after super typhoon Yolanda hit Panay island, Philippines, 2013.

Mr Gore also called on The Geneva Association's Members to examine the implications of climate risk for their strategies and actions on the asset management side of their businesses. The insurance industry can have a powerful impact in accelerating the transition to a low-carbon role by looking at the true risks associated with carbon-based assets, he said.

In conclusion, Mr Gore called again on the insurance industry to continue its leadership role in evaluating the true nature of the climate risks the world faces. He urged insurers to ramp up their appetite for engaging policymakers in dealing with the systemic risks that are quantified on the loss projection and risk management side and urged all insurers to provide leadership in the communities in which they operate.

2 *Editor's note:* The Climate Risk Statement confirms its signatories' commitment to a set of guiding principles on the substantial role insurance can play in global efforts to tackle climate-related risks. Signed by 67 CEOs in Toronto in May 2014 at the 41st General Assembly. See p. 11 for more details.

3 February 2014: California rancher Nathan Carver drives his truck delivering hay which he now has to buy to feed his herd of beef cattle. At this time of the year normally, the fields would be covered in lush green grass but the western U.S. states's worst drought in decades has reduced the land to a parched moonscape.

The Geneva Association's Climate Risk Statement is a set of guiding principles on the substantial role insurance can play in global efforts to tackle climate-related risks. It provides the foundations on which the direction of future climate-related initiatives by The Geneva Association will be based and was finalised among leaders of the world's largest insurers at the General Assembly in Toronto. Vice President Al Gore commended Members of The Geneva Association for signing this statement.

CLIMATE RISK STATEMENT OF THE GENEVA ASSOCIATION

The new *Fifth Assessment Report of the Intergovernmental Panel on Climate Change* (IPCC) strongly indicates that climate change is happening, mankind's influence is very material and the changes are occurring faster than earlier projected. The prospect of extreme climate change and its potentially devastating economic and social consequences are of great concern to the insurance industry.

Against this backdrop, we, the leaders of the world's largest insurance and reinsurance companies as assembled in The Geneva Association, want to make known our view through the following key messages.

Customers

- We are committed to enhancing our research capabilities in order to provide a better evaluation and management of climate risks.
- We promote mitigation efforts by developing products which incentivise offsetting or reducing greenhouse gas emission levels.
- We are willing to design insurance products to support low-carbon energy development projects and to help attract investments to such projects.
- As a major institutional investor, the insurance industry encourages mitigation and adaptation efforts, such as investing in low-carbon energy projects.

Policymakers

- The insurance industry is prepared to help counter climate risks through active cooperation in implementing building codes or similar means which encourage the use of sustainable practices.
- We offer to work closely with policymakers on communicating to our customers their climate risk levels, possible strategies of mitigation and adaptation, and in quantifying the financial benefits of those strategies.
- The insurance industry provides innovative solutions for climate risk issues. These include funding relevant research and providing tools to its customers to assess and counter climate risks.
- We recognise the significant benefit of pooling climate risks. We urge policymakers to collect robust data and make it freely available to allow risk assessment and to facilitate efficient solutions where premiums are risk-based.

United Nations

- The insurance industry is uniquely positioned to provide specialised services for countries and businesses facing climate risks worldwide.
- Insurers have the expertise to develop a broad range of affordable private insurance solutions for climate risks.
- Insurance mechanisms are an effective tool to promote climate-related risk management and reduction.
- We recognise that no stakeholder can succeed alone in solving the challenges of climate change. Insurance can and should be a strong complementary mechanism in a wider framework of adaptation and disaster risk reduction.

Insurance industry

- We encourage political processes to work towards a better understanding of the potential costs of climate change and the advantages of market-based solutions.
- We continue to work towards further reducing the—relatively moderate—carbon footprint of the insurance industry.
- We are willing to play a major and concerted role in the global efforts to counter climate risks.

The Geneva Association offers a unique platform to pool the knowledge and expertise of the insurance sector. It acts as a hub for expert networking within the industry as well as with external communities. The Geneva Association strives to create opportunities for the insurance industry to join their forces to deal with climate risks where relevant and appropriate.

Toronto, 16 May 2014

FINANCIAL STABILITY AND REGULATION

CAPITAL STANDARDS AND EFFICIENT REGULATION

A recent survey of insurance CEOs[3] showed that regulation was their number one concern (86 per cent of all respondents). All surveyed CEOs referred to capital rules and accounting standards as examples. Regulation is an important and necessary part of the insurance industry, but changes in insurance accounting and capital standards could have significant flaws if not designed and implemented well.

EMERGING CAPITAL AND ACCOUNTING STANDARDS

Kathrin Hoppe, Insurance Regulation and Supervision Expert, The Geneva Association, provides a summary of the discussion session "A Dialogue on Current Global Regulatory Initiatives" chaired by Donald A. Guloien, President and Chief Executive Officer, Manulife Financial Corporation.

At the discussion session on global regulatory initiatives at the 41st General Assembly of The Geneva Association, panellists Julie Dickson, Superintendent of the Office of the Superintendent of Financial Institutions, Canada, and Naruki Mori, Assistant Commissioner for International Affairs, Financial Services Agency (FSA), Japan, represented the regulatory and supervisory community. They clearly indicated that the development of international capital standards was not based on a concern about insufficient capital adequacy in the insurance sector, but a necessary adaptation of the regulatory framework to the global market in which insurers operate.

From left to right: Mario Mendonca, Managing Director and Research Analyst, TD Securities; Julie Dickson, Superintendent of the Office of the Superintendent of Financial Institutions, Canada; Donald A. Guloien, President and Chief Executive Officer, Manulife Financial Corporation; and Naruki Mori, Assistant Commissioner for International Affairs, Financial Services Agency, Japan.

Both emphasised that higher capital requirements were not the universal tool for creating a stable and resilient financial sector; efficient group supervision and supervisory tools were equally important. Julie Dickson explained that direct intervention tools allowed the Canadian supervisors to act proactively at the

3 PricewaterhouseCoopers (2014) *Fit for the future—17th Annual Global CEO Survey—Key findings in the insurance industry.*

holding companies and allowed them to prevent disadvantageous merger and acquisitions transactions, for example.

In particular, group supervision and supervisory colleges would enable supervisors not only to know each other better, but also to coordinate and cooperate better. Julie Dickson explained, however, that the financial crisis also caused supervisors to focus on their own markets, as they would be held accountable for the capitalisation of the market they supervise.

She said that the development of an international capital standard was overdue and manageable in the set time frame, and explained that for a period of time, solo capital standards and international capital standards would coexist as the international capital standard is expected to be a global minimum. Naruki Mori pointed out that a functioning feedback loop of different stakeholders was essential for the development of new capital standards to avoid unintended consequences.

Panellist Mario Mendonca, Managing Director and Research Analyst, TD Securities, focused on the discussion about the development of new accounting standards. Having analysed both the banking and the insurance sector, he could exactly explain how analysts and investors viewed the insurance sector. He pointed out that the starting point for them was the generally accepted accounting principles (GAAP) financial statements. The fact that International Financial Reporting Standard 4 (IFRS 4) introduced a number of non-GAAP reconciliations would add a new, unnecessary layer of complexity and would run the risk of creating a disconnection between GAAP and capital.

Mendonca warned that investors did not tolerate big changes in capital ratios well. In addition, the treatment of discount rates had the potential to set the industry back. Julie Dickson shared his concerns and clearly stated that Canada did not want to be the first country to implement those rules for this specific reason. Naruki Mori added that the Japanese supervisors feared that the new accounting standards would discourage life insurers to offer long-term contracts.

All panellists agreed that efficient supervision could be achieved if regulators, supervisors, and the industry continued the dialogue and remained committed to the goals of efficient group supervision. Julie Dickson explained that the new capital standards would not be onerous on insurance companies that already operated in countries with relatively good capital standards.

GIVEN THAT REGULATORS AND SUPERVISORS ARE MOST CONCERNED ABOUT A POTENTIAL FAILURE OF A FINANCIAL INSTITUTION, SOLVING THE CROSS-BORDER RESOLUTION CHALLENGE IS OF PARAMOUNT IMPORTANCE.

WHAT DOES GOOD INSURANCE REGULATION LOOK LIKE?

Summary of the discussion session chaired by Henri de Castries, Chairman and Chief Executive Officer, AXA Group, by Kathrin Hoppe.

Peter Skinner, Member of the European Parliament, and Henri de Castries, Chairman and Chief Executive Officer, AXA Group, and Chair of the discussion session on "What Does Good Insurance Regulation Look Like?".

The financial crisis required reactive regulatory action to re-establish financial stability and make the financial sector more resilient. The sector has since been hit by an avalanche of new regulatory proposals in a very short time frame. This panel discussion at the General Assembly looked at which regulatory process would fit the insurance industry best and the right ingredients for it.

Henri de Castries reminded the audience that the quality of regulation had improved over the last two decades, becoming more global and economics-based. However, the insurance business model was still not well understood, as evidenced by the clear focus on capital buffers in recent discussions. Regulators and supervisors should instead concentrate on improving their knowledge of the business model to "understand the risk, follow the risk, track the risk, and prevent the risk". The opposite appeared to be happening in Europe, he said, with supervisors envisaging capital buffers before Solvency II is implemented.

Peter Skinner, Member of the European Parliament, shared Henri de Castries' concern and warned that policymakers and regulators should not underestimate the role of insurers as long-term investors. Higher capital buffers or the prospect thereof already led insurers to retreat slowly from the investment industry, ultimately reducing real economic growth potential. Mr Skinner recommended that any piece of legislation or any standards have a clearly defined purpose and objective.

