Special Session on Climate Change and the Insurance Sector

Organised by the OECD and The Geneva Association

Conference Review

Paris, 3 December 2015

January 2016

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', is based in Zurich, Switzerland and is a non-profit organisation funded by its members.

About the OECD

The Organisation for Economic Co-operation and Development (OECD) is a forum in which governments compare and exchange policy experiences, identify good practices in light of emerging challenges, and promote decisions and recommendations to produce better policies for better lives. The OECD's mission is to promote policies that improve economic and social well-being of people around the world. Find out more at *www.oecd.org*.

The OECD's Insurance and Private Pensions Committee (IPPC), established in 1961, is the international forum for addressing policy and regulatory issues in insurance and private pensions for governments (ministries of finance, regulators), international organisations (e.g., IAIS, IAA) and industry, and complements the OECD Committee on Financial Markets. It engages in surveillance and monitoring of insurance markets and regulation, with thematic roundtables and structural reports to address specific topics. The IPPC has developed good practices, where relevant, and its Working Party on Private Pensions is the global standard setter in the area of private pension regulation.

The overarching objective of the Committee is to promote efficient, open and sound market-oriented insurance and private pensions systems, based on high levels of transparency, confidence, and integrity, and respecting recognised social objectives of these systems.

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CONTENTS

This document, associated reference documents and a series of videos from the conference are available on The Geneva Association and OECD websites:

https://www.genevaassociation.org/research/topics/climate-risk

http://www.oecd.org/daf/fin/insurance/special-session-climate-change-insurance-2015.htm

CONFERENCE PROGRAMME

Special Session on Climate Change and the Insurance Sector

Agenda

3 December 2015, 9.00am-4.30pm
OECD Conference Centre, Paris, France
2, rue André Pascal
75775 Paris Cedex 16, France

08:00–09:00 *Registration of participants*

09:00–09:30 **Opening Session: The role of the insurance sector in a climate change agreement**

Chair	**Adrian Blundell-Wignall**, Director, Directorate for Financial and Enterprise Affairs and Special Advisor to the Secretary-General on Financial Markets, OECD
Opening address	**Gabriela Ramos**, OECD Chief of Staff, G20 Sherpa and Special Counsellor to the Secretary-General
Special address	**Henri de Castries**, Chairman and CEO, AXA

09:30–11:15 **Session 1: Managing the financial risks of extreme events in a changing climate**

Topics (Re)insurance and capital markets play a critical role in the financial management of disaster risks by absorbing the costs of damage and losses and supporting post-disaster economic recovery by providing a source of funds for recovery and reconstruction. Countries with mature insurance markets recover much faster and more efficiently when struck by a disaster. When properly designed, insurance can also contribute to adaptation by reducing the overall losses from climate change-related extreme events through the use of risk-based premiums, deductibles and premium discounts that encourage risk reduction. The insurance sector can also play a strong advocacy role in encouraging preventive measures such as land-use policies and building codes that improve resilience against the impacts of disaster events. This session will explore the impacts of climate change on the insurability of extreme events and the potential for insurance companies to support enhanced financial protection against climate change-related disaster events:

- What are major challenges in terms of assessing risks in a changing climate? What are the merits of risk-based premiums? Are climate risks insurable at rates that are affordable? What are the driving factors? Will uncertainty have an impact on the availability of insurance coverage for disaster risks? Will it be possible to insure "certain" risks (such as coastal inundation resulting from sea-level rise)?
- How can the knowledge, experience and expertise of the insurance sector be leveraged to support the financial management of extreme events and climate risks?
- Are there innovative approaches to expanding financial protection that could prove promising in reducing the protection gap for disaster risks? How does insurance fit in? Is there a need for new and innovative insurance products and services to address climate risk issues? What about scalability and sustainability of insurance as an integral part of a comprehensive risk management strategy?
- What critical partnerships need to be forged to pave the way? What challenges and opportunities lay ahead in ensuring such partnerships?

Moderator **Maryam Golnaraghi**, Director, Extreme Events and Climate Risks, The Geneva Association

Panellists **Peter Höppe**, Head of Geo Risk Research/Corporate Climate Centre, Munich Re and Chair of the Munich Climate Insurance Initiative

Robert Muir-Wood, Chief Research Officer, RMS and a lead author of the IPCC Special Report on *Managing the risks of extreme events and disasters to advance climate change adaptation (SREX)*

R. Dale Hall, Managing Director of Research, Society of Actuaries

Ivo Menzinger, Managing Director, Global Partnerships, Swiss Re

Masaaki Nagamura, General Manager (Corporate Social Responsibility), Tokio-Marine

11:15–11:30 *Coffee break*

11:30–13:00 **Session 2: Investing in the transition to a low-carbon economy**

Topics As institutional investors, the (re)insurance sector could support the transition to a low-carbon economy by allocating investments into assets that reduce greenhouse gas emissions (e.g., renewable energy power generation, energy efficiency). This session will explore the ways in which innovation in policy, regulatory, product development and market-based approaches could provide incentives for emissions-reducing behaviour. Furthermore, as an integral part of a comprehensive strategy for climate risk management, this session will also look at the potential contribution of insurers to supporting the transition to a low-carbon economy through their investment allocations and product design and related hurdles and opportunities:

- What are the barriers and challenges to investing in low-carbon assets? Do we need a clear definition for a low-carbon asset class to bring clarity to this issue?
- What are the business case drivers for green investment, particularly low-carbon assets? What are the risks of continued investment in greenhouse-gas emitting sectors? Are climate change-related factors material for investment decisions, in terms of risks and opportunities?
- How can governments support the advancement of policy options to improve the financial system's effectiveness in mobilizing capital towards a green and inclusive economy? How can cooperation and collaboration between governments, policy makers and regulators be enhanced to scale up policy progress?
- What is the role of insurance in supporting the financial viability of green projects and infrastructure? What impact can product design have in promoting emissions-reducing behaviour? Are low-emission activities a better insurance risk?

