

The Geneva Association

Annual Report 2012/2013 40th Anniversary







The Geneva Association (The International Association for the Study of Insurance Economics)

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 policy-makers, 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.

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

Vice Chairmen: Mr John **Strangfeld**, Chairman and CEO, Prudential Financial, Inc., Newark; Mr Kunio **Ishihara**, Chairman of the Board, Tokio Marine & Nichido Fire Insurance Co., Tokyo; Mr Michael **Diekmann**, Chairman of the Management Board, Allianz SE, Munich.

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Secretary General: Mr John H. Fitzpatrick, Basel/Geneva.

Vice Secretaries General: Prof. Jan Monkiewicz (Head of PROGRES and Liaison—Eastern Europe), Warsaw; Mr Walter R. **Stahel** (Head of Risk Management), Geneva.

Heads of Programmes and Research Directors: Dr Etti **Baranoff** (Research Director, Insurance and Finance), Richmond, VA; Dr Christophe **Courbage** (Head, Health and Ageing and Insurance Economics), Geneva; Mr Daniel **Haefeli** (Head, Insurance and Finance), Geneva; Mr Anthony **Kennaway** (Head, Communications), Geneva; Prof. Krzysztof **Ostaszewski** (Research Director, Life and Pensions), Normal, IL.

Special Officers: Mr Katsuo **Matsushita** (Liaison—Japan & East Asia), Yokohama; Mr Richard **Murray** (Head of Liability Regimes Project), New York; Dr Hans Peter **Würmli** (Chairman of Chief Risk Officers Network), Zurich.

Chairman of the Scientific Advisory Council: Prof. Harold Skipper.

Former Presidents of The Geneva Association: Prof. Raymond **Barre**, Paris (1973-1976); Mr Fabio **Padoa**, Trieste (1976-1983); Mr Julius **Neave**, London (1983-1986); Prof. Dr Dr e.h. Reimer **Schmidt**, Aachen (1986-1990); Sir Brian **Corby**, London (1990-1993); Drs. Jan H. **Holsboer**, Amsterdam (1993-1999); Mr Walter **Kielholz**, Zurich (1999-2003); Mr Henri **de Castries**, Paris (2003-2008); Mr Martin J. **Sullivan**, New York (2008); Mr Jacques **Aigrain**, Zurich (2008-2009).

Former Secretaries General of The Geneva Association: Prof. Orio Giarini (1973-2000), Mr Patrick M. Liedtke (2000-2012).



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Chairman's statement

I am very pleased to report to you in this landmark year for The Geneva Association as it celebrates its 40th anniversary.

Since its formation by Raymond Barre, former Prime Minister of France and a select group of European insurance CEOs in 1973, The Geneva Association has developed and grown enormously. Today, our Members are headquartered in 27 countries around the world, employ more than two million people, serving customers in more than 140 countries and have total assets of more than US\$11.7tn.

Since the Kyoto General Assembly in 2009, the strategy adopted by the membership to share our research more widely and to increase our influence has made significant progress. Today the Association is: 1) more visible as an active participant in the current global insurance dialogue, 2) more influential with policymakers because of the research we have published, and 3) more actively engaged with its membership, than ever before.

These past four years have also highlighted the value of having an organisation focused solely on insurance interests to represent the industry at the global level. The Association's class-leading research on systemic risk has proved invaluable in appropriately articulating to governments, central banks and our other stakeholders the important role insurance plays in absorbing insurance and financial risks from the economy.

The regulatory landscape has been particularly dynamic with important developments in the G20-initiated international discussions on the designation of systemically important insurers (G-SIIs). The responses the Association has provided during the year within the framework of the International Association of Insurance Supervisors' (IAIS) proposed Designation Methodology and Policy Measures & Consequences consultations, and the research papers, Surrenders in the Life Insurance Industry and their Impact on Liquidity and Variable Annuities: An Analysis of Financial Stability, have been significant contributions to specific policy-related discussions under way. The Cross industry analysis study reached international opinion-forming commentators in the media and has remained the focus of considerable discussion with the international regulatory and supervisory bodies, central bankers and policymakers.

While 2011 was an overall record year for natural catastrophe losses, 2012 was notable for the higher proportion of global natural catastrophe losses experienced in the United States. Combined, these last two years have highlighted the importance of disaster risk reduction in both the developing and developed world, and this has been a key focus of the Association's



Nikolaus von Bomhard Chairman of The Geneva Association, Chairman of the Board of Management, Munich Re Risk Management programme. The Climate Risk and Insurance working group has been examining the role the insurance industry can play in disaster risk reduction efforts, and has been working with the United Nations Office for Disaster Risk Reduction (UNISDR), not least providing insurance case studies for this year's Global Assessment Report on Disaster Risk Reduction. A report on the implications of ocean warming for risk modelling and risk transfer mechanisms is also forthcoming and will be published in time for the General Assembly.

The challenge of global ageing is also well and truly upon us. Social security systems and private sector pension funds are under increasing pressure caused by the ageing of the world's population. So too are health services, where an ageing population has higher levels of reliance on health care systems due to age-related illnesses such as Alzheimer's disease and dementia. The work of both the Association's Health and Ageing and Life and Pensions research programmes is focused on issues arising from these phenomena and the potential role of insurance as part of the solution. Both programmes will be holding important conferences later this year on these issues. The Life and Pensions programme conference will take place in the U.S., where state and municipal pensions are under extreme pressure due to fiscal issues

and low interest rates. The Health and Ageing programme will hold a conference entitled, "Insuring the Health of an Ageing Population" cohosted by Swiss Re in Zurich that will explore the complex issues in this area.

It is also a landmark year for me because, after four years as Chairman of The Geneva Association, I will step down at the General Assembly. Over these last four years, the Association has made great strides in developing its impact and reputation, and has become the leading voice of the insurance industry at the global level, particularly on the issue of systemic risk regulation.

This progress has been made as a result of the contributions and engagement of the Board and their staff, the Members and, of course, the work of the staff at the Association. I would like to thank all of those involved and urge you all to continue to participate actively with the Association in all its activities and thereby fully utilise its potential for the development of the insurance industry. I will remain fully engaged in the Association and wish the new chairman, who will be voted in at the General Assembly, every success in their new role.

Secretary General's statement

I am very pleased to report to our Members after this first year as your Secretary General. The Geneva Association has continued to develop a number of global initiatives in its areas of focus, in particular on systemic risk and regulation, climate risks and global ageing. This Annual Report aims to provide a summary of some of the key research work on these issues under way on your behalf at the Association.

Our work is being recognised. For example, the Cross industry analysis study and our other work on financial stability have been the subject of a considerable number of important meetings, including those with central banks such as the Bank of England, the Bank of Japan and the monetary authorities in Hong Kong and Singapore; regulators and supervisors such as the Financial Stability Board (FSB), the International Association of Insurance Supervisors (IAIS); and a panoply of national regulators and trade bodies. It has also featured several times in the Financial Times as well as the *Frankfurter Allgemeine* Zeitung and other opinion-forming national newspapers. In September, The Geneva Association was awarded the "Global Insurance Initiative of the Year" for its work on systemic risk at Insurance Day's Worldwide Reinsurance Awards.

Operationally there is more that the Association can do on behalf of its Members and the wider industry. Many of the issues our industry faces at the global level cut-across the concentrations of our research

programmes. For example, the issue of global ageing spans Life and Pensions, Health and Ageing as well as, potentially, accounting and/or regulation. We are striving to work in a more flexible way to address this, drawing on the expertise of several programmes to tackle topics comprehensively. We have already made progress. In October, we addressed the intersection of liability regimes and climate change in a speech at a University of Connecticut Law School event. And in this annual report you will see that the Association has adopted a topicsbased approach to its priority subjects and will be drawing on its resources and staff accordingly.

There is also more that we can do to develop closer working relationships with our Members' companies and, where appropriate, tap into their expertise and knowledge through working groups, conferences and articles. Many Members can get more from the range of working groups, conferences and other forums offered to their senior staff such as chief financial officers, chief risk officers, chief investment officers and chief economists by the Association, and we are working on raising awareness of these opportunities. Achieving this will enable us to continue driving the growth and stature of the Association on your behalf both within the industry and with our other important stakeholders.

With each report on financial stability, we have successfully informed and taken forward the discussions with



John H. Fitzpatrick Secretary General, The Geneva Association regulators and supervisors on behalf of our Members and the industry. While financial stability has been an important focus of our Association over the last three years, I expect our focus to rebalance this year, driving forward some of our other research programmes, in particular, retirement systems and climate risks.