Loo Siew Yee, Executive Director, Insurance and Capital Markets, Monetary Authority of Singapore (MAS), emphasised this point by warning that rushed actions could lead to unintended consequences. She agreed with comments from the audience that impact assessments were necessary tools for achieving good insurance regulation, but explained that there might be exceptions where gaps in regulation needed to be closed quickly. While she understood the industry's burden of reporting and informing supervisors in various jurisdictions, she asked for the industry's understanding that information collected at the group level often did not contain the necessary information on the risk profile of a local subsidiary in their market. It therefore required different and additional disclosure and reporting to assess the risk adequately.

However, she fully agreed with Henri de Castries and other industry representatives that dialogue between the regulator and the regulated was of fundamental importance. The MAS has published two monographs *Objectives and Principles of Financial Supervision in Singapore* and *Tenets of Effective Regulation* to define clear expectations and create consistency, and ultimately formed the basis for a mutual understanding.

Paul Traynor, Managing Director and Head of Insurance, International Segment, BNY Mellon, also noted that supervisors and regulators retreated from imposing unilateral requirements on the industry, which would be detrimental to global trade. Given that regulators and supervisors are most concerned about the potential failure of a financial institution, Mr Traynor considered that solving the cross-border resolution challenge was of paramount importance.

The audience agreed that insurance regulation was necessary to reflect the evolution of the industry, but shared the following concerns:

Consistency of regulation: internationally active insurance companies need consistent regulation and legal certainty to manage their companies efficiently in various markets, without being burdened by increasing reporting and disclosure requirements.

Underinsurance as an unintended consequence: Regulators need to assess carefully the consequences of new regulation on each and every market. As new risks emerge, the industry needs to remain in a position to innovate and accept new risks.

Competitiveness: Regulatory reforms need to be principle-based to allow market players to differentiate themselves from each other.

Trust as the fundamental pillar: The success of the industry depends on the trust of its customers. While the industry has to build trust among its customers with sufficient transparency and predictability, supervisors and regulators can play an important role with regard to the general public when communicating about the industry. Last but not least, the trust between regulator and regulated could be improved if regulators agreed to enter into a dialogue with senior company management to understand individual companies better, rather than basing their analysis solely on data and information requested.

From left to right: Barbara Ridpath, former Chief Executive, International Centre for Financial Regulation; Loo Siew Yee, Executive Director, Insurance and Capital Markets, Monetary Authority of Singapore; and Paul Traynor, Managing Director and Head of Insurance International Segment, BNY Mellon.

EXTREME EVENTS AND CLIMATE RISK

DISASTER RISK REDUCTION AND RESILIENCE

The scope and intensity of natural disasters have increased in recent years, requiring ever greater cooperation between various public and private actors—individuals, corporations and governments—to strengthen societal resilience and lower the human and economic cost of extreme events. Insurance, with its deep knowledge of risk management and unique capacity for mitigating loss, can and must play an important role in any disaster risk reduction measures.

In 2009 in Kyoto, many Members of The Geneva Association signed a statement setting out in broad lines what The Geneva Association intends to do on the issue of climate risk. This document was redrafted and updated this year at the General Assembly in Toronto as the Climate Risk Statement of The Geneva Association (see p.11) with 67 signatories.

THE CONTRIBUTION OF INSURANCE TO DISASTER RISK REDUCTION

Michael Butt, Chairman, AXIS Capital Holdings Ltd., Chair of the discussion session on "Extreme Events and Climate Risk".

The past is no longer a guide to the future for extreme events. Despite all the potential we have for forecasting, managing the degrees of uncertainty that Vice President Al Gore and Governor Mark Carney talked about in their presentations at The Geneva Association's General Assembly in Toronto is going to be demanding.

We believe that the insurance industry could be and should be a catalyst for development on the issue of climate risk. We should be advocates and disseminate information to others, within our industry, but particularly outside it, on what we have learnt. We are in a strong position to contribute to the sustainable development goals upheld by many international organisations, as the insurance industry has more history and experience on these issues than any other industry in the world.

We have to ask ourselves as an industry whether we compile and communicate that knowledge efficiently. How do we support public policy issues and encourage the type of long-term thinking that the effective mitigation of climate risks requires, when it contrasts with the short-term interests of many participants?

One of the major contributions that insurance can provide to this debate is risk-based pricing, which can take away or at least mitigate the need for expediency that often characterises political processes. We also have, of course, risk reduction and adaptation expertise.

The economic crisis of 2008 is abating, economies are improving, and climate risk is reverting to its important position. Therefore, there is now the opportunity to engage with parties who are more willing to speak out. The International Monetary Fund (IMF), the Organisation for Economic Co-operation and Development (OECD), the World Bank, the United Nations, and regional development banks all now consider this issue to be a major global priority.

Furthermore, all governments constitute an important factor in this issue as they represent a prime area of uninsured risk. Most of all, we have people around the world looking for help to tackle the effects of climate change—something many believe is too difficult to think about.

Against that background, The Geneva Association assembled in Toronto a group of panellists from various regions of the world, highlighting the global nature of the challenge.

From left to right: Michael Butt, Chairman, AXIS Capital Holdings Ltd.; Nikolaus von Bomhard, Chairman of the Management Board, Munich Re; and Mike Wilkins, Managing Director and Chief Executive Officer, Insurance Australia Group Ltd.

THE FOCUS MUST BE ON PREVENTION RATHER THAN CURE. ONLY $1 IS SPENT ON PRE-DISASTER MITIGATION FOR EVERY $10 SPENT ON DISASTER RELIEF AND RECOVERY: IT SHOULD BE THE OTHER WAY AROUND.

BUILDING RESILIENCE TO NATURAL DISASTERS

Mike Wilkins, Managing Director and Chief Executive Officer, Insurance Australia Group Ltd. (IAG).

Australia is one of the countries most affected by natural disasters, and the risks could increase further with the uptick in population growth in coastal cities, particularly in the northeast state of Queensland where communities are most exposed to damaging weather events such as tropical cyclones, storms surges, wind storms, hail storms, and coastal river flooding. The country as a whole is subject to heatwaves that are increasing in intensity and duration, and causing more frequent and damaging bush fires.

IAG has been particularly active in responding to the impact of extreme weather events as it seeks to influence the debate around climate risks. It has initiated several cooperative partnerships with other companies as well as with social and humanitarian agencies. And we must focus our attention on prevention rather than cure. For every $10 spent on post-disaster relief and recovery, only $1 is spent on pre-disaster mitigation: it should be the other way around.

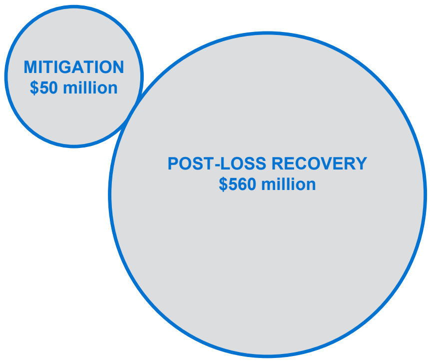
2011 was a particularly devastating year for Oceania, prompting a public discussion in Australia on how to increase resilience to these events, on a scale that hadn't been seen before. The several government inquiries, however, did not lead to the implementation of any concrete measures. At IAG, we decided to pull together a "risk summit" to unite the affected parties and get a wider voice to effect change.

Brisbane flood, January 2011: aerial view of Rocklea markets and light industrial area; businesses, markets, and homes were destroyed by Australia's worst disaster .

We gathered some 60 risk experts from non-governmental agencies, academia, emergency services, community and humanitarian organisations, and government and business sectors. One of the outcomes was The Australian Business Roundtable for Disaster Resilience & Safer Communities, led by IAG to develop policy that encourages the building of safer communities.

ECONOMIC COST OF NATURAL DISASTERS IN AUSTRALIA

AUSTRALIAN GOVERNMENT INVESTMENT



- The total economic **costs of natural disasters in Australia average $6.3 billion** annually
- The Australian Government invests **$50 million each year in mitigation measures** but more than **$560 million on post loss recovery.**
- For every $10 spent on post-disaster recovery, only $1 is spent on pre-disaster mitigation.

Source: Insurance Australia Group

This is not just a question of the insurance industry looking out for its own interests; these risks cause immeasurable social and human losses as well as economic. The United Nations Office for Disaster Risk Reduction (UNISDR) has since recognised these efforts as constituting a welcome and unique approach to disaster risk reduction that can be emulated elsewhere.

The business roundtable offered three key recommendations:

1. The establishment of a national resilience advisor, within the Department of the Prime Minister and Cabinet.
2. Consolidated long-term funding for pre-disaster resilience, including mitigation infrastructure. Economic modelling found that the payback in flood-prone areas to building more resilient homes is about three to one.
3. Identification and prioritisation of activities: reduction of the duplication of research, identifying gaps where research is missing, and making data accessible to everyone.

The reaction to these recommendations has been encouraging. As a direct result of the work that this coalition has done, the Australian government has initiated an inquiry into disaster funding and mitigation. The group has also engaged with the United Nations, and the intent is to prove that more investment in disaster reduction will lead to a virtuous circle of safer and more resilient communities, less public money being spent on post-disaster recovery, and greater insurance penetration.

PUBLIC-PRIVATE COOPERATION IS AN AREA WHERE THE INSURANCE INDUSTRY CAN GREATLY CONTRIBUTE TO DISASTER RISK REDUCTION.