Moderator **Steve Waygood,** Chief Responsible Investment Officer, Aviva Investors

Panellists **Michael Liebreich**, Chairman of the Advisory Board, Bloomberg New Energy Finance

Tom Hutton, Managing Partner, XL Innovate

Matt Christensen, Global Head of Responsible Investment, AXA Investment Managers

Karsten Löffler, Managing Director, Allianz Climate Solutions

13:00–14:15 *Lunch break*

14:15–16:00 **Session 3: Is there a role for regulators in addressing climate risks?**

Topics Climate change has implications for insurance companies on both sides of the balance sheet. Potential changes to the nature of disaster risks or the regulatory environment for greenhouse gas-producing sectors could have significant impacts on the financial soundness of insurance companies. This session will look at the issues that arise for insurance regulators as a result of a changing climate and the efforts that regulators have made to address these issues:

- How should regulators manage the inherent uncertainty in understanding climate change implications without impeding the availability of financial protection?
- What is the role of regulators in facilitating the sector's contribution to climate change adaptation and mitigation?
- What would need to change in the international and national regulatory and policy framework to orient the financial system more towards long-term issues including climate change?

Moderator	**Cynthia McHale**, Director (Insurance Program), Ceres
Panellists	**Nick Robins**, Co-Director, UNEP Inquiry into the Design of a Sustainable Financial System
	Monica Lindeen, Montana Commissioner of Securities & Insurance and President, National Association of Insurance Commissioners
	Matthew Scott, Team Leader, Environmental Risks, Insurance Division, Prudential Regulation Authority, Bank of England
	Stéphane Cossé, Director, Public Affairs, COVEA
Special address	**Nicolas Schimel**, Chief Executive Officer, Aviva France

16:00-16:30 **Concluding remarks**

Special address	**Denis Kessler**, Chairman and CEO, SCOR and Co-Chair of The Geneva Association Committee on Climate Change and Extreme Events
Closing remarks	**Anna Maria D'Hulster**, Secretary General and Managing Director, The Geneva Association
	Adrian Blundell-Wignall, Director, Directorate for Financial and Enterprise Affairs and Special Advisor to the Secretary-General on Financial Markets, OECD

From left to right: Masaaki Nagamura, General Manager, Tokio Marine; R. Dale Hall, Managing Director of Research, Society of Actuaries; Adrian Blundell-Wignall, Director, Directorate for Financial and Enterprise Affairs, OECD; Gabriela Ramos, OECD Chief of Staff, G20 Sherpa and Special Councellor to the Secretary-General; Henri de Castries, Chairman and Chief Executive Officer of AXA; Mamiko Yokoi-Arai, Principal Administrator, Directorate for Financial and Enterprise Affairs, OECD; and Timothy Bishop, Head of Division, Financial Affairs Division at OECD.

INTRODUCTION

The 21st Conference of the Parties (COP21) to the United Nations Framework Convention on Climate Change took place in Paris from 30 November to 11 December 2015. COP 21 achieved a new international agreement on climate change, applicable to all countries, aimed at keeping global warming below 2°C. The (re)insurance sector can make an important contribution to supporting climate change mitigation and adaptation and this potential role was recognised in the text of the agreement.

In this context, the Organisation for Economic Co-operation and Development (OECD) and The Geneva Association organised a special session of the OECD Insurance and Private Pensions Committee to explore the potential contribution of the (re)insurance sector to managing the financial risks of extreme events and climate change and investing in the transition to a low-carbon economy as well as the insurance regulatory issues that may arise as a result of climate change. This document provides the main findings of this event.

OPENING SESSION: THE ROLE OF THE INSURANCE SECTOR IN A CLIMATE CHANGE AGREEMENT

Opening address: Gabriela Ramos

OECD Chief of Staff, G20 Sherpa and Special Counsellor to the Secretary-General

This special session of the OECD Insurance and Private Pensions Committee was organised at a critical juncture—as negotiators at COP 21 worked towards achieving an agreement to get us on a 2 degree pathway. The financial sector is coming to the forefront of managing the uncertainty of, transition to, and adaptation to climate change.