The continued development of the Association's visibility and influence is a top priority and we are therefore investing in some of our key strategic platforms. We are in the final stages of delivering a new website that will be live by the General Assembly; it will provide a cutting edge online experience that will, inter alia, provide an extranet for Members and working groups, and enable us to exploit the increasingly dynamic social- and multi-media landscape. We have replaced our contacts database with a state-of-the-art customer relationship management system that will support and enhance our mandate to interact more meaningfully with our stakeholders. We have upgraded our online library to deliver a better resource for our Members and the industry that encompasses the Association's work from its foundation 40 years ago to the present day.

As this year is the 40th anniversary of the Association, the London Members have organised a spectacular programme to accompany the important annual discussions and sessions at the General Assembly. I look forward to seeing many of the Members there, but also expect to meet and update each and every Member during the course of the next year on the Association's activities and listen to your perspectives, not least, on new areas of emphasis important to you.

It remains for me to extend our thanks, on behalf of the membership, to Nikolaus who has done a tremendous job of chairing the Association over the last four years. He has been instrumental in its development over that period and leaves it well positioned to increase its momentum and growth. I would also like to extend my thanks to the staff of your companies who have made significant contributions to our working groups, conferences and publications. Finally, I would like to thank the staff of the Association for their hard work over the last year.

I look forward to making 2013 another successful year of development for the Association.

Board of Directors

Executive Committee

CHAIRMAN

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



1st VICE CHAIRMAN

John Strangfeld Chairman and CEO, Prudential Financial Inc.



2nd VICE CHAIRMAN

Kunio Ishihara Chairman of the Board, Tokio Marine & Nichido Fire Insurance Co.



Michel Liès Group CEO, Swiss Re Group



3rd VICE CHAIRMAN Michael Diekmann Chairman of the Management

Board, Allianz SE

Board of Directors



Carlo Acutis Vice President, Vittoria Assicurazioni



Patrick de Larragoiti Lucas President, SulAmérica Seguros



Martin Senn CEO, Zurich Insurance Group



Tidjane Thiam Group Chief Executive, Prudential plc.



Sergio Balbinot Managing Director, Generali Assicurazioni S.p.A.



Donald Guloien, President and CEO, Manulife Financial Corporation



Esteban Tejera Montalvo 1st Vice Chairman, MAPFRE



Richard Ward CEO, Lloyd's



Henri de Castries Chairman of the Management Board and CEO, AXA



Denis Kessler Chairman and CEO, SCOR



Mike McGavick CEO, XL Group plc



Yan Wu Chairman and President, The People's Insurance Company (Group) of China

Key collaborators

(as of 1 April 2013)



John H. Fitzpatrick Secretary General and Managing Director



Christophe Courbage Head of Health and Ageing and Insurance Economics



Etti Baranoff Research Director Insurance and Finance



Walter R. Stahel Vice Secretary General Head of Risk Management



Daniel Haefeli Head of Insurance and Finance



Kathrin Hoppe Insurance Regulation and Supervision Expert

Collaborating experts

- Katsuo Matsushita, Liaison Officer for Japan and East Asia
- Richard Murray, Special Advisor and Head of Liability Regimes Project
- Henri Schwamm, Special Advisor (Publications and Local Relations)
- Brian Woodrow, Director, World Fire Statistics Centre
- Hans Peter Würmli, Chairman of the CRO Networks

Staff of The Geneva Association Secretariat

Barbara Botterill, Conference Coordinator
Eric Grant, Communications Manager
Valérie Hirt, Project Manager, IT Services
Françoise Jaffré, Webmaster and Publications
Patricia Linstaedt, PA to Secretary General
Véronique Martinez, Information Manager
Dennis Noordhoek, Research Assistant
Meghan Orie, Research Assistant
Valéria Pacella, Communications and Conferences Assistant

Frederick Schlagenhaft, Copy Editor and Editorial Manager of *The Geneva Papers on Risk and Insurance*



Jan Monkiewicz Vice Secretary General Head of Regulation and Supervision (PROGRES)



Anthony Kennaway Head of Communications



Krzysztof M. Ostaszewski Research Director Life and Pensions

Overview of The Geneva Association

Founded in 1973 by the CEOs of leading insurance companies, The Geneva Association is an international insurance think tank that produces and distributes high-quality research and analysis on global strategic insurance and risk management issues.

The Association is a non-profit organisation with offices in Geneva and Basel. It is funded by its Members, comprising a statutory maximum of 90 insurance and reinsurance CEOs, and governed through the activities of its Board of Directors.

The General Secretariat handles the daily operations of the Association, and its work is directed by the Secretary General, the Vice Secretaries General and the heads of research. The Association is further assisted in its research and relationships with international institutions through the support of external experts and liaison officers.

Our research promotes policyrelated, public discussions among our Members, academics, standard setters, policymakers, governments, international organisations and the public at large. We interact directly and constantly with a broad spectrum of relevant international organisations such as the International Association of Insurance Supervisors (IAIS), the Financial Stability Board (FSB), the G20 and the International Accounting Standards Board (IASB)/ Financial/Accounting Standards Board (FASB) as well as intergovernmental organisations, nongovernmental organisations and national bodies on global insurance issues.

Our objective is to educate and develop understanding on the unique

role and importance of insurance in economies and for societies through publications, conferences and active discourse with policymakers and others. We strive to be known as the best and most influential research think tank on global insurance issues in the world.

The Geneva Association research programmes

The Geneva Association augments its limited "in-house" research resources by calling on external committees, working groups and academic sources for input. It produces research, white papers and commentary on existing and future challenges and opportunities for the insurance industry.

These activities are handled through six research programmes, specifically, Insurance and Finance; Regulation and Supervision (PROGRES); Risk Management; Life and Pensions (formerly Four Pillars); Health and Ageing; and Insurance Economics.

Other sources of information for potential research activities are the expert conferences and seminars that are organised throughout the year by each of the research programmes (*see Events p. 46*) and the various networks of contacts that the research programmes have established during the past four decades.

Insurance and Finance Head: Daniel Haefeli Research Director: Etti Baranoff

This programme is dedicated to creating a platform for a global discussion on insurance and finance through its original research and by engaging its unique network.

The programme has been engaged in financial stability issues since 2009 when the financial crisis unfolded with significant consequences for the global financial system and a series of international regulatory steps were initiated. (*See Financial Stability p. 16 for more details.*) In addition, the programme provides a platform for discussion on accounting, solvency, investments and other aspects of insurance's role in finance and the wider economy.

In the past 12 months, the Insurance and Finance research programme and its Financial Stability in Insurance working group published five reports, white papers and The Geneva presentations, namely Association Response to the IAIS G-SII Methodology Consultation (July 2012), Surrenders in the Life Insurance Industry and their Impact on Liquidity (August 2012), IAIS Policy Measures Consultation Response (December 2012), Cross Industry Analysis-28 G-SIBs vs 28 Insurers: Comparison of systemic risk indicators (December 2012, updated February 2013), and Variable Annuities-An Analysis of Financial Stability (March 2013).

Regulation and Supervision Head: Jan Monkiewicz

Also known as PROGRES, this research programme focuses on questions related to regulation, supervision and international cooperation of insurance and financial services as well as other legal issues of importance. Currently it is actively contributing on behalf of The Geneva Association to the discussions on the Common Framework (ComFrame) project of the IAIS aimed at supervising internationally active insurance groups (IAIGs). It recently issued Group-Wide Risk and Capital Management of Internationally Active Insurance Groups—Current Practices and Challenges (April 2013). (See Financial Stability p. 21)

It manages The Geneva Association's cooperation with the supervisory authorities around the world and, in particular, with the IAIS. The annual PROGRES seminar gathers industry leaders, senior regulators and insurance professionals. The biannual newsletter published by the programme covers topical subjects on solvency, international supervisory cooperation, accounting and regulatory issues.

Risk Management Head: Walter R. Stahel

This programme examines the management of risk and opportunities, emphasising the role of insurance in a modern service economy. It is one of the earliest research programmes of The Geneva Association and is an integral part of its dialogue with economic and academic actors.

The programme seeks in particular to understand the nature of emerging and key strategic risks—such as extreme events and those stemming from societal and technological developments (e.g. cyber security) and to understand how and where they relate to insurance.

In the last few years, the programme has adopted an increasingly interdisciplinary approach, developing the Climate Risk and Insurance (CR+I) and Liability Regimes projects.

The Climate Risk and Insurance project aims to analyse climate risk and its implications, including adaptation and mitigation measures, show the need for regulatory and legislative support in the management of increased impacts on the industry, and raise awareness about the role of insurance and the limits of insurability. The Liability Regimes project was initiated in recognition that unexpected liability loss conditions were the leading causes of nearly every industry crisis of the past 30 years. The current scope of risks include: (i) climate-related extreme event liability, (ii) environmental liability, (iii) cyber liability, (iv) risks arising from new technologies, substances and processes, (v) food, nutrition and crop risks and (vi) directors and officers insurance, financial institution and professional liability.