Sapporo, Japan, 11 February 2014. Severe snow storms around the country killed 19 people and caused more than 1,600 injured.

HOW TOKIO MARINE HAS APPROACHED CLIMATE RISK IN ASIA

Shuzo Sumi, Chairman of the Board of Tokio Marine & Nichido Fire Insurance Company, Ltd.

Recent extreme events appear to be tending towards a "new normal" and can no longer be considered tail events: snow storms in Tokyo in February 2014, flash floods on the east coast of the U.S., and extensive flooding in the U.K. and Central Europe.

Tokio Marine lists four key priorities in its approach to disaster risk reduction and the mitigation of the impact of extreme events: research, reducing customers' exposure to natural disasters, dealing with emerging market needs, and engaging with the public sector.

In Japan, climate change forecast data predict a decrease in central atmospheric pressure that implies stronger storms with tracks shifting eastward. For such research to remain relevant and to continue to conduct robust risk-based management, continuous efforts and investment to refine risk models are indispensable.

In the attempt to reduce corporate exposure to natural disasters, Tokio Marine deploys every effort to navigate corporate customers into making risk-conscious decisions, such as relocating coastal manufacturing facilities to sites free from threats of tsunami and storm surges. Tokio Marine also offers index-based weather insurance in emerging markets, and works together with local actors to minimise negative impacts on the economically challenged farming population.

Private–public cooperation has often been cited as an area where the insurance industry can greatly contribute to disaster risk reduction. The creation of the National Catastrophe Insurance Fund in Thailand (2012) was made possible by combining the underwriting expertise of the private sector and financial guarantees provided by the public sector. Another example showcasing the industry's ability to provide solutions on disaster risks example is the project for "A Stronger, More Resilient New York", designed in the wake of Hurricane Sandy.

INDUSTRY RESPONSES TO MITIGATING CLIMATE RISK

Nikolaus von Bomhard, Chairman of the Board of Management, Munich Re.

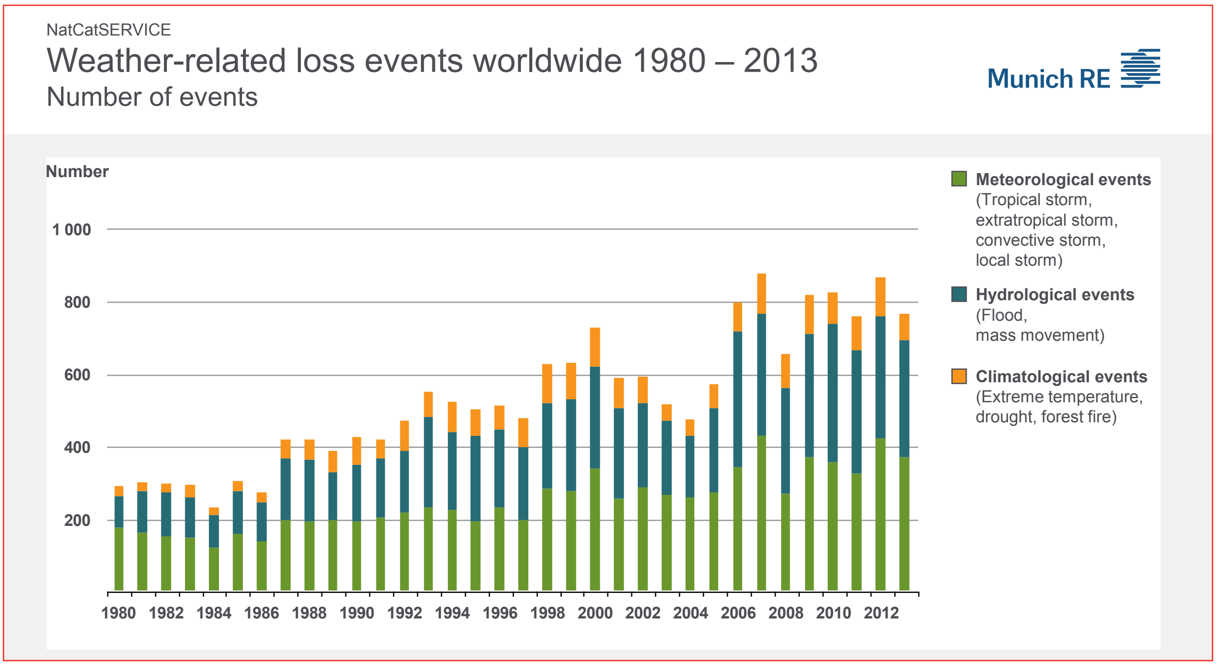
The insurance industry has always been careful to avoid rash statements of certainty, preferring instead to highlight trends and indicators, even as the evidence keeps piling up. Today, we are not alone in being bolder in our assessments and, though we still eschew any definitive assertions, we

From left to right: Al Gore, former U.S. Vice President; Shuzo Sumi, Chairman of the Board of Tokio Marine & Nichido Fire Insurance Company, Ltd.; and Michael Butt, Chairman, AXIS Capital Holdings Ltd.

do claim that the increasing frequency, severity, and variability of weather-related losses that we observe in many regions is in all likelihood partly connected with climate change. This is backed up by several recent scientific studies. However, socio-economic factors such as population growth and increasing wealth are still the main drivers behind higher loss potentials. As an industry, we certainly have undeniable expertise and unmatched credibility in managing risk, thanks to the data we have accumulated over the years. The figures presented by Munich Re on worldwide weather-related loss events (see next page) are based on more than 30,000 data sets of loss events since 1980. They show an increase in weather-related events (meteorological, hydrological and climatological) on a global scale.

The Fifth Assessment Report (AR5) of the Intergovernmental Panel on Climate Change (IPCC) mentions several response options and ways in which insurance can help tackle the challenges we face. These include the

THE RELATIVELY LOW COST OF LOSS REDUCTION MEASURES COMPARED WITH THE ECONOMIC AND HUMAN TOLL FROM EXTREME EVENTS SHOWS HOW IMPERATIVE IT IS TO FAVOUR LONG-TERM THINKING OVER SHORT-TERM POLICY.



Source: 2014 Münchener Rückversicherungs-Gesellschaft, Geo Risks Research, NatCatSERVICE—As at February 2014

following: incentives for risk reduction through risk-adjusted products and prices; coordinated initiatives between governments and the insurance industry to advance risk reduction; establishing risk models that take into account temporal changes in hazard and vulnerability conditions; and the use of reinsurance capacity to ensure insurers' solvency, given a long-term increase in large loss variability in various regions.

The relatively low cost of loss reduction measures compared with the economic and human toll from extreme events shows how imperative it is to favour long-term thinking over short-term policy. Since the devastating floods of 1962, the city of Hamburg has invested around €2.3bn in preventive measures and thus has probably saved around €20bn in losses that did not occur thanks to these investments. Despite severe storm surges in 1976, 1981, 2007 and 2013, "no comparable disaster has struck Hamburg since 1962."[4]

The industry can and does play an important pacesetter role by insuring alternative energy sources that would not be tapped unless insurance covered the investment risk, at least

4 Environmental and Society Portal. (2012). *The great flood of 1962 in Hamburg*.

THE INSURANCE INDUSTRY HAS UNDENIABLE EXPERTISE AND UNMATCHED CREDIBILITY IN MANAGING RISK THANKS TO THE DATA IT HAS ACCUMULATED OVER THE YEARS.

to some extent. The industry can also be a leader in how it manages investments—firstly, by generally ensuring that it invests responsibly and, secondly, by promoting and supporting investments in renewable energies and other climate-friendly technologies.

The insurance mechanism itself acts as a buffer against financial loss and enables communities to rebuild much faster. We have often shown how insurance supports economies and helps societies recover after natural catastrophes, as demonstrated quite clearly in Japan after the Tohoku earthquake and tsunami in 2011. Therefore, the greater the insurance penetration, the more resilient we can consider a community to be.

It is interesting to note that, according to a recent study by Munich Re and the University of Würzburg,[5] the greatest loss-minimising effects of additional insurance coverage are seen in countries with "medium" insurance penetration, such as China, Thailand, or Brazil. Emerging economies would benefit most from an expansion of insurance cover, since a fairly large number of economic assets in these countries are exposed to forces of nature and have relatively little protection. Developing economies with very low insurance penetration have few economic assets in total, and countries that are fairly saturated in terms of penetration already benefit from a high degree of prevention and financial cushioning.

Finally, in line with the discussion at the General Assembly in Toronto, an article published in *The New York Times* soon after the event said that "we must encourage private innovation and government support to insure against the devastating financial losses that will result".[6]

From left to right: Nikolaus von Bomhard, Chairman of the Board of Management, Munich Re, and Mike Wilkins, Insurance Australia Group Ltd.

5 Englmaier, F. and Stowasser, T. (2013). *The effect of insurance markets on countries' resilience to disasters*, mimeo, University of Würzburg.

6 Shiller, R.J. (2014, 24 May). Buying insurance against climate change. *The New York Times*.

LONG-TERM INVESMENT

INVESTING IN INFRASTRUCTURE

Long-term investing (LTI) has ranked high on the agenda of the G20 for several years, and global institutions are moving to develop various initiatives to spur LTI. World leaders and policymakers are paying ever greater attention to the issue, with a focus on the shifting dynamics of capital providers and the role of private market participants. In fact, under the 2014 Australian presidency, the G20 has made private LTI a top priority in its economic growth strategy. The benefits of LTI are many, including acting as a driver of economic growth, leading to higher GDP, and contributing to the stability of financial markets.