The insurance and reinsurance sector plays a critical role in managing the financial impacts of disasters by absorbing some of the losses and providing relatively quick access to funding for recovery. Countries with mature insurance markets recover much faster and more efficiently when struck by a disaster. Insurance can also play a critical role in incentivising the reduction of risks. However, these important market functions are significantly underutilised. Between 2005 and 2014, insurance covered only 51 per cent of all losses from meteorological and hydrological disasters in high-income countries, and less than 10 per cent of losses in developing countries. Closing this "financial protection" gap will only become more challenging in the context of a changing climate. In this context, policymakers and regulators have a critical role to play in ensuring that insurance sector policy supports the capacity of insurance and capital markets to absorb increasing disaster losses and addresses the market failure that occurs where insurance premiums are beyond the ability of large parts of the population to pay.

Insurance companies also have a key role to play through their investment decisions. Insurance companies alone represent over USD 28 trillion in assets under management. The transition to a low carbon economy will require trillions in investment into infrastructure—much of which will need to come from private sources. A number of insurance companies have made significant commitments to support this transition to a low carbon economy, through investments in green bonds, renewable energy projects, and energy efficiency. These investments can be viewed as a "climate hedge" given the potential of assets dependent on fossil fuel extraction and consumption becoming stranded assets, and will likely increase going forward. Government policies can play a central role in influencing how this private capital is mobilised and shifted, for example by improving the scope and consistency of disclosure on climate change risks and providing further guidance on how institutional investors can best take into consideration the impact of climate change on their investments, as part of their broader fiduciary duties.

The Insurance and Private Pensions Committee brings together officials from OECD members and key partners, enabling discussions on the implications of climate change in such important and relevant areas. I hope that this will be the beginning of active discussions on climate change in this Committee.

OPENING SESSION: THE ROLE OF THE INSURANCE SECTOR IN A CLIMATE CHANGE AGREEMENT

Special address: Henri de Castries

Chairman & Chief Executive Officer of AXA

Risk management is the DNA of insurance companies—insurance companies have been managing risks for centuries—and is at the core of the contribution insurance companies can make to addressing climate change. The cost of natural catastrophes is not what it was 25 or 30 years ago—and it is not only due to increasing wealth accumulation. The reality is that the frequency and intensity of natural disasters has increased steadily over the years. With much of the world's wealth concentrated along coasts and shorelines, the costs of natural disasters will continue to grow. While a world that is 2°C warmer might still be insurable, it is absolutely clear that beyond that, the insurability becomes uncertain, leading to possible serious economic disruptions.

Insurance companies play two main roles in managing these impacts. The first is providing advice to clients on prevention. The second is providing a service to its clients in the event of a loss. The way that insurance companies manage that service is critical for supporting economic recovery.

How insurance companies design their products can provide incentives for prevention, by excluding certain risks and encouraging risk mitigating behaviour. This can influence investment decisions and promote environmentally-conscious behaviour.

The insurance sector is one of the largest long-term investors in the world—its investment choices are not neutral. If it chooses to exclude a sector, it will increase the cost of capital and the cost of doing business in that sector with implications for its ability to prosper and develop. On the other hand, if the insurance sector decides to make more capital available to a sector, it will lower the costs of capital in that sector and increase the volume of investment. In this context, the potential contribution of investment into new technologies should not be underestimated.

Big data provides insurance companies with a better understanding of risks. In the past, the sector based its understanding on much more limited and historical data—using the past to analyse and predict the future. The technology that is available today allows us to move from a picture of risk not unlike the representations of primitive buffalo painted in the cave of Lascaux to now the equivalent of a hologram—a much more accurate, real-time, three-dimensional picture of reality. This strengthens the ability for prevention based on an improved ability to predict and allow for a more efficient response when a disaster does occur. For example, meteorological forecasts have improved substantially in the past 20 years, increasing the amount of advance warning from a couple of hours to a couple of days allowing much more time to put in place mitigation measures. With better data, it is easier to predict possible scenarios and take prevention measures years in advance. For example, the risks from a centennial flooding

in Paris are now much better understood, allowing an insurance company to measure exposure building by building, floor by floor, and street by street based on the impact of various water levels—and improves the ability to advise clients on preventative measures that can be taken.

Cities play an important role in building resilience and are the relevant party for taking preventative action. The Rockefeller initiative to encourage the appointment of Chief Resilience Officers in cities is very interesting and allows insurance companies to discuss risk management with cities in a similar way as they do with large sophisticated corporations. A small investment in risk management early in the cycle can have a large return in terms of risks avoided down the road.

New technologies are also allowing insurance companies to make coverage available to fragile populations that had no coverage in the past. For example, agriculture insurance is becoming available where previously any disruption by a catastrophe would have a devastating impact on agricultural communities. Insurance for agriculture was previously too expensive because of the high costs of physically sending risk assessors—and claims adjusters in the event of a disaster—making it unaffordable for most of the population. Today, with the availability of satellite data, insurance companies can design parametric insurance at extremely low cost in terms of expenses (compared to before) because the needed data is available in a couple of clicks.

Going forward, the sector can play a very significant role in the management of climate change risks. A dialogue and partnership with the public sector is necessary to establish the right regulatory framework and ensure that good behaviour is rewarded to the detriment of bad behaviour. Also important is the capacity of the sector as long-term investors. The insurance sector is ready to invest more in new energies and in helping communities invest in disaster resilient infrastructure. However, regulators can inadvertently reduce the pool of investment available for such items by imposing an inappropriate risk management approach. In a changing climate, regulators should not penalise infrastructure investments with inappropriate capital charges. Regulation has consistently ignored the long-term nature of an insurance company's liabilities and encouraged short-term investment. For example, AXA's investment in equities has declined from 25 per cent of all investments 25 years ago to a maximum of 4 per cent today. This has resulted in less infrastructure investment, less growth and less jobs.