The Risk Management programme publishes a newsletter twice a year and hosts several events: the CR+I seminars, the Annual Round Table of Chief Risk Officers, the annual CRO Assemblies and the Management of Risk in the Economy (M.O.R.E.) seminars. (*See Events p. 46 for more details.*)

The programme head, Walter R. Stahel, takes an active role in international meetings and expert groups. He was a member of the Steering Committee of SRA (Society of Risk Analysis) Europe and speaks regularly at major risk management conferences.

Life and Pensions Research Director: Krzysztof Ostaszewski

Formerly known as the "Four Pillars", this research programme is dedicated to research on social security and insurance, employment and retirement. It aims to study and understand the challenges that modern societies face with their old-age provision systems due to increasing life expectancies and changing labour markets.

Through this programme, The Geneva Association advocates the consolidation of the sources of pension financing by encouraging complementary development of the second and third pillars and, more generally, the modernisation of social security through greater integration of private insurance. More particularly, the programme aims to promote the idea of a "fourth pillar": the continued employment of retirees, mostly part-time, to supplement resources from the first three pillars of pension financing, that is, income from part-time work after retirement. The programme thus promotes a new design for employment and retirement policies adapted to the new service economy and to the needs of societies with changing demographics and lifecycles.

The issue of retirement funding has moved to the forefront of public policy concerns and The Geneva Association responded by publishing a report in June 2012 entitled Addressing the Challenge of Global Ageing-Funding Issues and Insurance Solutions. It also covers various aspects of retirement security and the four pillars concept through its biannual newsletter, special contributions and seminars. The Life and Pensions group held the conference "The Four Pillars-The Next 25 Years" in December 2012 in Geneva. (See Global Ageing p. 30 and Publications p. 52 for more details.)

Health and Ageing Head: Christophe Courbage

This programme seeks to bring together analyses, studies and research linked to issues in health provision and the role of insurance, with an emphasis on the changing demographic structure whereby the population over 60 largely exceeds that of other groups. The key is to test new and promising ideas, linking them to related works and initiatives in the health sector and trying to find solutions for the future financing of health care.

The following issues are of particular interest: the impact of an ageing population on health insurance systems, the effect of technology on health insurance, the development of health care systems and the capitalisation issue, the interaction of public and private systems in health provision, the performance of health systems, the health issues for an ageing population in the workplace, the factors influencing health status, the factors responsible for the increase in health spending, and the factors that contain the increase in health cost.

This past year, the research programme has focused on the issue of long-term care (LTC) and dementia as they relate to insurance. (*See Global Ageing p. 34 for more details.*) It also examined the controversial subject of genetics and insurance at the annual Health and Ageing seminar held last November in Stockholm. (*See p. 36 for more details.*)

Insurance Economics Head: Christophe Courbage

At the foundation of The Geneva Association, as its traditional name implies—The International Association for the Study of Insurance Economics—all research was undertaken by the Insurance Economics programme. As the range of research topics expanded, it maintained its original mission to stimulate and support academic and professional research work in the field and to diffuse knowledge and the results of research worldwide.

The research programme thus comprises the theoretical and academic activities of The Geneva Association, with the aim of fostering progress in the understanding insurance and promoting of studies on the interdependence between economics and insurance. It highlights in particular the importance of risk and insurance economics as part of modern general economic theory.

The programme publishes a biannual newsletter and organises the activities of the Amsterdam Circle of Chief Economists (ACCE), supports the European Group of Risk and Insurance Economists (EGRIE) and the World Risk and Insurance Economics Congress (WRIEC), and organises a joint seminar with the European Association of Law and Economics (EALE). (See Events p. 46 for more details.) The publication of The Geneva Papers on Risk and Insurance and The Geneva Risk and Insurance Review (see below) is also an essential activity of the programme.

In its role of promoting research in its field, The Geneva Association, through its Insurance and Economics programme, awards a series of prizes and research grants every year. These include the prestigious Ernst-Meyer Prize, The Geneva Association/ International Insurance Society Partnership-Shin (IIS) Research Excellence Award, research grants and subsidies for doctoral theses. (See Prizes and grants p. 50 for more *details.*)

The Geneva Association events

The Geneva Association organises or co-organises approximately 15 conferences and seminars every year. These include, but are not limited to, the Insurance and Finance, Regulation and Supervision, Health and Ageing, Life and Pension, and Liability Regimes conferences; the Amsterdam Circle of Chief Economists; the Annual Round Table of CROs and the CRO Forum; the Management of Risks in the Economy (M.O.R.E.) and Climate Risk and Insurance seminars; and, of course, the annual General Assembly. (See page 46 for more details.)

The Geneva Association publications

The Geneva Association issues a number of publications throughout the year. These include seven newsletters published twice a year (one for each research programme and the *World Fire Statistics Bulletin*), white papers by research working groups, ad hoc topical reports (The Geneva Reports), special contributions by experts and Members, and our flagship publications, *The Geneva Papers*

on Risk and Insurance and The Geneva Risk and Insurance Review. (See page 52 for more details.)

The Geneva Association prizes and grants

Every year, The Geneva Association presents an award jointly with the International Insurance Society (IIS) on applied research in the insurance area. The Association also awards annually the prestigious Ernst Meyer Prize for doctoral theses, and offers two grants for research to be conducted on insurance economics. (*See page 50 for more details.*)

2012-2013 highlights

2012

7 June 2012



John H. Fitzpatrick is named secretary general and managing director of The Geneva Association. He previously served as chief financial officer of both the Kemper Corporation and Swiss Re Group and is currently a non-executive director of AIG.

7 June 2012



Christine Lagarde, the managing director of the International Monetary Fund (IMF) addressed The Geneva Association's 39th General Assembly in Washington, D.C. providing the IMF perspective on the world economy and the role of insurance in the financial system.

31 July 2012

In a detailed response to the International Association of Insurance Supervisors (IAIS), based on extensive research

r e s e a r c h conducted over the last two years, The Geneva Association calls on supervisors to revise and improve the methodology to make it more appropriate for the insurance industry. *See the Financial Stability section p. 18 for more details.*

5 September 2012

The Geneva Association receives the "Global Re/Insurance Initiative of the Year 2012" award at the Worldwide Reinsurance Awards for its research and contributions to the discussions on the regulation and supervision of systemic risk in insurance.

5 October 2012

John Fitzpatrick addresses issues of litigation and third-party recoveries for climate condition victims as the keynote speaker of the University of Connecticut School of Law's inaugural conference on "Climate Change Risks & Liability". *See p. 26 of this report.*

October-November 2012

Following the publication of a report on the social and economic value of insurance, The Geneva Association launches a series of seven weekly articles in Insurance Day that highlights different aspects of insurers' contributions to the economy and society, and calls on the industry to communicate its achievements better.

8–9 November 2012

The Health and Ageing research programme organises a conference on "Genetics and Insurance", co-hosted with Länsförsäkringar



Secretary General John H. Fitzpatrick collects Insurance Day's Worldwide Reinsurance Award for "Insurance Initiative of the Year'" for the Association's work on financial stability, September 2012.

AB. Topics include the medical and ethical aspects of genetics, the use of genetic information in the life and health insurance markets, discrimination and actuarial fairness, and public issues linked to genetics. *See p. 36 for more details.*

4–5 December 2012

After the publication of The Geneva Report N° 6 in June on the challenge of global ageing, the Life and Pensions research programme returns to the critical issue of how to fund retirement, considering current global demographics, with a topical conference on "The Four Pillars: the next 25 years". See the Global Ageing section p. 30 for more details.

11 December 2012



The Geneva Association releases a *Cross industry analysis* comparing the named 28 global systemically important banks (G-SIBs) to 28 of the world's largest insurers. It is the first such quantitative comparison using the IAIS' indicators of systemic risk. *See the Financial Stability section p.* 16 for more details.

17 December 2012

The Geneva Association publishes *Proposed Policy Measures for Global Systemically Important Insurers*, its response to the IAIS' public consultation and the latest publication in a series of research papers and commentary on financial stability and insurance from the Association. *See the Financial Stability section p. 16 for more details.*

2013



The Geneva Association celebrates its 40th anniversary in 2013. Having been founded in 1973 by Professor Raymond Barre, former prime minister of France, and a small group of European insurance CEOs, the Association has developed into the leading voice of the insurance industry today.

17 January 2013

Walter R. Stahel, the vice secretary general and head of the Risk Management Programme awarded an Honorary Doctorate by the University of Surrey in recognition of his outstanding contributions to the field of sustainability.



From left to right: Professor Sir Christopher Snowden, President and Vice-Chancellor Dr John Forrest, Pro-Chancellor (and Presiding Officer of the Ceremony) Dr Walter Stahel Professor Roland Clift, CBE, Emeritus Professor of Environmental Technology (and Honorary Graduate Presenter).