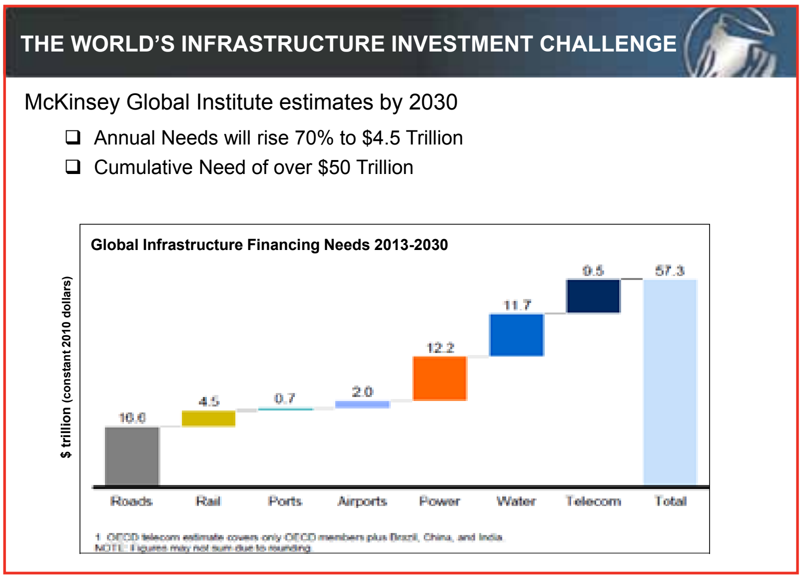
LONG-TERM INVESTMENT: INSURERS AS A KEY CONTRIBUTOR TO ECONOMIC GROWTH

John R. Strangfeld, Chairman and Chief Executive Officer, Prudential Financial, Inc. and Chair of the discussion session on "Long-term Investment: Insurers as a Key Contributor to Economic Growth".

The development of society relies on certain drivers of prosperity, notably property rights, commercialisation of ideas, efficient transportation and communication, and capital markets. Among the benefits of broad and deep, well-established capital markets, i.e. where there is a high rate of corporate credit relative to GDP, are low funding costs, more effective progress with education and higher GDP per capita.

There is also a pressing need for long-term capital to finance the infrastructure and the societal demands of both developed and developing economies; in fact, this need has rarely been greater than it is today. The numbers are staggering. McKinsey Global Institute estimates that annual needs for global infrastructure development alone will rise by 70 per cent in the next 15 years and by 2030, will reach a cumulative need of US$50tn.

Furthermore, we find ourselves in a situation where the public and banking sectors are forced to play more limited



Source: OECD; IHS Global Insight; GWI; IEA; McKinsey Global Institute analysis

From left to right: Jim Barry, Managing Director and Global Head, BlackRock Infrastructure Investment Group; Michael Diekmann, Chairman of the Management Board, Allianz SE; John R. Strangfeld, Chairman and Chief Executive Officer, Prudential Financial Inc; and Bertrand Badré, Managing Director and World Bank Group Chief Financial Officer.

roles than they have in the past as long-term investors. Government balance sheets have grown more constrained, while banks are encouraged by the Basel III regulatory framework to seek short-term, high-quality assets and lengthening funding sources rather than investing in long-term and illiquid assets.

This represents an opportunity for insurance companies, who managed some US$26.5tn in assets at end 2012, excluding pension funds, which account for an additional US$33.9tn.[7]

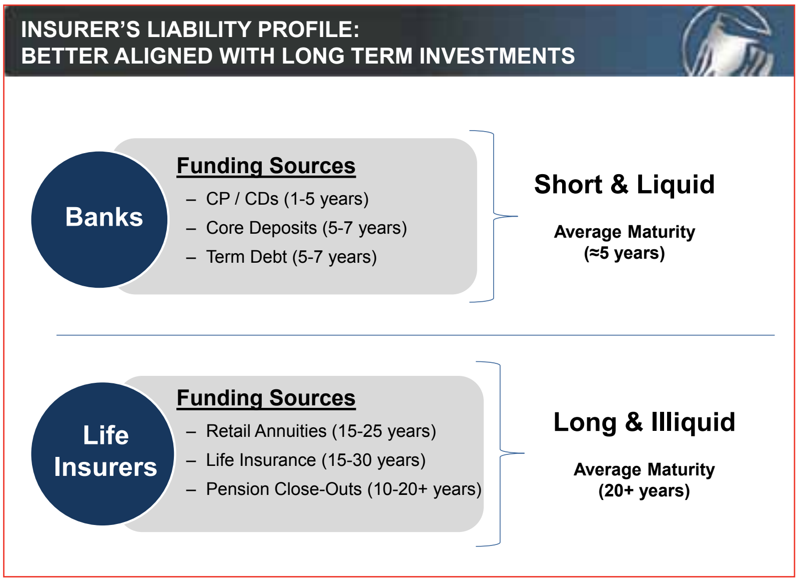
This allows for a substantial contribution to long-term investment on the part of the insurance industry, particularly those funds that are channelled into job-creating projects and other productive sectors of the economy. Indeed, the insurance mechanism is uniquely suited to LTI, as most of the industry's products are of long duration in nature, and its asset needs are of long duration as well.

Finally, infrastructure investing has some very interesting qualities in terms of investment attributes. If you look at historical default rates and recovery data, infrastructure

7 Maslakovic, M. (2013, September). *Fund Management.* London: TheCityUK.com

THE MORE LIMITED ROLE PLAYED BY THE PUBLIC AND BANKING SECTORS AS LONG-TERM INVESTORS SINCE THE FINANCIAL CRISIS REPRESENTS AN OPPORTUNITY FOR THE INSURANCE SECTOR.

investment presents in many respects a lower risk than classical long-term corporate lending, particularly over the long term. This makes for an attractive risk–return relationship; however it is important to add that the current capital weightings and regulatory capital charges are not aligned with this reality, though there are favourable prospects and an opportunity over time to change this situation.



Source: Prudential Financial Inc. 2014

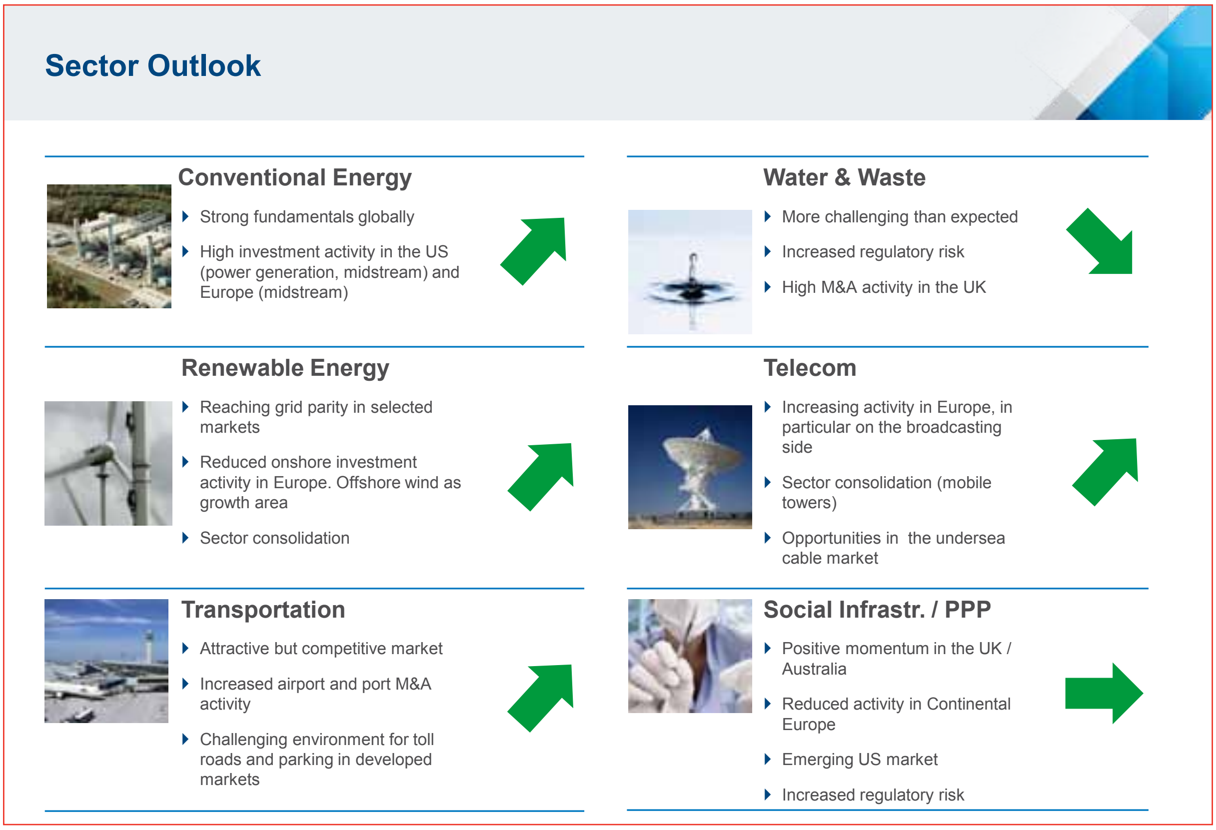
THE CHALLENGES AND OPPORTUNITIES OF INFRASTRUCTURE INVESTMENT

Jim Barry, Managing Director and Global Head, BlackRock Infrastructure Investment Group.