SESSION 1: MANAGING THE FINANCIAL RISKS OF EXTREME EVENTS IN A CHANGING CLIMATE

Moderator:
Maryam Golnaraghi, Director, Extreme Events and Climate Risks, The Geneva Association

Panellists :
Peter Höppe, Head of Geo Risk Research/Corporate Climate Centre, Munich Re and Chair of the Munich Climate Insurance Initiative
Robert Muir-Wood, Chief Research Officer, RMS
R. Dale Hall, Managing Director of Research, Society of Actuaries
Ivo Menzinger, Managing Director, Global Partnerships, Swiss Re
Masaaki Nagamura, General Manager (Corporate Social Responsibility), Tokio-Marine

(Re)insurance and capital markets play a critical role in the financial management of disaster risks by absorbing the costs of damage and losses and supporting post-disaster economic recovery by providing a source of funds for recovery and reconstruction. Countries with mature insurance markets recover much faster and more efficiently when struck by a disaster. When properly designed, insurance can also contribute to adaptation by reducing the overall losses from climate change-related extreme events through the use of risk-based premiums, deductibles and premium discounts that encourage risk reduction. The insurance sector can also play a strong advocacy role in encouraging preventive measures such as land-use policies and building codes that improve resilience against the impacts of disaster events.

This session explored the impact of climate change on the insurance sector from the perspective of direct insurance and reinsurance companies as well as the catastrophe modelling firms and actuaries that support the quantification of disaster risks. There is general agreement that climate change is occurring and leading to more significant losses. In Japan, for example, previously uncommon events such as winter storms, tornadoes and hail storms have begun to emerge more frequently.

The Inter-Governmental Panel on Climate Change's (IPCC) special report on extreme events provided strong evidence of an increase in heat waves and a rise in sea level. New global temperature records are being set every year and the world has already reached a 1°C temperature rise over the pre-industrial era (50 per cent of the ceiling established by governments). A critical risk in terms of the occurrence of extreme events is warmer water which leads to increased evaporation and fuels convective storms and cyclones and more intense precipitation events. The increased availability of data and improvements in scientific understanding have allowed for better forward predictions on weather activity with modelling firms now able to provide estimates of activity looking forward five years. The actuarial industry is also devoting increasing attention to the measurement of climate change, for example, with the development of a climate change index in North America.

Left to right: Masaaki Nagamura, General Manager (Corporate Social Responsibility), Tokio Marine and and R. Dale Hall, Managing Director of Research, Society of Actuaries.

The insurance sector—as one of the sectors most impacted by climate change—has been examining these issues for many years. However, the expertise and capacity of the insurance sector has been underutilised. Only 30 per cent of total economic losses have been insured (with the proportion even lower in emerging markets). Insurance companies need

to continue to work on designing products for lower-income clients, including products that lower administration, claims adjustment and distribution costs. The sector also needs to take the risk of investing in immature markets as a future opportunity for growth.

While a significant "financial protection gap" remains for privately-owned assets, the gap is even more significant for public sector assets and liabilities. Insurance companies need to invest significantly in raising awareness of the benefits of financial protection for governments.

Progress has been made in a number of countries, particularly where public-private partnerships have been established to address insurance supply and demand issues (e.g. Turkish Catastrophe Insurance Facility, Flood Re, etc.). In Germany, efforts by the insurance industry to raise awareness about flood risks —combined with a government commitment to not provide compensation for insurable damage—has led to a significant increase in insurance coverage for flood risk. A number of countries, including Mexico and countries in Africa and the Caribbean, have also sought financial protection for public assets and liabilities. International fora such as the Asia Pacific Economic Cooperation (APEC) have also placed increasing attention on the financial management of disaster risks.

In the context of increasing risk from climate change, the insurance sector also needs to play a more active role in providing advice on land-use planning, building codes and prevention measures—helping society manage risk using a forward looking perspective. The sector also needs to get ahead of the potential for significant liability risks as litigation around climate change causation develops.

From left to right: Peter Höppe, Head of Geo Risk Research/Corporate Climate Centre, Munich Re and Chair of the Munich Climate Insurance Initiative; Maryam Golnaraghi, Director, Extreme Events and Climate Risks, The Geneva Association; and Robert Muir-Wood, Chief Research Officer, RMS.

SESSION 2: INVESTING IN THE TRANSITION TO A LOW-CARBON ECONOMY

Moderator:
Steve Waygood, Chief Responsible Investment Officer, Aviva Investors

Panellists:
Michael Liebreich, Chairman of the Advisory Board, Bloomberg New Energy Finance
Tom Hutton, Managing Partner, XL Innovate
Matt Christensen, Global Head of Responsible Investment, AXA Investment Managers
Karsten Löffler, Managing Director, Allianz Climate Solutions

As institutional investors, the (re)insurance sector could support the transition to a low-carbon economy by allocating investments into assets that reduce greenhouse gas emissions (e.g., renewable energy power generation, energy efficiency). The industry has an increasing, although difficult to quantify, value-at-risk as a result of climate change and its potential impact—not only in terms of assets exposed to fossil fuel use and extraction—but also to broader financial markets should climate change lead to significant financial market disruptions. A report by The Economist Intelligence Unit has suggested that USD 43 trillion in market capitalisation could be lost in a scenario of six degrees of average temperature change.