27 March 2013

The Geneva Association publishes its sixth report on financial stability, *Variable Annuities—An Analysis of Financial Stability*, that examines the current characteristics and management of variable annuities and their potential for systemic risk. *See p. 21 for more details*.



April 2013

In April 2013 The Geneva Association provided a paper to contribute to the IAIS ComFrame discussions an analysis and key findings based on a survey of the risk and capital management practices of 19 internationally active insurance groups.



Financial stability: working towards effective financial supervision

International regulatory efforts to address systemic risk in the insurance industry continued to intensify throughout 2012 and into 2013. In particular, the process to identify global systemically important insurers (G-SIIs) has developed considerably the first half of 2013. The Geneva Association has continued its intensive dialogue with regulators, supervisors, central bankers and the insurance industry to develop research that addresses the issues that have emerged during the process.

At the time of writing, the designation of systemically important insurers (G-SIIs) is expected in the summer of 2013. While remaining supportive of the G20-launched regulatory initiatives to increase the resilience of the global financial system, The Geneva Association has remained focused on data and research that contributes to the development of processes and regulations that are appropriate for the insurance industry.

The Geneva Association's contributions to the technical discussions on G-SIIs have been well received by the International Association of Insurance Supervisors (IAIS), the Financial Stability Board (FSB) and other relevant stakeholders. In particular, the presentation of technical papers that explain and insurance mechanisms analyse have been welcomed and have been the subject of in-depth discussions with our regulatory and supervisory counterparts. At this stage, and despite the many challenges left to deal with, The Geneva Association has noted how the past and current

work has had a significant impact not only on the content of the discussions but also the standing of the insurance industry in the global debates surrounding financial stability and systemic risk. Insurers are playing a more prominent role and are being listened to with a special appreciation for the intellectual and analytical contributions to the global discussions on how best to develop greater financial stability. This is evident in the appearance of insurance considerations in the U.S. Congress, comments from the U.S. Treasury Secretary Ben Bernanke and other kev members of the FSB. It is also reflected in the new willingness of central banks to meet and discuss our work as well as in the regulatory process where, for example, regulators are now examining the activities that could cause systemic risks rather than taking an institution-based approach.

The more substantive discussions with the IAIS and FSB representatives in recent meetings indicate that the IAIS and FSB are engaging on the major points of our messages and have, in many cases, agreed with them. Expectations are that the conclusion of the process and its outcomes will be announced in the summer. It is encouraging that the focus of regulatory attention is on non-traditional and non-insurance activities (NTNIs), not the traditional activities of insurers as was the case a year ago. Similar views are now also expressed by non-insurance bodies, including some central banks and finance ministries in various countries.

Over the last year, our work has focused on helping the IAIS and FSB develop a process that appropriately addresses insurance activities. Alongside the publishing of responses to IAIS proposals and the development of research to address issues raised by the regulatory process, The Geneva Association has undertaken a number of meetings with key central bankers, policymakers, regulators and supervisors. These meetings have provided the commentary to accompany our research and provided an opportunity for dialogue on the issues we

Policy measures for G-SIIs: an escalating ladder of intervention

On 17 December 2012, The Geneva Association published its response to the IAIS's *Proposed Policy Measures for Global Systemically Important Insurers* in which it suggested three steps for applying appropriate policy measures to insurers in an escalating "ladder of intervention".

1. Positively identify and explain the rationale for selecting the non-traditional, non-insurance (NTNI) activities that are "systemically relevant" (SRAs), and consider whether the insurance group can appropriately handle the SRA through its internal processes, risk governance and capital position.

2. Ensure that the SRAs are carefully considered and that it would not impact the group's insurance activities; where the separation or segregation of an activity is necessary, the risks associated with the SRAs can be managed via internal risk management programmes and enhanced supervision that would eliminate the need for the complex and lengthy process of structural separation.

3. Ensure that the company's liabilities and capital for all SRAs address all material categories of risk associated with that activity. This may be through targeted rather than group-wide higher loss absorption (HLA) that combines risk-based capital and prudential requirements. have raised. The key milestones in this process are as follows:

IAIS proposed designation methodology

At the end of July 2012, The Geneva Association responded to the consultation on the methodology proposed by the IAIS for identifying G-SIIs.

The Geneva Association's analysis of the paper showed that several indicators outlined by the IAIS appeared to penalise, rather than reward, the risk reduction inherent in the insurance model. For example, many of the indicators focused on the size of insurers, ignoring the basic law of large numbers and the natural diversification of risk by business line and geography that tend to occur in the larger insurance businesses.

We also highlighted the potential for unintended consequences if the methodology is not modified to account for the specificities of insurance. For example, the current inclusion of traditional insurance activities in "large exposures" means that the considerable holdings of government bonds and bank-issued securities owned by insurers would be subject to this indicator. In order to manage their systemic risk ranking, insurers may seek to reduce their holdings in these important assets, making it harder for banks and governments to refinance. The response was noted in the Financial Times and other financial media and it appears that this effect is now understood to be detrimental to some aspects of financial stability.

Surrenders in life insurance

Conscious of the effects of liquidity stresses at an individual level, which may lead to mass withdrawals in times of economic uncertainty, some regulators and supervisors, raised the possibility of "runs" on insurance companies and their impact if they were to occur. To address these questions, The Geneva Association issued

a report in August 2012, *Surrenders* in the Life Insurance Industry and their Impact on Liquidity.

The report shows that liquidity risk is not a key threat for life insurers, due to their business model. Customers generally buy life insurance policies for long-term purposes and do not generally expect short-term liquidity from them. They also have disincentives to surrender (loss of guarantees, loss of protection, surrender charges and loss of tax benefits), if there is an option to surrender at all.

Insurance companies are nevertheless prepared to deal with such an unlikely event as mass surrenders and have put comprehensive liquidity management routines in place. They have done so through:

- product design to control liquidity risk;
- surrender assumptions, included in the actuarial calculation;
- regular checks to verify that they have sufficient liquidity to withstand panic surrender scenarios (including testing those scenarios in times of adverse capital market developments);
- contingency plans in the event company-specific risk tolerance levels are breached.

Empirical data show that, since 2007, surrender rates have decreased for many business lines. An analysis of U.S. industry data over the period 2002–2010 illustrates that the industry has proven to be capable of covering surrenders several times over all periods of time under examination.

The report concludes that regulators should be cautious not to lower surrender penalties and that, in times of extreme mass surrenders, rigid rules regarding ring-fencing that prevent asset exchanges across borders between the local entities of internationally active insurance companies, or between life and nonlife entities of a group, would be counterproductive. Finally, as in the case of circuit breakers, provisions for limiting trade on stock exchanges



"All large financial services and insurance companies should be subject to consolidated group supervision, with closely regulated holding companies."

> Robert H. Benmosche, President and CEO, AIG

Strategic challenges in a changed world

The Geneva Association's $9^{\rm th}$ Insurance and Finance Seminar London, 11–12 December 2012

Hosted by Lloyd's, the 9th Insurance and Finance Seminar focused on the challenges to the insurance industry in light of current economic conditions, technological innovations, natural disasters, low interest rates and regulatory challenges.

During the two-day seminar, CEOs and leading insurance executives discussed these many challenges but also analysed the opportunities they represent for the industry, notably strategic shifts to underwriting profits and greater diversification.

Panel discussions and presentations included CEO and CFO perspectives on strategic and financial challenges, financial stability in insurance (FSI) and G-SII designation and policy measures, the insurance industry's financial reporting and accounting moving forwards, and the issue of valuations.



Richard Ward, CEO, Lloyd's

Robert H. Benmosche, CEO of AIG, in a special keynote speech widely commented in the press, underlined the importance of taking an activities-based approach to regulation—stating that the issues faced by AIG in 2008 were due to non-insurance-related areas of the firm that ultimately had a disproportionate impact on capital and liquidity.



He further argued that large financial services and insurance companies should be subject to consolidated group supervision, which needs to be tailored to the structure of the financial company and the specific role it plays within the broader financial system. He particularly emphasised that inappropriate regulation could increase costs unnecessarily, reduce flexibility and, in fact, increase instability.

From left to right: John Fitzpatrick, Secretary General of The Geneva Association; Robert H. Benmosche, President and CEO, AIG; Simon Lee, Group Chief Executive, RSA Insurance; Bronek Masojada, Chief Executive, Hiscox plc; and Tidjane Thiam, Group Chief Executive, Prudential plc.

and partial suspension of surrenders can be economically justified.

Comparing banks and insurers

Since 2010, with the publication of its report *Systemic Risk in Insurance*—*An analysis of insurance and financial stability*, The Geneva Association has continuously highlighted the differences between the systemic relevance of the insurance and banking business models, since understanding these differences is essential to designing appropriate and effective regulation.