Governments in Canada, Australia, and the U.K. started to experiment with public–private partnerships and public finance initiatives for infrastructure projects in the late 1980s and early 1990s. As with many new asset categories, these initiatives were very successful, with a favourable risk premium leading to an influx of institutional capital. This flow of capital, in turn, prompted more and more countries to adopt similar programmes in the ensuing decades.

There were, however, a few negative dynamics that played out. One of the big challenges for asset managers in this class is deploying capital effectively and in a manner consistent with investment objectives. Towards the middle of the 2000s, we reached a situation where the flow of opportunities was not commensurate with the dramatic increase in the amount of available capital for investment.

This had two negative consequences. First, the definition of what constituted "infrastructure" began to stretch and, as a consequence, a lot more risk ended up in the assets that were bought than was originally intended. Second, prices went up and, particularly pre-July 2007, a lot more leverage went into the assets. Many equity positions were then wiped out in the financial crisis of 2008.



Source: BlackRock

As a result, there has been a huge increase in institutional players entering the equity market directly, as well as risk aversion in manager selection that has led to a greater attraction for large managers—"a flight to the big"—who are aggregating more and more capital. The challenge now is for these direct players to set up efficient and experienced teams to handle infrastructure investment projects effectively so that they can derive the benefits of acquiring market relevance and access to the projects, as well as manage these projects as long-term, sustainable investments. The challenge for the large managers will be to deploy their large capital commitments consistent with investor expectations, notwithstanding increased competition for the larger assets they will need to acquire.

The need for infrastructure investment has always been high and today amounts to approximately US$5.7tn annually. However, infrastructure as an asset can be stretched—e.g. more cars on the road, more airport users—

and the gatekeepers in that regard, in every market in every country, are governments and policymakers. As a result, the scale of need does not always translate as expected into the pace or scale of investment opportunity, particularly for the institutional market.

The outlook for infrastructure investment varies from country to country and from sector to sector. Conventional energy, renewable energy, transportation, and the telecom sector currently have a favourable outlook as investment channels, while water and waste is on the decline.

Infrastructure investment matches several institutional investor needs, particularly those of insurers. These include secure income and long-duration assets (stable cash flow); a preference for yield over capital gains, particularly in a low interest rate environment; relative risk aversion; the need for portfolio diversification; inflation protection; and transparency. When examining particular projects, investors should consider several factors, notably income vs growth, risk tolerance, the degree of inflation protection, liquidity needs, investment objectives ("buy & hold" vs "buy & sold"), and the use of levered vs unlevered capital.

Infrastructure investment remains, however, a complex and challenging asset class with many variables, requiring that buyers be truly aware of what they are looking for in the asset class before investing—and that the strategy which is implemented allows them to achieve that goal.

The current environment does raise a concern that there may again be negative dynamics at work in infrastructure investment, in particular surrounding whether the risk profile of what is going to be in investors' portfolios will rise to try and meet the return that has been projected. Furthermore, investors should note that, in any country, not only in emerging markets, infrastructure assets do carry policy, regulatory and political risk. This risk cannot be controlled, but it does require an understanding of the context so that the risk can be properly assessed and priced.

INSTITUTIONAL INVESTORS AND INFRASTRUCTURE FINANCE: THE POTENTIAL FOR WIN-WIN

Michael Diekmann, Chairman of the Management Board, Allianz SE.

Public investments in Europe, as a percentage of GDP, are on the decline since the 1970s, dropping from about 2.3 per cent to approximately 1.3

THE REGULATION OF INVESTORS NEEDS TO SUPPORT INFRASTRUCTURE INVESTMENT BY CONSIDERING IT AS A SEPARATE ASSET CLASS AND AVOID IMPOSING CAPITAL REQUIREMENTS THAT ARE TOO HIGH.

From left to right: Michael Diekmann, Chairman of the Management Board, Allianz SE; John R. Strangfeld, Chairman and Chief Executive Officer, Prudential Financial, Inc. and Bertrand Badré, Managing Director and World Bank Group Chief Financial Officer.

per cent today. The figure is similar in the U.S. Infrastructure investment requirements, however, are estimated at 3–4 per cent of GDP.

It is clear that governments alone will not be able to meet the world's long-term investment needs, particularly since they are focused on reducing or at least stabilising their debt. Partly as a result of the financial crisis, the average burden of explicit public debt in OECD countries is now over 100 per cent of GDP, and ageing societies will certainly place additional pressure on public finances.

The private sector will have to contribute more. However, traditional private-sector sources of infrastructure financing are also constrained. New capital and liquidity requirements will prevent banks from resuming the dominant position they enjoyed before the crisis, and capital markets in Europe have never really played a big role in infrastructure investment. Hence the focus is shifting to the insurance industry and pension funds to step in.

Infrastructure should be an attractive addition to portfolios for insurers.

Benefits include asset-liability matching, the potential to increase risk-adjusted returns, the low correlation with other asset classes, acting as a hedge against inflation as well as the low interest rate environment.

Allianz has invested in renewable energies (wind parks and solar stations), infrastructure equity (such as gas distribution networks), and infrastructure debt. This experience provides an idea of where improvements can be made to create the right investment environment for the industry. These include the regulation of investors, social-political acceptance, and the development of financial products and markets.

The regulation of investors needs to support infrastructure investment by considering it as a separate asset class and avoid imposing capital requirements that are too high. National laws in Europe are also, in some cases, a hindrance, particularly when they impose restrictions on how much can be invested in infrastructure, as in Spain and Italy.

Long-term investment can also only take place in an environment that offers long-term stability. Building the capability to handle this asset class requires considerable resources; to harness these resources, institutional investors need to be assured of a sufficient pipeline for long-term investments. This means that policies affecting infrastructure need to be predictable. Only a few countries, however, have clear, long-term infrastructure plans, and even fewer countries consider a significant role for private investors.

Most importantly, terms and conditions for these investments need to remain stable. Retroactive policy changes, for instance, not only undermine the basis of an investment but also make other potential investors more careful going forward. There is clear evidence of this in the privatisation of water in the U.K.

Behind this reluctance of governments to involve the private sector in infrastructure investment and the temptation to change policy is the general public's wariness about allowing the private sector to play a broader role in energy transport, health care, or education. There is a sense of unease at institutional investors earning private returns on what is perceived as a public service. What many people do not realise, however, is that insurers and pension funds earn these private returns to finance their clients' retirement. Further, these clients remain the ultimate owners of infrastructure assets, either as taxpayers or as investors.

The third suggestion for improvement is the development of well-functioning capital markets for infrastructure investments. We need a system with multiple financing channels—not

THE INSURANCE MECHANISM IS UNIQUELY SUITED TO LONG-TERM INVESTMENT AS AROUND 90 PER CENT OF INSURANCE INVESTMENT FUNDS ARE FROM LONG-TERM INSURANCE POLICIES

only government funding, long-term bank lending, or direct investments by institutional players. Infrastructure-linked assets would be attractive, not only to insurance companies and pension funds but also retail investors, particularly if markets were liquid and transparent. If private households could invest in infrastructure more directly, they might find the idea of private returns from so-called public services more acceptable. This might also stabilise the policy environment.

We therefore need more standardisation to create a market for smaller scale infrastructure bonds and, ultimately, a platform to package infrastructure loans and make them tradeable. While large projects such as solar stations, wind farms, and roads are often big enough to issue their own debt, smaller, community-level infrastructure projects are not. There the idea of transforming future stable income into securities remains valid, too, but this will require overcoming the negative reputation which securitisation acquired during the crisis.

There are already encouraging developments in the market for infrastructure bonds in Europe. The European Investment Bank (EIB), for example, has launched the pilot phase of the so-called Project Bond Initiative, whereby the EIB uses credit enhancements to make infrastructure debt more accessible for institutional investors.

However, we estimate that institutional investors currently have about 1–2 per cent of their assets in infrastructure. If this share rose to 4 or 5 per cent, the additional money available could be over US$3tn—an impressive number, but which shows that institutional investors alone cannot close the gap. There remains a lot of work to be done until this opportunity, which offers many potential benefits, can really unfold.

Source: Allianz SE

UNDERINSURANCE

ASSESSMENT AND OPPORTUNITIES FOR GROWTH

Insurance offers vital support to both society and the commercial world by providing financial compensation for loss. By mitigating the fear of loss, insurance promotes economic and social development. Underinsurance, particularly in developing and emerging markets, is therefore a major challenge and potential threat to insurers and to society at large.

THE CHALLENGE OF UNDERINSURANCE IN EMERGING MARKETS

Inga Beale, Chief Executive Officer, Lloyd's, and Chair of the discussion session on "Underinsurance Assessment and Opportunities for Growth".

The insurance industry is one of the largest sectors in the world economy, with total premiums in 2012 amounting to about US$4.65tn, or 6.5 per cent of global GDP. These figures reflect the industry's sizeable and crucial role in assessing, transferring, and managing insurable risks to human life, health, and property.

Today's emerging markets across Latin America, Africa, and Asia contribute 40 per cent to global GDP, yet represent only 16 per cent of global insurance premiums. This disparity suggests large-scale underinsurance across these high-growth markets.

This situation is not without consequences. Underinsurance research undertaken by the Centre for Economics and Business Research (Cebr) for Lloyd's in 2012[8] suggests there is a virtuous cycle between levels of non-life insurance penetration, benefits to business, and wider GDP growth. By providing financial compensation for loss, insurance encourages positive risk-taking, which is essential to entrepreneurship and the growth of small and medium-sized enterprises on which thriving economies depend.