Annual investments in "clean energy" (including enabling industries as well as low(er) carbon nuclear and gas power generation) have been stable for many years at around USD 330 billion, mostly as a result of the declining cost of many clean technologies which are now competitive with fossil fuel technologies. Investment in clean energy by non-OECD countries has now overtaken investment by OECD countries. There is also some evidence that clean energy issues are being considered as a factor in investment decisions across a broader range of asset classes (not just equities).

Insurance companies have made a number of commitments to increase their investments in clean energy. A few companies have chosen to divest from coal although there is a debate on whether this is more effective than engaging with coal companies to take steps to reduce their emissions (e.g. carbon capture and storage). It was noted that the depth of capital markets makes it difficult to starve an industry of investment capital.

A lack of bank-able projects (and countries) has been a barrier to growth in clean energy investment and led to significant demand for participating in a few projects (and increasing prices). In most cases, the risk that makes the clean energy project difficult to invest in is policy risk (i.e. the risk that energy policy will change), not technology risk. Where technology risk exists, the insurance sector can make an important contribution by providing insurance coverage for technology performance. For example, insurance coverage has been successful in reducing the significantly higher cost of debt faced by some renewable energy projects.

There are also some regulatory barriers to investing in clean energy (and divesting from high-emitting sectors). For example, in the case of asset managers (managing third party capital), the consistency of considering Environmental, Social and Governance (ESG) factors with their fiduciary duty to their investors has been a barrier for some. A recent U.S. Department of Labor announcement that ESG is consistent with fiduciary duty has provided needed clarity and reduces the risk

for investment managers in taking ESG into account. Declining prices for fossil fuel-related assets would also reduce any inconsistency between fiduciary duty and ESG considerations. Stewardship requirements that encourage companies to consider the long-term benefits for investors can also be helpful in supporting clean energy investments—particularly given the limited direct demand from investors to take such issues into account.

The regulatory treatment of long-term investments has been a more significant barrier. It was noted that 95 per cent of all investment by the U.S. property and casualty industry is allocated to government bonds, leaving limited scope for investments in clean energy. Regulatory capital charges for long-term investments are perceived to be a significant barrier to increasing investment by insurance companies and pension funds in clean energy. Regulatory frameworks (e.g. the energy transition law in France), better disclosure standards and credit rating methodologies that allow for a longer-term view could provide incentives for (or reduce disincentives against) investment allocations to long-term assets.

For insurance companies providing coverage for natural disasters, investments in the transition to a low-carbon economy should also have benefits for the liability-side of the balance sheet. Some companies are addressing climate change risks from this integrated perspective. Governments can also be a role model in terms of how they allocate the investments that they have influence on.

From left to right: Matt Christensen, Global Head of Responsible Investment, AXA Investment Managers; Michael Liebreich, Chairman of the Advisory Board, Bloomberg New Energy Finance; Steve Waygood, Chief Responsible Investment Officer, Aviva Investors; Tom Hutton, Managing Partner, XL Innovate; and Karsten Löffler, Managing Director, Allianz Climate Solutions.

SESSION 3: IS THERE A ROLE FOR REGULATORS IN ADDRESSING CLIMATE RISKS?

Moderator:
Cynthia McHale, Director (Insurance Program), Ceres

Panellists:
Nick Robins, Co-Director, UNEP Inquiry into the Design of a Sustainable Financial System
Monica Lindeen, Montana Commissioner of Securities & Insurance and President, National Association of Insurance Commissioners
Matthew Scott, Team Leader, Environmental Risks, Insurance Division, Prudential Regulation Authority, Bank of England
Stéphane Cossé, Director, Public Affairs, COVEA

Special address:
Nicolas Schimel, Chief Executive Officer, Aviva France

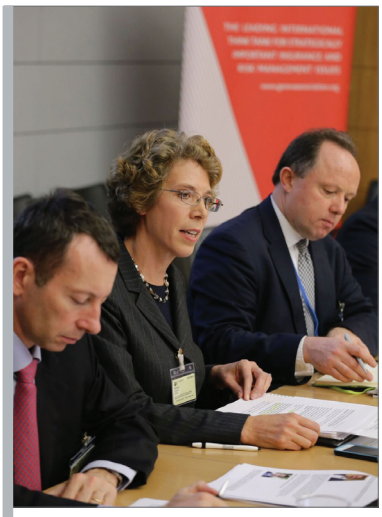
Climate change has implications for insurance companies on both sides of the balance sheet. Potential changes to the nature of disaster risks or the regulatory environment for greenhouse gas-producing sectors could have significant impacts on the financial soundness of insurance companies. These issues could have implications for insurance regulators who need to consider the potential risks to the companies that they regulate.