In 2012 it became clear that systemic risk was being considered in isolation for different financial services sector

constituents. Discussions between insurers and their regulatory counterparts lacked a fundamental analysis of the facts about the relative size of the activities of banks and insurers.

In early December 2012, The Geneva Association released its report *Cross industry analysis 28 G-SIBs vs. 28 Insurers—Comparison of systemic risk indicators.* This benchmark study represented the first-ever comparison of the 28 banks designated as "global systemically important" banks (G-SIBs) in 2011 by the FSB and 28 of the largest global insurers. It was presented at The Geneva Association's 9th Insurance and Finance Seminar in London.The research showed that:

• Insurers are smaller than banks and less intertwined with the global

economy: the biggest private insurer, by total assets, is only as large as the 22^{nd} largest bank.

- Insurers write considerably fewer credit default swaps (CDS) than banks: the G-SIB banks as a group carry 219 times more derivatives on their books than insurers.
- Insurers utilise substantially less short-term funding than banks: the insurer most reliant on short-term funding would rank 25th among banks.
- Insurers are much less interconnected to other financial services providers than banks.

The study provided policymakers and other stakeholders with a factual analysis that quantified the systemic risk of banks versus insurers on the basis of the criteria required by IAIS' data calls.

The study was updated in February 2013 to include the three banks that the FSB removed from the list in 2012 because they had fallen below the systemic risk threshold set by the FSB for banks. The update focused attention on the fact that even banks no longer considered systemically relevant by the FSB are still significantly larger than the largest insurers according to many criteria, notwithstanding the less interconnected and less systemically risky activities of insurers.

Based on this analysis, The Geneva Association called for a reasonable comparison of criteria with the banking sector so that the world would focus on entities representing high systemic risk and avoid designating a company without comparing it with other entities in the overall financial sector. Not doing this would undermine the activity-based approach the regulators and the industry are strongly supporting.

The report featured twice in the *Financial Times* including an opinion piece from lead columnist John Gapper and remains a reference point for our discussions with our regulatory and supervisory counterparts. In addition, it is clear that this report has been examined by the IAIS and several FSB members and we believe it has and will continue to influence designation and consequences for the insurance industry.

Global regulatory and supervisory architecture

The Geneva Association's PROGRES Seminar on Insurance Regulation and Supervision

Held in Geneva, Switzerland, 22–23 March 2012, the **28**th **PROGRES Seminar** focused on the topic "New regulatory and supervisory landscape. Who runs the show and who pays the bill?" With more than 100 participants, including senior regulators, industry leaders and insurance professionals, the seminar provided a forum for the exchange of views on the current and future shape of the insurance industry and its regulation.

The various panels and sessions during the two-day event highlighted the degree to which a sound global supervisory and regulatory framework is important if the insurance industry is to continue playing its vital role in the economy in providing long-term stability and financial protection for individuals and institutions.

The **29**th **PROGRES Seminar**, held in Geneva on 11–12 April 2013, dealt with "Recent Developments in Global Regulatory and Supervisory Architecture. Is There a Master Plan?"

Sessions involved in-depth discussions on systemic issues in the insurance industry, challenges and sopportunities for internationally active insurers within the global regulatory and supervisory frame-



Terry Vaughan, former CEO, NAIC, at the 29th PROGRES Seminar

work, cross-border crisis management and resolution, and consumer/policyholder protection. Panel moderators included Peter Braumüller, Chairman of the IAIS; Yoshihiro Kawai, Secretary General of the IAIS; Michael McRaith, Director of the Federal Insurance Office; and Carlos Montalvo Rebuelta, Executive Director of EIOPA.

Keynote speakers included Prof. Danuta Huebner, Member of the European Parliament, who spoke about the euro zone fiscal and



financial crisis and its global consequences, and Ben Nelson, the new Chairman of the National Association of Insurance Commissioners (NAIC), who presented the challenges of the U.S. economy in the aftermath of the global financial crisis and its wider effect.

29th PROGRES Seminar :Thomas Leonardi, Connecticut Insurance Commissioner; Monica Mächler, Chair Technical Committee, FINMA Switzerland; Karel van Hulle, Head of Insurance and Pensions, European Commission; Victor Rod, President of the Management Board, Commissariat aux Assurances; and Axel Lehmann, Group CRO, Zurich Insurance Group.

Variable annuities

By the end of 2012, it had become clear that some discussion and concern was focused on variable annuities (VAs) as a potential source of systemic risk. A Geneva Association working group was established to examine the market for and structure of VAs to answer these outstanding questions. In March 2013, a report on variable annuities was published that examined VAs and their role in the financial stability of the insurance industry.

Variable annuities fulfil a compelling social need for the ageing population worldwide by providing a product for them to save for their income needs during retirement. In times where traditional non-insurance sources of retirement income are disappearing, VAs have seen a substantial increase in sales over the last two decades in most markets (especially the U.S.) unlike other insurance sources of retirement income, which have failed to gain market appeal.

The main risks of VAs are insurance risk, capital market risks and policyholder behaviour risks. These risks are present in traditional insurance products as well, but to a different extent and magnitude. Variable annuity writers have developed many tools to manage these risks including product design, risk pooling, asset liability management and a diverse, overall balance sheet which provides natural hedges. VAs are products regulated by current insurance regulations.

Notwithstanding the increased complexity of VAs, the research did not unearth a scenario that would make a variable annuity writer a source of systemic risk to the global financial services market and/or the wider economy. Should an extreme scenario occur, other players of the financial services sector would run into serious difficulties long before insurers would experience the same problems. Experience has shown that insurers absorb, rather than amplify or accelerate, received risks from counterparties or from extreme scenarios up to a certain extent.

Other findings of the report include:

- Variable annuities are carefully regulated products.
- Even if they appear more complex, variable annuity products entail the same risk factors as other life and savings products and are carefully managed to reduce risk exposures.
- Variable annuity writers use derivatives for risk management purposes (hedging), not to speculate, and derivatives are actively managed through dedicated hedging programmes and teams.
- Insurers' use of derivatives represents a fraction of overall derivative markets.
- The use of derivatives for asset liability management (ALM) purposes reduces systemic risk as it supports the solvency of insurers and thus reduces the probability of a failure.
- Diversification exists within and across variable annuity portfolios and other life and savings' business lines.
- The product design of VA policies incentivises policyholders to follow a counter-cyclical behaviour with regard to surrendering policies, thus providing additional stability to the financial system.

Common Framework (ComFrame) for the supervision of IAGs

Jan Monkiewicz, Head of the Programme on Regulation and Supervision (PROGRES), Hans Peter Würmli, Chairman of the CRO Network and Kathrin Hoppe, Insurance and Regulation Expert, contributed on behalf of The Geneva Association to the discussion on ComFrame, an IAIS project to supervise internationally active insurance groups (IAIGs).

At the ComFrame Dialogue during the IAIS Annual Conference, The Geneva Association highlighted a



number of concerns among IAIGs to be addressed:

- The application of ComFrame should not distort competition among IAIGs and between IAIGs and other insurance companies or groups.
- ComFrame should not add complexity to the supervisory process.
- The greatest challenge of ComFrame remains the reconciliation of different group capital, solvency and valuation standards.

Hans Peter Würmli and Kathrin Hoppe interviewed 19 IAIGs about their group-wide risk and capital management practices. The interviews were the basis for an analysis conducted by The Geneva Association's ComFrame working group, which is co-chaired by Dr Panos Charissiadis (Munich Re) and Kathrin Hoppe.

The survey was issued as a report entitled *Group-Wide* Risk and Capital Management of Internationally Active Insurance Groups— Current Practices and Challenges and edited by the working group co-chairs. Key findings include:

- Various enterprise risk management (ERM) and capital management practices are applied around the globe by IAIGs, revealing both similarities in principles applied and diversity reflecting individual company characteristics. Insurance groups consider this to be beneficial to the market, as uniform approaches to risk management introduce the risk of herd behaviour and outcomes.
- Internal models, when used, are considered to be an integral component of business steering processes. They enable a consistent view across business units, ensure that the long-term nature of insurance business is properly accounted for and support strategic decisionmaking.
- IAIGs have processes in place (or are taking measures) to ensure an

effective link exists between their risk management and their capital management. Internal models, when used, have been developed and reviewed over time to make sure that all risks are appropriately captured.

The chief risk officers who were interviewed did not think that common standards for group capital could be developed in the short term. In their view the IAIS should aim to recognise the internal economic valuation approaches developed by groups to measure risk exposure and assess group capital adequacy. A set of harmonised principles for assessing group capital should be developed and agreed.