Catastrophes and natural disasters can have a disproportionate impact on regions with fragile infrastructure. Perversely, emerging markets are more likely to encounter natural catastrophes due to their geographical locations, yet are typically underinsured to cover the potential loss.

Lloyd's findings also highlight a major gap between the minimum levels of insurance needed to cover the economic losses created by natural catastrophes and the levels actually in place. Seventeen countries are identified as underinsured to the amount of US$168bn—that is, more than 8 per cent of non-life insurance premiums in 2012. These include high-growth economies such as Brazil, Mexico, Turkey and China, which exhibit the highest absolute level of underinsurance.

8 Lloyd's. (2012). *Lloyd's global underinsurance report*.

Nigeria, India, Egypt, the Philippines, Vietnam, and Indonesia also show shortfalls in excess of 1 per cent.

History suggests that natural catastrophes cause particular economic trauma when that loss is uninsured. Over an eight-year period from 2004 to 2011, a study in the report undertaken by Cebr for Lloyd's shows that, even in certain mature markets such as the U.S., 40 per cent of losses due to extreme events were uninsured, a figure that rises to over 80 per cent for Japan.[9] Nonetheless, higher levels of insurance penetration are expected to translate into a lower level of uninsured losses from natural catastrophes, as in the case of China and Colombia, whose uninsured losses were almost equal to total losses.

According to a study by Swiss Re,[10] which looked at the whole non-life insurance gap not just in the case of natural catastrophes, the gap between insured losses and total losses over the past 40 years has widened continuously, with total losses growing much faster.

This trend highlights that, to date, insurance has failed to match the rise in economic activity and risk exposures. From this perspective, people might question the relevance and social purpose of insurers if their share of economic losses continues to drop.

Inga Beale, Chief Executive Officer, Lloyd's, and Chair of the discussion session on "Underinsurance Assessment and Opportunities for Growth"; Patrick de Larragoiti Lucas, President, SulAmérica Seguros.

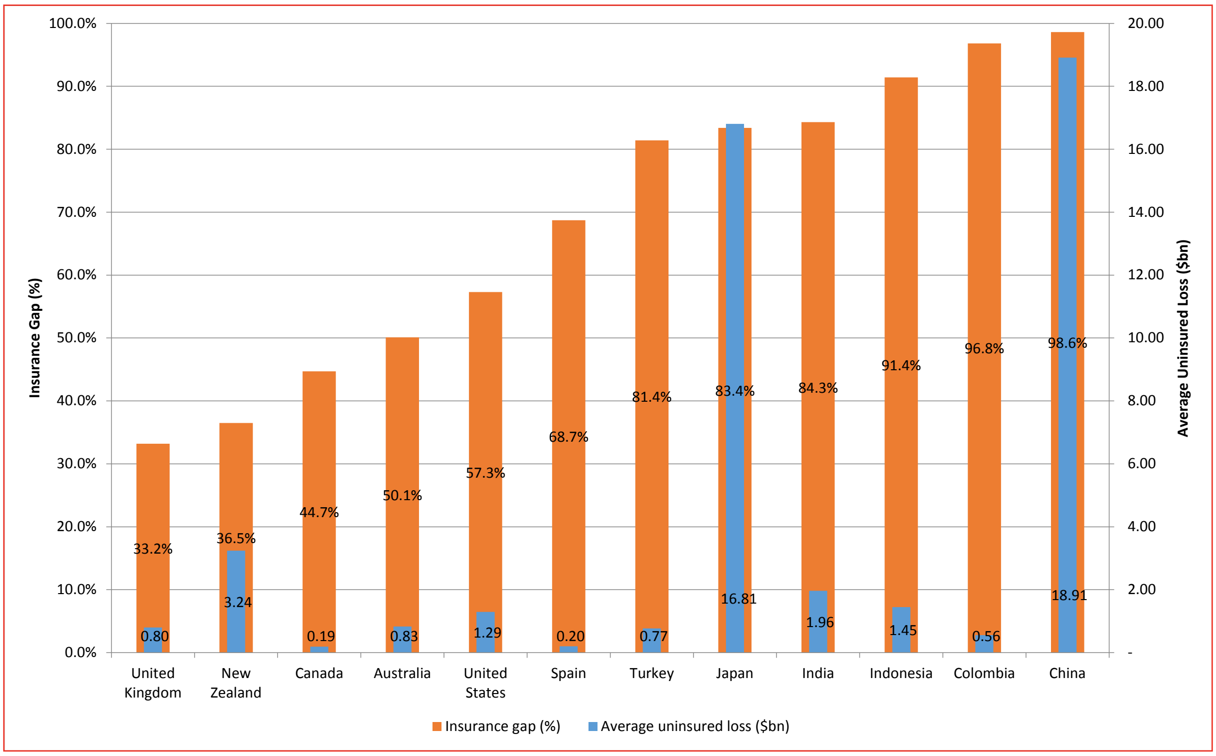
It is important to understand the reasons for this trend and to find solutions. There is a relationship between GDP growth and insurance penetration; that is, penetration levels rise markedly once a country reaches a certain stage of development before plateauing. When per capita income is low, insurance is unaffordable for many. At intermediate income levels (about US$10,000), premiums tend to grow twice as fast as GDP per capita and, above GDP per capita levels of

THERE IS A MAJOR GAP BETWEEN THE MINIMUM LEVELS OF INSURANCE NEEDED TO COVER THE ECONOMIC LOSSES CREATED BY NATURAL CATASTROPHES AND THE LEVELS ACTUALLY IN PLACE

9 The March 2011 Japan earthquake caused an overall economic loss of at least US$210bn; the share of insured losses was less than 20 per cent, including a significant contribution from the government's Earthquake Reinsurance Scheme.

10 Swiss Re. (2014). *Natural catastrophes and man-made disasters in 2013: large losses from floods and hail; Hayan hits the Philippines*, sigma No. 1/2014.

UNINSURED LOSS (% OF TOTAL LOSS AND AVERAGE UNINSURED LOSS PER NATURAL CATASTROPHE 2005-2012, US$BN)



Source: sigma natural catastrophes and man-made disasters 2005-2012, Cebr analysis

US$30,000, penetration tends to stagnate as insurance demand drops.

Underinsurance can also reflect low levels of risk awareness and risk culture. This is particularly common in markets emerging from decades of state monopolisation. In some countries, a preference towards savings as a form of contingent capital means that many individuals and companies assume their balance sheets are robust enough to take on their own risks.

Looking ahead, it is incumbent upon the industry to understand the challenges and opportunities in the emerging markets in order to support and enable sensible insurance infrastructure in these thriving high growth economies.

WE NEED TO OVERCOME A MISPERCEPTION OF RISK AND A MISPERCEPTION OF THE VALUE OF MITIGATION.

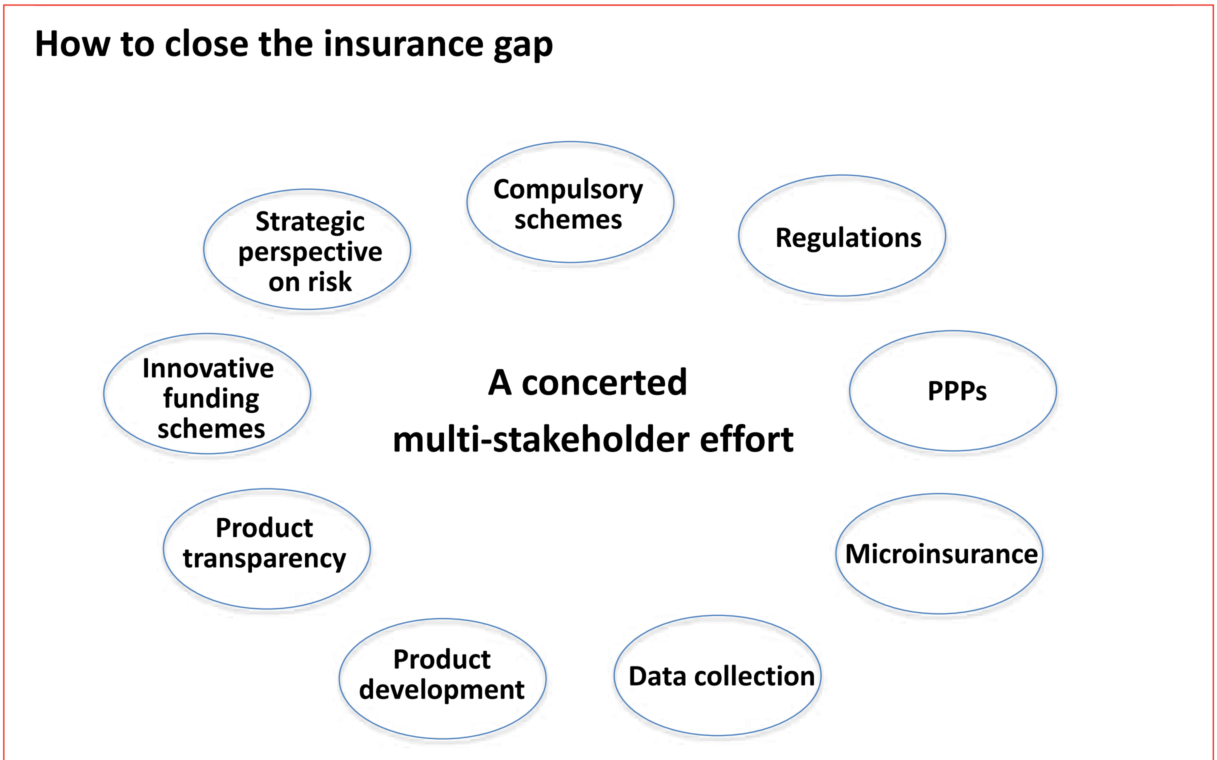
REASONS FOR UNDERINSURANCE

Robert P. Hartwig, President, Insurance Information Institute.