For insurance companies, climate change is an external risk that needs to be considered in operations and underwriting. Insurance companies need better models to capture this risk and a regulatory environment that allows externalities such as climate risks to be appropriately priced. The Bank of England has categorised the risks of climate change to insurance companies in terms of physical risks from natural disasters, liability risks related to attributing causation for climate change and transition risk

There is an increasing recognition of the potential implications of a changing climate for insurance regulation (including at the Financial Stability Board, which has begun work on enhancing climate change-related disclosure). Work by the UNEP Inquiry into the design of a sustainable financial system has identified a number of innovative measures aimed at ensuring that environmental considerations are taken into account in financial transactions, encouraging long-term investment through the calibration of capital charges and improving reporting on climate risks. In France, regulators require financial institutions to demonstrate the alignment of their business model with the effort to achieve a 2°C limit on temperature rise and are including climate risk factors in stress testing of the banking sector.

Climate change is irreversible and therefore will be a risk going forward. Insurance companies tend to base their risk management on the impacts of a 1-in-200 year event—climate change has a much higher probability of occurring than that. For regulators, time-horizon is important as some risks may be short- or medium-term (e.g. should there be a significant move away from fossil fuel assets) while others are most likely to be longer-term, such as the risks from natural disasters that are expected to become more frequent and intense over time.

A number of tools are available to regulators and supervisors in their oversight of how insurance companies are taking these risks into account. For example, regulators are taking climate change into account as part of financial institution examinations (which consider prospective risks) and are looking to companies to take climate change into account in terms of their Own Risk and Solvency Assessment (ORSA). The increasing attention to business model analysis as part of the supervisory process also allows regulators to ensure that companies are



From left to right: Nicolas Schimel, CEO of Aviva France; Cynthia McHale, Director (Insurance Program), Ceres; and Nick Robins, Co-Director, UNEP Inquiry into the Design of a Sustainable Financial System.

considering climate change risks in the development of their business strategies.

While regulators clearly perceive a role for themselves in supervising climate change-related risks, it is important to note that this type of analysis is being undertaken from the perspective of safety and soundness, consistent with the existing mandates of a prudential regulator/supervisor of insurance companies. Going forward, the objectives of policymakers in terms of climate change may need to be a consideration in developing regulatory and supervisory approaches.

Regulators and supervisors need to have the requisite expertise to undertake assessments of company practices in terms of managing climate change risks. Some regulators have developed guidance for examiners and provided additional training to build the necessary capacity.

The potential impact of any regulatory intervention, and particularly the incentives that intervention creates, needs to be carefully considered. For example, measures to encourage investment in clean energy assets, such as subsidies for clean power generation, could lead to over-investment and market disruption if/when the subsidy regime changes. On the other hand, regulatory impediments to long-term investment could lead to under-investment in clean energy. It was suggested that the existing regulatory framework has not been adapted to financing the transition to low-carbon economy and that adjustments were needed.

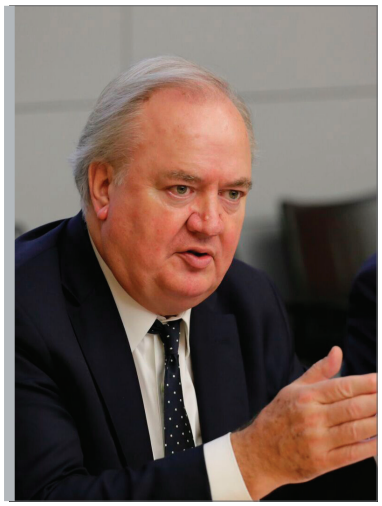
There may be value in terms of improving international cooperation on these issues, similar to what has been developed for the banking sector.

Nicolas Schimel, CEO of Aviva, France provides a special address at the meeting, while Monica Lindeen, Montana Commissioner of Securities & Insurance and President, National Association of Insurance Commissioners looks on.

CONCLUDING REMARKS

Special address: Denis Kessler

Chairman and Chief Executive Officer, SCOR



Climate change is not a new issue for the insurance sector or for The Geneva Association—the insurance sector has a real self-interest in reducing the impacts of climate change on the planet—it's not just an interest based on humanitarian values. Climate change is a rare issue in terms of establishing such a strong alignment of interests across all stakeholders—governments, policymakers, industries, populations—towards the objective of reducing climate change and its impacts on the frequency and severity of extreme events. If we don't address these issues, it will leave populations around the world without the support of the insurance and reinsurance industry for coping with the consequences of such events. It is in the interest of the insurance sector to mitigate the impacts of climate change and it is in the interest of the population to ensure that the insurance sector has the capacity to support the population.

We have to use insurance—not only as a means for providing financial resilience—but as an instrument for supporting risk reduction. The worst outcome would be that the size of the risks facing the world as a result of climate change leads the insurance sector to retreat from playing a role. If the insurance sector retreats, it would leave populations, corporations and governments without any support to manage extreme events such as floods, tornadoes, hurricanes, storms, etc. —therefore it is key to maintain insurability. Insurability is not a given— it can disappear when events are out of control. If there is a multiplication in extreme events, we will see the insurance market shrink to the point where it will be difficult for households, corporations and governments to find support.