Publications in 2012/2013 on financial stability and regulatory issues

Research reports and presentations

- Institutional Framework for Global Insurance Regulation and Supervision (December 2012) by Jan Monkiewicz, Head of the Programme on Regulation and Supervision (PROGRES) and Vice Secretary General of The Geneva Association, and Patrick M. Liedtke, former Secretary General and Managing Director of The Geneva Association (January 2001–June 2012).
- Cross industry analysis 28 G-SIBs vs. 28 Insurers—Comparison of systemic risk indicators (December 2012, updated February 2013)
 A first-ever comparison of the 28 banks named global systemically important (G-SIBs) in 2011 by the FSB and 28 of the largest global insurers.
- Variable Annuities—An Analysis of Financial Stability (March 2013)

A report on the characteristics and management of variable annuities and how variable annuities and their management should be considered in the discussion of systemic risk in the insurance industry.

Group-Wide Risk and Capital Management of Internationally Active Insurance Groups—Current Practices and Challenges (April 2013)

A survey analysis that aims to support the discussions underway at the IAIS on a Common Framework for the Supervision of Internationally Active Insurance Groups (ComFrame).



Journals

- The Geneva Papers on Risk and Insurance—Issues and Practice, Volume 37, Issue 3 (July 2012), Special Issue on Insurance and Finance
 "The Financial and Economic Attributes of Insurers": editorial by Etti G. Baranoff, Research Director of the Insurance and Finance Programme.
- □ The Geneva Papers on Risk and Insurance—Issues and Practice, Volume 38, Issue 2 (April 2013), Special Issue on Insurance and Supervision

"Dialectics of the current regulatory and supervisory developments in insurance": editorial by Jan Monkiewicz, Head of the Programme on Regulation and Supervision (PROGRES) and Vice-Secretary General of The Geneva Association.

Newsletters

- □ Insurance and Finance Newsletter Nos 10 (August 2012) and 11 (February 2013) edited by Etti G. Baranoff, Research Director of the Insurance and Finance Programme.
- Regulation and Supervision (PROGRES) Newsletter Nos 55 (June 2012) and 56 (December 2012) Edited by Jan Monkiewicz, Head of the Regulation and Supervision Programme.



Conference call with John Fitzpatrick on the cross industry benchmark study available at www.genevaassociation.org



Climate risk and insurance

In 2012/2013 The Geneva Association intensified its research on the cooperation that must exist between governments, insurers and citizens if societies and nations are to prepare for and mitigate effectively the impact of natural catastrophes and other extreme events. The evidence suggests that poor and uncoordinated risk management is as much a contributor to losses from extreme events as the effects of climate change. Though largely absent from the 2012 U.S. presidential elections, the issue of climate risk was thrust to the forefront of the U.S. policy agenda by Hurricane Sandy and with President Obama's subsequent 2013 State of the Union address.¹

Indeed, there is now evidence that the climate change over recent decades has led to higher volatility of many climate- and weather-based extremes.² Even former sceptics of climate change have started to admit that global warming is detectable and that it is most likely influenced by human emissions of greenhouse gases (GHG). This is not to say that human activity is the primary cause of climate change, nor can we determine the degree to which it contributes to global warming—only that it evidently does so.

Research at The Geneva Association on the effects of climate change and its associated risks are handled by the Climate Risk and Insurance (CR+I) working group. Under the aegis of the Risk Management programme of The Geneva Association,³ this group has assembled a team of experts from internationally renowned institutions that is co-chaired by Kunio Ishihara, Chairman of the board of Tokio Marine & Nichido Fire Insurance Company, and Michael Butt, Chairman of Axis Capital Holdings.

The CR+I working group continually flags the external challenges to be addressed at the political, educational and social levels to prevent repeated losses in hazardous regions. It further pursues the objective of identifying and analysing issues related to climate risk that are of specific relevance to the insurance industry, such as the likely range of future claims costs, new business opportunities and scenario testing.

Insurers' contributions to disaster reduction

The frequency and severity of natural catastrophes (NatCats) has radically increased since the turn of the century, causing major economic losses and human suffering. Mitigating losses and protecting populations has become one of society's greatest challenges. The magnitude and scope of these events require the involvement and cooperation of multiple actors to strengthen societal resilience.

Superstorm Sandy, which struck the East Coast of the United States in late October 2012, is one extreme event among the many that occurred worldwide in the past 12 months. It is, however, arguably the one that generated the most media coverage and, as such, renewed calls not only to address the issue of climate change but, more urgently, also to focus on disaster risk reduction measures.

The Geneva Association has collaborated over the past months with the United Nations Office for Disaster Risk Reduction (UNISDR) and has produced a report that focuses on the arrangements, regulation and conditions that draw on the insurance industry's deep knowledge of risk management. It also examines the cooperation between governments, insurers and citizens in their endeavours to mitigate extreme events

Governments contribute to disaster reduction by encouraging risk-averse behaviour through legislation aimed at protecting people and property (e.g. building codes, and zoning restrictions).

Indeed, The Geneva Association has long suggested that strengthening societal resilience is the shared mission of insurance, governments and the international risk community—but they have different options and limitations as to how they reach this

¹ Stromberg S. (2013) "In State of the Union, Obama threatens Congress on climate change", *The Washington Post*, 13 February.

² See IPCC (2012) Special Report on Managing the Risks of Extreme Events and Disasters to Advance Climate Change Adaptation (SREX), Geneva: Intergovernmental Panel on Climate Change.

³ See website for more details.

objective and how they engage each other in the effort.

Weather-related extreme events—the role of the global insurance industry

At the University of Connecticut (UConn) Insurance Law Center conference on climate change risks in October 2012, keynote speaker and Secretary General of The Geneva Association John H. Fitzpatrick, touched specifically upon the contributions that have been made, and the additional ones that could be made by the insurance industry in relation to weather-related extreme events.

The insurance industry has a profound knowledge of risk engineering that should be utilised to foster sound land-use planning, more secure construction techniques and the widespread adoption of protective building codes.

Insurers can, and do, develop new products that foster better loss prevention and which utilise the best of global operating methods to bring initial, essential relief to the victims of weather-related extreme events and climate-related damage. Regrettably, these industry resources are all too often ignored by those who set public policy, favouring short-term or politically motivated standards for loss minimisation.

Insurance is uniquely competent to provide first-party compensation for climate-related losses through property insurance, which is free to be sold in conditions and at prices that fairly reflect the risks of the location and facilities seeking insurance. Furthermore, through the pooling of large numbers of risks, insurance reduces the individual's risk of loss and therefore the cost of a loss to an entire population.

These competencies should be deployed in tandem with community, state, and national resilience movements. With regard to climate risks, this will require the terms and prices to grow with the frequency and severity of anticipated losses. Allowing these risk management tools to be freely applied will cause commercial and personal property



John Fitzpatrick, keynote speaker at the UConn Insurance Law Center conference on climate change.

owners to reconsider where they wish to locate and how they should operate.

All too often, however, laws and regulations limit or prohibit such tools from being deployed, depriving many of any insurance. They can also put a further burden on taxpayers and other insureds that impairs rather than fosters climate change sustainability.

The industry can fill this role more effectively than we do today, but we have been inhibited by public policies that see many functions, such as the setting of building codes, land use and others, as exclusively a government function. The decisions in such important areas are informed by politics, not always by a proper risk management or reflection of risk pricing. It is an area in which insurers and all stakeholders can achieve more through effective public–private sector collaborations.⁴

John Fitzpatrick addressed the main issue of the UConn Law conference climate change litigation which has increased significantly as parties perceived to have losses from climate change seek recompense from other parties seen as contributing to climate change, often through legal, and indeed economically essential activities such as power producers. As a result, liability claims have grown

⁴ Excerpt from presentation by John Fitzpatrick on 5 October 2012.

in numbers and complexity. This topic is explored more specifically by the Liability Regimes project of The Geneva Association (*see p. 37 of this report*).

John Fitzpatrick concluded by outlining a way forward to address pre-event disaster risk reduction. There must first be a universal appreciation of the challenges before any action can be taken effectively. Second, policy must move beyond short-term opportunism that evades sound courses of action because they may be unpalatable to voters; what is required are hard decisions and responsible planning.

In particular, public sector regulation of land use, structural design and population centre developments must give due consideration to the mitigation of losses, using insurance data and expertise, and all other useful inputs. Insurers, for their part, must innovate with new products to foster better preparedness with suitable market-priced policies and to limit the need to depend exclusively on event contingency planning and post-event reconstruction.

Finally it is essential that the public and private sectors collaborate closely on readiness plans for postevent recovery. Governments should not hesitate to utilise the insurance industry's capacity to respond quickly across multiple jurisdictions with large numbers of trained personnel and efficiently deliver integrated attention across all of the affected area.



Uncommon darkness settled on the blacked-out streets of Lower Manhattan in New York, NY, U.S., on 31 October 2012.

Emerging risks: space weather



Space weather describes events that occur in near-Earth space and cause electromagnetic disturbances that can disrupt modern technologies. The most commonly recognised type of space weather is solar storms or flares.