Closing the gap of underinsurance, given its scope and complexity, will require a concerted approach from all relevant private and public-sector stakeholders. There are already a multitude of products to address the challenge of underinsurance in mature markets, not only with regard to natural catastrophes but also for terrorism and cyber risk.

One obstacle to closing the insurance gap is the existence of a "knowledge gap", whereby consumers and public policy leaders are aware of existing products but certainly not universally, and not to the extent that they should be.

There are several reasons for this situation, including a perception gap, as people (and businesses) routinely underestimate the degree to which they are at risk for a particular event. In this respect, compulsory insurance has often proven to be, in many lines of insurance, a fairly effective means



Source: The Geneva Association

for closing the gap between insurance and economic loss.

We must also realise that there is a poor understanding of the terms of coverage, with people believing they are covered for a risk under a particular policy when they are not. And finally, we cannot ignore the moral hazard that arises from a vast array of *ex ante* and *ex post* aid, incentivising consumers to accept an excessive amount of risk. It is up to insurers and reinsurers to demonstrate why their products do add value and why protection from these products is superior to post-disaster aid or a system saturated with subsidies.

While insurance penetration is high in the U.S. as well as in parts of Western Europe, the coverage of "dollars at risk" remains low. In a typical year in the U.S., about 50 per cent of the total economic loss from natural disasters is insured (58 per cent last year). Some types of perils, however, are better insured than others and vary from country to country, as is the case for floods, where two thirds of the economic damage is insured by private or public schemes.

Then, there are risks that have not occurred yet. At the time of the Northridge earthquake in California in 1994, 1 in 3 homes was insured; now only 1 in 10 has earthquake insurance. This underlines the extent of a misperception of risk: a large portion of the population has had no experience with a major earthquake, either because they did not live in the state at the time or were too young to remember. Affordability, of course, comes into play as a "second-layer obstacle", particularly given the high deductibles.

There is also a misperception on the value of mitigation, and it remains difficult to incentivise people to make significant investments in mitigation today on property that may not suffer damage under their ownership—unless they are compelled to do so. This has proven to be highly effective in the U.S., where there is a strong positive correlation between building codes and loss mitigation.

For mitigation efforts to be effective, however, there must be enforcement: in 1992, when Hurricane Andrew hit Florida—the most costly extreme event at the time—the state had the most stringent building codes in the country, but they were not enforced. Similarly, risk-based pricing must also be allowed to work without distortion from intervention in the form of suppressed or subsidised rates, and restrictions on capital flow should be removed for insurers subject to particular types of catastrophic loss.

Finally, paralysis at the political level often prevents the necessary investments in mitigation measures being made, or the development of public–private partnerships that could go a long way towards reducing the insurance gap that exists today. The impact of government paralysis can

PARALYSIS AT THE POLITICAL LEVEL OFTEN PREVENTS THE NECESSARY INVESTMENTS IN MITIGATION MEASURES BEING MADE.

also be observed in the U.S. in the area of terrorism insurance: if the Terrorism Risk Insurance Act is not renewed, we will be heading for a large insurance gap with full knowledge of the fact.

A COMBINATION OF SOLUTIONS

Kengo Sakurada, President and Chief Executive Officer, Sompo Japan Insurance Inc.

In examining the reasons for the situation of underinsurance, it is interesting to highlight the common aspects that can be observed between recently matured markets and emerging markets.

Indeed, we can observe a positive correlation between economic development and the expansion of the non-life insurance market in Japan until it became mature in the late 1990s. This progression can be seen as reflected to some degree in Vietnam and Indonesia, where the current GDP per capita is equivalent to that of Japan in the early 1970s.

This does not mean, however, that the non-life insurance market in these countries will follow the same trend in development as in Japan. Despite common aspects, the current special environment of developing and emerging countries completely differs from the past situation in advanced countries.

Robert P. Hartwig, President, Insurance Information Institute and Kengo Sakurada, President and Chief Executive Officer, Sompo Japan Insurance Inc.

This is particularly true with regard to new technology that appears suddenly in emerging markets, creating an advanced information society rapidly familiar to the so-called "Generation Y" and transforming the cultural landscape. The internet penetration ratio in Indonesia, for example, which had already reached 12.5 per cent or 35 million users as of 2011, could reach 40 per cent next year. The motive, for one third or more of these users, is to make a purchase through the internet.

In terms of improvement of the insurance penetration ratio in emerging markets, we note a lack of awareness, which is an essential point, since we can consider it correlated to economic affluence—whether people have value or property to

THE MANAGEMENT OF RISKS LIES IN A COMBINATION OF SOLUTIONS: CONSULTATIONS SERVICES FOR MITIGATION AND PREVENTION, INNOVATIVE PRODUCTS, AND MAKING USE OF CAPITAL MARKETS.

protect or not. We also observe a lack of attractive products and insufficient distribution channels in emerging markets, which may partly be related to issues of moral hazard. More generally, however, we do expect P&C insurance to expand much more rapidly than in advanced economies due to the development of information and communication technology.

With regard to extreme events, the insurance-covered ratio for typhoons in Japan is also high relative to other markets. Indeed, 70 per cent of financial losses from Typhoon Mireille—one of the deadliest storms in history and which swept across Japan in 1991—was covered by insurance, larger than the 50 per cent covered for Hurricane Katrina.

The earthquake risk in Japan is particularly huge, with maximum economic loss estimated at US$1–2.2tn, US$1tn for a Tokyo metropolitan earthquake, US$2.2tn for a Nankai Trough event. The insurance market size for worldwide natural catastrophes is approximately US$300bn. Furthermore, the heavy accumulation of risks in urban areas such as Tokyo makes it very difficult to resolve this issue through the insurance mechanism alone and without public sector assistance.

The disruption of supply chains is also an important risk to consider, as we saw in the aftermath of the Tohoku earthquake. In some cases, income losses caused by business interruption were actually much larger than property losses, because this risk was not anticipated due to its virtual invisibility.

The great 2011 east Japan earthquake in Iwate.

There is no textbook answer for the appropriate management of these risks, but certainly it lies in a combination of solutions, such as the consultation services for the prevention and mitigation of risks, innovative products, and making use of capital markets.

Consultation services support clients in developing more resilient structures and enhance the visibility of complex risks. Innovative products include business interruption insurance, in particular for small and medium-sized companies. Finally, and because of the size of the risks, the use of capital markets should be very seriously considered as they represent US$30tn worldwide.

WORKING ON THE MICRO AND MACRO LEVELS

Michel Liès, Group Chief Executive Officer, Swiss Reinsurance Company Ltd.

With few remarkable exceptions, the insurance industry has mainly focused its attention on the "meso segment"—providing insurance to middle-income households and corporations. Closing the insurance gap, therefore, requires the industry to be inventive in finding solutions and work on the macro and micro levels to assist that segment and help it to grow.

On the micro level, the industry must strive to become more inclusive and provide insurance to those who currently lack it—very often those people at the base of the income pyramid and therefore most vulnerable to large catastrophes. With products such as crop insurance sold through fertiliser purchases, the industry can hopefully provide them with a sustainable and affordable safety net, so that they do not fall back into poverty due to drought or crop-destroying floods. There are also other forms of microinsurance that protect against accident, income shortfalls and the like. A recent Swiss Re sigma study[11] estimated the potential for this market at US$40bn. This is significant and should attract many industry players, though this gap cannot be closed overnight.

We cannot expect these consumers to remain clients of microinsurance forever, though; they should become middle-class citizens. If the industry can show this segment of the population the added value that insurance can provide in their lives, notably financial security in the event of misfortune, the industry can improve its image among the middle class of the future and, indeed, help build that middle class.

On the macro level, the contingent liabilities after a major extreme event generally fall on the shoulders of governments, and here insurance and capital markets can make a contribution from a financial perspective by taking on part of the cost. Mexico's multi-cat bonds and the Caribbean Catastrophe Risk Insurance Facility (CCRIF) are pioneers in this segment, and we are seeing some promising developments like the Pacific Catastrophe Risk Insurance Pilot (developed under the Pacific Islands Catastrophe Risk Assessment and Financing Program/PCRAFI), the African Risk Capacity (ARC) and

WE ARE CLOSING THE INSURANCE GAP BUT THE EXPOSURE IS GETTING BIGGER. SPREADING THE RISK MAKES A LOT OF ECONOMIC SENSE

11 Swiss Re. (2010). *Microinsurance—risk protection for 4 billion people*, sigma No. 6/2010.

the recent World Bank transaction to hedge hydro-energy production in Uruguay. Very often, however, these initiatives are created after a catastrophe, and are currently not sufficient to accelerate the closing of the insurance gap.

Natural catastrophes (NatCats) worldwide are growing in frequency, intensity, and cost. This is mainly due to the increased concentration of insured value and insurance penetration in highly exposed regions—which means that, in some cases, we are closing the gap, but the exposure is getting bigger—and these factors will most likely be compounded by the effects of climate change.