Reinsurance and insurance provide an absolutely vital social and economic function by signalling, through pricing, the true nature of risk. When the insurance sector signals an increase in risk through higher pricing—while no one likes to see higher premiums—it provides an important signal that the frequency and severity of risks are increasing and that something needs to be done because insurability and capacity are shrinking. This is critical for raising the awareness of the population of increasing risk levels. If a risk is free, no one will believe that there is a real risk.

Reinsurers are able to manage the risks through their ability to pool those risks on a global basis, which allows them to manage dramatic changes in the risk environment. Reinsurers' ability to pool risks from different parts of the world is necessary in ensuring their capacity to absorb the losses from more frequent and severe events linked to climate change. The consequences of extreme events cannot be borne by a country or region alone, they need to be managed by the world as a whole. This is why reinsurance is at the centre of the effort to manage the implications of a changing climate and critical for absorbing the shocks from

events such as the floods in Thailand, hurricanes in the United States or forest fires in Canada and California that are linked to climate change.

Reinsurers can make an important contribution to managing climate change due to the knowledge they have developed in terms of risk management and disaster risk reduction and are happy to share this experience with governments, policymakers, businesses and individuals. A solution to climate change issues will only be found if we agree to share this expertise. When the insurance sector decides to provide coverage for a risk, it is based on an analysis of trends over 100 or even 200 years to determine whether there is a change in the risk level over time.

The insurance and reinsurance sector is developing new products to help their clients manage the implications of extreme events. No business in the world wants to put their capital at risk of climate change impacts—entrepreneurs should take on the risk of entrepreneurship, not the risk of extreme events. Businesses should protect their assets and people against the risks that they can protect themselves against, such as the risk from flood or storms or earthquakes.

Insurers and reinsurers are also important investors and should be encouraged to invest in low-carbon assets and divest from assets that are contributing to global warming. The sector does not need regulation to make this transition—it is best practice that should be based on an understanding that such practices are in the sectors' best interest. Most reinsurers are already doing this.

Despite many initiatives to harness market-based risk transfer, there are a number of challenges that remain to be addressed and barriers that need to be removed —limited take-up, fluctuating market capacity, occasional pricing difficulties and sometimes conflicting public policy measures and regulatory environments that are not fully aligned with where we should be if we wish to address the risks of climate change. The sector needs to be able to assess the appropriate risk-based premium rate in order to send the right signals to the public on the severity of risk. Unless we address barriers to these issues, we will leave the population, business and governments with significant challenges in managing climate risk.

One example of regulatory misalignment is the capital charges under Solvency II for investments in infrastructure and private equity. Solutions to climate change are likely to come from investments in private equity—could be in solar energy or hydrogen or some other technology that has yet to be imagined. Letting insurance and reinsurance companies invest in numerous projects will support the identification of viable solutions. Forcing insurance and reinsurance sector through regulatory requirements to invest in public bonds will not support the effort to find climate change solutions. Allowing investors to take risks in the

search for climate change solutions on the asset-side will diminish the risk from the liabilities that insurers are accumulating. This needs to be fixed today.

A stable regulatory and policy environment is also key to encouraging long-term investment. Insurers can't invest for the long-term where they are faced with changes in regulation or taxation or the support available for such investments. Reinsurance company liabilities can involve very long-time frames—50 years. To invest in projects that match the timeframe of those liabilities, insurers need a long-term commitment to regulatory stability. There needs to be a new deal between governments and institutional investors where investors provide the financing and capital and governments provide stability on the rules and visibility to investors on these rules. Insurers are already facing increased natural disaster risk, why should they also face regulatory risks?

No stakeholder will be able to solve these challenges alone. The public and private sectors need to unite their efforts—if we don't, we will all suffer the consequences of global warming. Mega-cities are a global risk that we have created by concentrating people and economic activity in locations vulnerable to natural disasters. The only way to manage this risk is by working together with mayors, housing authorities, and planners. Risk management is the only answer to the challenges that we face and should be the responsibility of all stakeholders, not just insurance or reinsurance companies. A risk management culture needs to be included in each planning decision that is made at all levels of society. Avoiding claims and indemnification is better than finding the resources to meet those claims.

Science and technology need to be supported in order to find innovative ways to address climate risks. Insurance and reinsurance sectors have a wealth of data, forward-looking modelling capacities, and exposure data that needs to be shared to help understand climate risks.

CONCLUDING REMARKS

Closing remarks: Anna Maria D'Hulster

Secretary General and Managing Director, The Geneva Association

As the world leaders have convened in Paris to negotiate an international framework agreement on Climate Change during COP21, the joint GA/OECD discussions touched on the practicalities of how to build resilience to impacts of climate change and what role the insurance sector can play.

The Geneva Association is unique in the sense that it brings together approximately 80 CEOs of the largest international insurance and reinsurance companies with the purpose of conducting research and drive the debate on topics that are relevant for the insurance industry and society. These presently are: Extreme Events and Climate Risk, Global Ageing and Pensions, Financial Stability and the Protection Gap (from a top down point of view). Regarding climate risk, The Geneva Association has achieved an industry level consensus through its Climate Statement which was issued on 19th November 2015, to which 68 CEOs, who collectively represent US$1.2 trillion of premium volume and manage total assets of more than US$13 trillion, were signatories. This statement covers CEO commitments on climate across several dimensions, not least, customers, products, UN and policymaking institutions and addresses activities like research, product innovation and adaptation, adaptation measures (like building codes) whilst working with institutions and governments at different levels.