The largest known solar flare to date is the so-called Carrington event, which erupted on the sun's surface in 1859 and caused major outages and fires among telegraph stations around the world. According to an article published in *National Geographic*,¹ if a similar event were to occur today it would affect high voltage transmission links and cause a cascade of failures that would plunge large cities into chaos for weeks or even months. Losses could amount to US\$1–2tn.

This is not a rare occurrence. Pete Riley, senior scientist at Predictive Science in San Diego, California, claims that there is a greater than 10 per cent probability that a Carrington-level event will occur in the next 10 years.² And the impact will be increasingly devastating as our infrastructure and technology continues to become ever more developed and interconnected: from a US\$13bn business in 2003, the GPS industry, which would be significantly affected, is predicted to grow to nearly US\$11th by 2017.

At its 39th General Assembly last year in Washington, D.C., The Geneva Association held a breakout session on space weather, chaired by Dr Richard Ward, CEO of Lloyd's, with presentations by Dr David Boteler, Geographical Survey of Canada; Dr Eberhard Faust, Head of Climate Risk Research, Munich Re; and Dr Nicole Homeier, Atmospheric and Environmental Research, Inc.

The session panellists demonstrated how solar flares could potentially affect major global systems and create huge disturbances in the transport, aviation and power sectors. With its experience insuring space and power generation assets, the insurance sector can support joint efforts by governments, regulatory authorities, scientific experts, electricity generators and distributors, and other industries, to mitigate the associated risks of space weather.

A working group was subsequently formed by The Geneva Association to study the implications of space weather and the role insurance can play in pre-event disaster reduction. Furthermore, "Ground Effects of Solar Storms" will be the focus of the 27th edition of the Management of Risks in the Economy (M.O.R.E.) seminar, organised jointly in Berlin on 15–17 July 2013 by The Geneva Association and Allianz.

¹ Lovett, R. (2011) "What If the Biggest Solar Storm on Record Happened Today?", National Geographic, 2 March.

² Riley P. (2012) "On the probability of occurrence of extreme space weather events", Space Weather, 10(2).

Publications in 2012/2013 on climate risk

Association report

□ Stahel, W. (September 2012)

"Climate risks and the Principles for Sustainable Insurance (PSI)". (A review of the PSI and their context, and the implications for insurers signing the statement). *The General Assembly Review 2012*, pp. 33–38.

Academic journals

- □ *The Geneva Papers on Risk and Insurance—Issues and Practice*, Volume 37, Issue 2 (April 2012): "Insurance Law and Economics Research for Natural Hazard Management in a Changing Climate", editorial by Raimond Schwarze of the Helmholtz-Center for Environmental Research.
- □ *The Geneva Papers on Risk and Insurance* will publish in July 2013 a special issue on "Disaster Reduction and Extreme Events".

Newsletters

Risk Management Newsletter No 51, May 2012.

"The UN Shift from Social Research to Protecting the Environment to Governance" by Meghan Orie. This paper places the latest publication of the Principles of Sustainable Insurance (PSI) in the context of the evolution of UN environmental action since the first Conference on the Human Environment in 1972, a shift in focus from government to private action.

Risk Management Newsletter N° 52, November 2012. "Review of the Climate Change and Insurance" by Christina M. Carroll, J. Randolph Evans, Lindene Patton and Joanne L. Zimolzak (ABA Publishing, November 2012).



The challenge of global ageing: Retirement issues and health concerns

The year 2012 brought the problems of global ageing and longevity—in particular, financing retirement systems and long-term care for the elderly—to the forefront of the public policy agenda and the public's concerns.



The cost of pensions and retirement policy challenges have been among the key issues in policy responses to the European sovereign debt crisis since 2010. In 2012, the presidential election in France was marked by a heated debate over the retirement age, as was the 2012 U.S. presidential election over the sustainability of long-term funding for Social Security, Medicare and Medicaid.

The challenge of financing retirement is largely due to improved longevity and lower fertility rates that are not properly represented in the cost of retirement, i.e. the financing of pension systems has not been adapted to account for changing demographics. In addition, central banks policies have produced very low interest rates, severely exacerbating the financing of retirement by pension funds, insurers and savers.

Adding to this concern about how to support a growing number of pensioners living longer lives is the increase of age-related illnesses such as dementia, and the health-care costs of an ageing population. It is not surprising that the World Health Organization declared "Ageing and Health" the theme of the World Health Day on 7 April 2012.

The Geneva Association has been studying these issues through its Life and Pensions and Health and Ageing programmes⁵ for many years, proposing solutions to the challenges they raise that are now more urgently needed than ever. Yet, as discussed in "The Challenges of Ageing Societies for the Insurance Industry" (*Life and Pensions Newsletter* No. 51), the insurance industry is uniquely qualified to help address the financial challenge posed by rapidly evolving demographics.

Most recently, in the March 2013 edition of the *Life and Pensions Newsletter*, The Geneva Association featured the articles "The Future of Retirement Systems" by Theo Bouts and "Sustainability and Adequacy of Social Security in the Next Quarter Century: Balancing Future Pensions' Adequacy and Sustainability while Facing Demographic Change" by Krzysztof Hagemejer.

Global retirement systems: the fierce urgency of now

At the inaugural meeting of the Federal Advisory Committee on Insurance (FACI) in April 2012, the director of the Federal Insurance Office Michael McRaith clearly underlined the importance of responding to the challenge of demographics, ageing and longevity in Western society.⁶ The same week, Michael Hodin of the Washington Post published an article entitled "G-8 Should Tackle Issues of Aging".

The 2012 Global Financial Stability Report by the International Monetary Fund (IMF) placed substantial emphasis on sustainability of retirement systems, and the World Economic Forum published Global Population Ageing: Peril or Promise. A March 2013 report by the House of Lords on the U.K.'s ageing society found both politicians and individuals completely underprepared for the demographic shift.

Ratings agency Standard & Poor's even expressed the opinion that the developed world had yet to solve the budgetary implications of a demographic financial time bomb that could drive public debt to 220 per cent of GDP by 2050 if policy action is not taken.⁷

MSN, as an example of mainstream media interest, published an article on 19 March 2013 entitled "Retirement crisis ahead for boomers and Gen Xers". *The New York Times*,⁸ USA

The third pillar of retirement: stimulating private savings with product innovation



For several generations now, the needs of retirees were served mostly by state pensions and social security systems, with greater emphasis on the accumulative side of retirement system than on the payout phase.

Today, however, we have arrived at a point in time when the next quarter century will be very different. Retirement payouts will dominate all three pillars of retirement: the public finance, employer-based retirement systems and the overall private financial industry.

Innovations in the public sector, such as notional, defined contribution plans, are certainly required, but the insurance industry can and should play a major role in the retirement systems globally in the next 25 years. It has the tools and the expertise to evaluate those costs, as well as the ability to assess the underlying risks, with products such as variable annuities, contingent annuities, enhanced annuities, reverse mortgages and life/ annuity long-term care combination products. In addition, the insurance industry can enable corporations to shift the risks of financing the retirement of their workers to professionnal pension insurers, and enable longevity risk to be aggregated more efficiently with life insurance risks.

⁵ See Overview of The Geneva Association p. 11 and website for more details.

⁶ Festa, E. (2012) "McRaith Steers FACI Discussion Away from Pet Issues; Toward Aging Population", PropertyCasualty360°, 2 April.

⁷ See Standard & Poor's (20 March 2013) Global Aging 2013: Rising To The Challenge, S&P500 report.

⁸ Brooks, D. (12 March 2012) "The Fertility Implosion", New York Times.

Today,⁹ *Time*,¹⁰ *Bloomberg*¹¹ and *CBS money watch*,¹² among many others, have all featured articles on the demographic challenge facing our societies, whether it be about the drop in fertility or, more specifically, on how to prepare for and finance retirement. The latter issue has reached a true crisis point in Illinois, as public pension systems are only 39 per cent funded and threaten to drag down the entire state economy.¹³

Most articles, however, focus on the urgency of the issue rather than on how to solve it.

Insurance solutions

In June 2012, The Geneva Association published The Geneva Report No. 6, Addressing the Challenge of Global Ageing—Funding Issues and Insurance Solutions (see extract from press conference below). This collection of papers by leading industry professionals and researchers sets the context and reasons behind the pension crisis. It also offers solutions for policymakers, including the role the insurance industry, with its knowledge and expertise in managing risk, can play in supporting the financing of global retirement systems.