The risk pool, therefore, is growing and growing fast, driving the demand for NatCat capacity. Truly catastrophic losses from very severe extreme events in the U.S., for example, have already grown too large for the domestic insurance industry to handle alone. Spreading the risk across various shoulders, including capital market solutions and reinsurance, makes a lot of economic sense.

A key concern regarding cat bonds and similar products is that now many investors are looking for high returns at almost any price, leading in some cases to an acceptance of "naïve" capital; it is important that investors understand that if there are higher returns, there are some important risks. There are also certainly banks holding sizeable risk in their portfolios—such as mortgage portfolios in earthquake-exposed areas like California—and these risks can be transferred to the insurance market.

THE CHALLENGE OF CHANGING DEMOGRAPHICS AND THE SOCIO-ECONOMIC LANDSCAPE

Patrick de Larragoiti Lucas, President, SulAmérica Seguros.

Since the implementation of the *Plano Real* ("Real Plan") in 1994, which stabilised the Brazilian economy and brought the rampant inflation under control, the insurance industry has grown from 1 to 3.5 per cent of GDP. There is still, however, a clear situation of underinsurance in the country. Brazil is the seventh largest economy in the world, but its insurance market is only ranked 13th.

Inflation destroyed life insurance as a savings product 20 years ago; this is still present in many consumers' minds today, making it one of the more important reasons behind underinsurance in Brazil. Another is the complex set of regulations that affects the design of mass products.

As examples, there is no mandatory motor insurance in Brazil and only one third of drivers are insured. There is also an educational gap, whereby insurance is perceived as a complicated

INITIATIVES TO COVER CATASTROPHE RISK ARE OFTEN CREATED AFTER AN EVENT AND ARE CURRENTLY NOT ENOUGH TO ACCELERATE THE CLOSING OF THE INSURANCE GAP.

and unnecessary product with a poor cost–benefit ratio. Furthermore, there is a large population with low levels of earning and property ownership, with a "not too much to lose" approach that drives them away from purchasing these insurance products. Finally, Brazil has a "culture of optimism" that distorts the perception of risk.

There are, however, perceptible demographic and socio-economic changes taking place, with 41 million people seeing a marked improvement in their economic situation over the past ten years. This upward migration from one socio-economic class to another is set to continue. Furthermore, the government has established new de-bureaucratisation rules to create more companies, and a large contingent of small-size businesses have entered the formal economy.

These developments mean new patterns of consumption and a demand for new products and new services—and insurance is starting to be perceived as a way to guarantee the maintenance of this new socio-economic status for these consumers and businesses. The services offered by the state for financing retirement and health care remain poor, and private life, health, and pension products are among the top demands from consumers in Brazil today.

The industry is therefore developing innovative products in these areas, as well as in the sector of motor insurance, to address these new and growing needs. In the latter area particularly, such innovations are driving down prices, providing more focused pricing models and allowing for the adoption of mandatory third-party insurance coverage. The government, for its part, established 18 months ago a new set of rules to develop the microinsurance market.

From left to right: Robert P. Hartwig, President, Insurance Information Institute; Kengo Sakurada, President and Chief Executive Officer, Sompo Japan Insurance Inc.; Inga Beale, Chief Executive Officer, Lloyd's; Patrick de Larragoiti Lucas, President, SulAmérica Seguros and Michel Liès, Group Chief Executive Officer, Swiss Reinsurance Company Ltd.

PHOTO GALLERY

Bertrand Badré, Managing Director and World Bank Group CFO.

Barbara Ridpath, former Chief Executive International Centre for Financial Regulation; Loo Siew Yee, Executive Director, Insurance and Capital Markets, Monetary Authority of Singapore.

The General Assembly meeting room at the Four Seasons Hotel in Toronto.

Al Gore, former U.S. Vice President and Chairman of Generation Investment Management; Mike McGavick, CEO, XL Group plc and Chairman of The Geneva Association; and Mark Carney, Governor of the Bank of England and Chairman of the Financial Stability Board.

Our gracious Canadian hosts!
From left to right: V. Prem Watsa, Chairman and CEO, Fairfax Financial Holdings Ltd.; Donald A. Guloien, President and CEO, Manulife Financial Corporation; Charles Brindamour, CEO, Intact Financial Corporation; and Dean A. Connor, President and CEO, Sun Life Financial Inc.

Robert P. Hartwig, President, Insurance Information Institute and Kengo Sakurada, President and CEO, Sompo Japan Insurance Inc.

From left to right: Julie Dickson, Superintendent of the Office of the Superintendent of Financial Institutions, Canada; Donald A.Guloien, President and CEO, Manulife Financial Corporation; and Naruki Mori, Assistant Commissioner for International Affairs, Financial Services Agency, Japan.

Yoshinobu Tsutsui, President, Nippon Life Insurance Company.

Mike Wilkins, Managing Director and CEO, Insurance Australia Group Ltd., and Bronek Masojada, CEO, Hiscox plc.

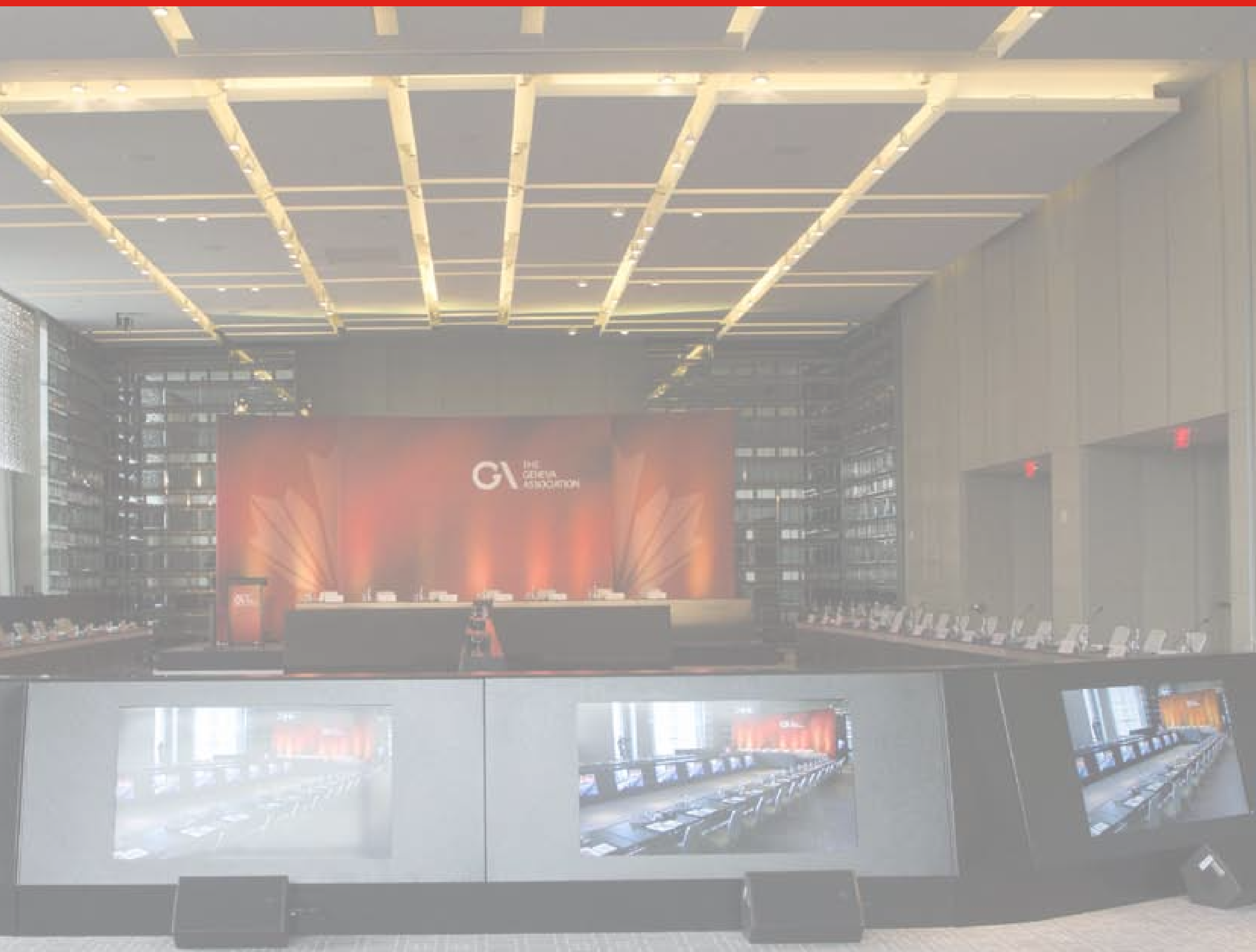
Constantine Iordanou, Chairman and CEO, Arch Capital Group Ltd., and Michel M. Liès, Group CEO, Swiss Reinsurance Company Ltd.

Donald A. Guloien, President and CEO, Manulife Financial Corporation and Mark Carney, Governor of the Bank of England and Chairman of the Financial Stability Board.

V. Prem Watsa, Chairman and CEO, Fairfax Financial Holdings Ltd.

This review is a retrospective on some of the key discussions in Toronto at the 41st annual General Assembly of The General Association, the leading international insurance think tank for strategically important insurance and risk management issues.

It provides an insight into the most prestigious gathering of insurance leaders worldwide, and comprises essays by CEOs and staff of The Geneva Association as well as synopses of keynote speeches by former U.S. Vice President Al Gore and Mark Carney, Governor of the Bank of England. Subjects include insurance regulation, extreme events and climate risk, the challenge of underinsurance, and long-term investment.



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