The insurance industry has played a critical role in helping nations build economic resilience in face of catastrophes, yet far too few of the world's people benefit from the resilience offered by risk sharing and transfer schemes. The importance of such schemes is increasingly appreciated in light of protection of sovereign risk, along with SMEs and individuals.

As an industry, (re)insurers are constantly developing and providing innovative products and specialized services for those at risk to ensure greater economic and financial stability in face of challenges posed by extreme event and climate risks.

As major institutional investors (re)insurers are engaging more closely with policymakers, regulators and the wider investment community on the development of relevant and sound frameworks that encourage low-carbon investment practices. Finally, the role of regulations in helping pave the way, rather than hurdling utilization of the benefits of insurance to the society.

However, the insurance industry recognizes that no stakeholder can succeed alone in solving the challenges of climate change. Events such as the joint GA/OECD meeting are extremely important in ensuring an active dialogue between the public and private sector that could lead to the identification of critical partnerships and cooperation of the industry with policymakers, governments, regulators and other stakeholders to ensure that the best this industry can offer is realized by more people around the world.

The importance of dialogues such as this one cannot be overstressed. The public and private sectors need to work together to determine the best paths forward and establish and/or further strengthen partnerships that could bring economic resilience to governments, businesses and individuals, filling the large protection gap.

Left to right: Denis Kessler, Chairman and CEO, SCOR; Adrian Blundell-Wignall, Director, Directorate for Financial and Enterprise Affairs, OECD; and Anna Maria D'Hulster, Secretary General and Managing Director, The Geneva Association.

CONCLUDING REMARKS

Closing remarks: Adrian Blundell-Wignall

Director, Directorate for Financial and Enterprise Affairs and Special Advisor to the Secretary-General on Financial Markets, OECD

The implications of climate change for insurance and capital markets should continue to be an important issue for the OECD and the Insurance and Private Pensions Committee going forward. For insurance companies—and the regulators and supervisors that oversee them—the implications of climate change are only beginning to materialise. More than almost any other sector of the economy, the insurance sector will have a key and lasting contribution to climate change mitigation and adaptation. Climate change is occurring and is leading to—and will continue to lead to—greater losses and damages. Without significant investments in both mitigation and adaptation climate change will increase the scope of risks that are uninsurable in the future.

Studies have shown that well-insured economies face more limited economic disruption from disasters than economies with limited insurance penetration and coverage. Yet we are living in a world where insurance has not fulfilled its full potential role in supporting disaster losses, with the vast majority of damages and losses from disasters being covered by households, businesses and governments, and not by the insurance and capital markets that have the capacity to absorb these losses. In this context, policymakers have a critical role to play in ensuring that insurance sector policy supports insurance and capital markets' ability to absorb increasing disaster losses and address the market failure that occurs where actuarially-based insurance premiums are beyond the willingness-to-pay of large parts of the population in many countries.

Insurance companies are some of the biggest institutional investors and their decisions on investment allocations can have a significant impact. There will be no transition to a low-carbon economy if insurance companies do not support such a transition with their investment decisions. Fortunately, the incentives for insurance company investment in low-carbon assets is generally-aligned—particularly for the non-life insurance companies that absorb the damages and losses from natural catastrophes. Investments that support climate change mitigation should over time have a positive impact on reducing the costs of damages and losses from climate-related disasters.

Managers of assets, which have been entrusted to them by policyholders, have a number of considerations to make when allocating the resources. Foremost, they need to ensure adequate returns are generated in order to meet their commitments to policyholders. They are expected to take into consideration various factors, including long-term factors such as climate change risks. This is part of the discussion related to what fiduciary duties entails (understood in the broader sense of the term).

Climate change also has important implications for how insurance companies are regulated and supervised. What will be the impact on affordability and take-up rates if a conservative projection of climate change risks is made? Should the political commitment to a low-carbon economy be taken into account when applying capital requirements on exposures to green or fossil fuel investments? This session should be the beginning of a longer discussion on how the policy and regulatory framework for insurance companies should take climate change into account. By bringing together finance ministries and insurance regulators from both OECD and key non-OECD countries, the OECD Insurance and Private Pensions Committee is an ideal forum for such a discussion.

The OECD will continue to contribute to this discussion. We recently published a report on *Financial instruments for managing risks related to climate change* that identifies measures for enhancing the demand and supply of financial protection against disaster risks and made a number of recommendations for further research. The OECD has also been asked to develop guidance on the governance of institutional investment related to climate change related risks which is the subject of a panel discussion at the OECD pavilion at COP 21 on 10 December. I look forward to a continuing dialogue on these important issues.

FURTHER READING

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This review provides an insight into the discussions at a joint conference held by The Geneva Association and the OECD in Paris on 3 December 2015 at the OECD headquarters. The meeting took place concurrently with the COP21 climate summit and explored the potential contribution of the (re)insurance sector to climate change mitigation and adaptation measures—in particular, the role of the insurance sector in a climate change agreement; managing the financial risks of extreme events in a changing climate; investing in the transition to a low-carbon economy; and, the role for regulators in addressing climate change risks.

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