One of these options—explained by Greg Becker of the Reinsurance Group of America in his contribution "The insurance industry's role in addressing longevity funding issues"—consists of pension buyouts, whereby the pension scheme transfers its risks to the insurer. Indeed, buy-outs certainly appear to be a growing trend, with several global insurers and reinsurers having

- 9 Fishman, T. (15 March 2012) "The challenge for our (ripe old) age", USA Today.
- 10 Sivy, M. (26 September 2012) "How Bad Is America's Pension Funding Problem?", *Time*.
- 11 Orszag, P. (23 October 2012) "Pension Funding Scare Won't Frighten All States", Bloomberg.
- 12 Schlesinger, J. (15 May 2012) "A Real Retirement Plan Crisis", CBS money watch.
- 13 von Alroth, J. (6 February 2013) "Illinois at 'critical juncture' because of pension crisis", *Reuters*.

Silver workers' contribution to economic growth and retirement funding

Many traditional retirement systems, especially state were developed pensions, as far back as a century ago. They prescribed firm and absolute retirement ages, imposing prohibitive benefit cuts or taxes, or even direct prohibitions of employment, under the misguided premise of the labour market being a zerosum game, in which jobs to one group of people only appear at the expense of another group.



In its September 2012 issue

of the *Life and Pensions Newsletter*, The Geneva Association once again presented research indicating that not only is the continued employment of silver workers a financial benefit to those workers, but it also results in better utilisation of human capital in the entire economy, better transfer of skills between generations, as well as health benefits to those silver workers who chose continued employment.

- "The Holistic View: Why All Four Pillars Need to Work in Concert" by Krzysztof Ostaszewski argues that the economic downturn has made the Four Pillars approach to retirement even more relevant.
- "Researching and Campaigning for Silver Workers: the TAEN Story" by Chris Ball presents the story of TAEN, The Age and Employment Network, a centre of expertise on age and employment in the U.K.

signed such deals, e.g. Swiss Re with AkzoNobel in £1.4bn pension swap in May 2012.

Also, only a few days after the publication of The Geneva Report No. 6, Prudential Inc. announced a pension buy-out deal with General Motors. Prudential CEO John answered questions Strangfeld about the buy-out at the webcast press conference that took place in Washington, D.C. before The Geneva Association's 39th General Assembly, highlighting The Geneva Report No. 6.

The Prudential–GM deal paves the way for similar deals in the U.S.¹⁴ and shows that this somewhat uniquely British idea of employers



A video of Richard Jackson's presentation at the 2012 General Assembly press conference is available on The Geneva Association's website.

¹⁴ See in particular, Beeson, E (10 June 2012) "Landmark Prudential, GM deal seen as opening floodgates for U.S. pension transfers", *The Star-Ledger.*

outsourcing their pensions to the insurance industry specialists has gone global. It also demonstrates how the industry can become a crucial global partner to employers in developing better and more cost effective retirement benefits.

During The Geneva Association's Four Pillars conference in Geneva in December 2012, Amy Kessler, Senior Vice President and Head of Longevity Reinsurance at Prudential Financial Inc., touched upon the issue again in her presentation on the new methodologies of risk transfer that insurance firms now offer to pension plan sponsors. She said notably, "When pension plans' risks prove unsustainable, leading plan sponsors around the world turn to pension risk transfer."

Insurance and silver workers: a holistic approach to retirement funding

The emergent financial and sovereign debt crisis—placing additional pressures on public and private retirement finances—has resulted in the continued employment of silver workers, i.e. workers, in what are traditionally perceived as retirement age groups, who are still interested in some form of employment, be it full time, part time or just occasional.

The Geneva Association has been a long-standing proponent of labour market flexibility in order to promote the employment of these silver workers as valuable contributors to financial, economic and societal stability—and even growth.

The employment of silver workers also provides an additional source of retirement funding, the fourth pillar, that builds on the traditional threepillar approach: public pay-as-yougo (PAYG) schemes, occupational benefit plans and private insurance savings.

However, the current economic challenges have revealed rather painfully how vital labour market flexibility has become. The same labour market flexibility that The Geneva Association has been advocating for silver workers has turned out to be the key to better economic performance in the face of the crisis of some European economies such as Finland, Denmark, or the Netherlands despite those economies facing the same challenges that other European countries have also experienced.

The Geneva Association's Four Pillars Conference in Geneva, Switzerland, 3–4 December, marked the 25th anniversary of the Four Pillars programme, nowadays the Life and Pensions programme. Looking forwards to the next 25 years rather than focusing on past accomplishments,¹⁵ the conference proved the continued (and increasing) relevance of the ideas behind silver work and the fourth pillar.

In particular, it illustrated the important roles to be played by policymakers and insurers in developing a new retirement structure in which all four pillars work in concert. This point was driven home with force by the keynote speaker at the conference, Professor Elsa Fornero, Italian Minister of Labour, Social Policies and Equal Opportunities:

In an ongoing environment of stagnant economic growth, pension reform must go hand-inhand with long-term structural changes to the labour market, in order to increase contributions and ensure that people not only understand the need to save for retirement but also have the means to do so.

The argument was also stressed by John Fitzpatrick, Secretary General of The Geneva Association, who summarised the interaction between the four pillars of retirement funding in his remarks:

There is clearly huge pressure on the public-funded, payas-you-go first-pillar system, while occupational pensions—the second pillar—are suffering from increasing longevity and low



Prof. Elsa Fornero, Italian Minister of Labour, Social Policies and Equal Opportunities at the Four Pillars Conference in Geneva.

interest rates. Low rates also make it less attractive for citizens to save for retirement—the third pillar. This conference has highlighted that much more must be done on the fourth pillar, enabling employment of productive workers who have passed the statutory retirement age. Their continued employment contributes to society and stimulates economies suffering from low growth through consumption.

The challenge of longevity: economic and health concerns and costs

Past estimates of longevity improvement have too often turned out to be woefully inadequate. It is natural to have errors in estimations—but estimations of longevity improvements by government agencies over the last century have nearly universally turned out to be wrong only in one direction: underestimation. Since greater longevity increases the cost of defined benefit pension promises,

¹⁵ See Ostaszewski, K. (ed.) Life and Pensions Newsletter No. 52.

it is one of the key contributors to the current public finance malaise.

The Geneva Association aims therefore to educate the public on the significance of the resulting increases in the cost of retirement and to present the latest research to policymakers and the insurance industry that highlights how public schemes, occupational pensions, private saving and silver work can be used holistically to address the imminent crisis.

The Geneva Association Four Pillars Conference held a session specifically dedicated to the challenge of longevity, with presentations on world life expectancy and future longevity scenarios, the unique nature of longevity risk and the case of Japanese insurers who, despite record levels of longevity improvements, have created pricing, product management and risk management methodologies that have allowed them to remain profitable.16

As noted by Bruno Pfister, Swiss Life CEO, in his special contribution to the Life and Pensions programme entitled "Ageing of the European Population and Its Effects on Financial Markets" the influence of pensioners goes beyond the cost of funding their retirement: pensioners are a dynamic group, who consume and make investment decisions.

As the impact of these decisions grows, there will be a knock-on effect for the wider economy. The crucial message, especially to the European political decision-makers is that tinkering at the edges of the problem by increasing spending or lowering interest rates is not a sustainable option over the long term. More fundamental changes are required.

Though Bruno Pfister's article focuses primarily on the impact of a dynamic ageing population on consumption patterns, it also highlights the effects of longevity on health care costs for the elderly. Indeed, the long-term care that is required and the associated health costs of living longer lives can often exceed the available funding sources, particularly with a growing number of cases of age-related illnesses such as dementia. This issue is covered more extensively in the next section.

Managing long-term care risks for an ageing population

With the profound demographic shift caused by increasing life expectancy, the importance of long-term care (LTC)—that is, formal and informal care for people dependent on help for daily activities—is growing in all Organisation for Economic Cooperation and Development (OECD) countries (as measured by utilisation and cost).

The French government initiated a reform of the current system back in 2010. In England, the issue has been among the debated social policy issues since the mid-1990s. The mandatory Social Long-Term Care Insurance Law (SLTCI) implemented in Germany in 1995 has experienced deficits for several years and risks exhausting its reserves soon. And in the U.S., the financing of LTC has reached a crisis point with the withdrawal of the Community Living Assistance Services and Supports (CLASS) Act, originally intended to resolve this very issue.

In a study published in 2011, the OECD shows that the "utilisation of formal long-term care for disabled people is growing in all high-income countries. Higher demand for formal services is emerging also because of people's expectations for high-quality care. These factors are pushing up the cost of formal long-term care across OECD countries and raise questions about who should pay."¹⁷

This trend towards a greater need for LTC—and the debate on how to finance it—is a direct consequence of



population ageing and, in particular, the growing number of very old people in the population. Discussions about how to improve the financing of LTC needs in most countries appear to favour a mixed approach to funding based on public–private cooperation in the coverage of LTC risk.

The Geneva Association, under the auspices of its Health and Ageing research programme, has been engaged for some years in developing various activities to analyse better the issue of LTC financing, and continued to do so in 2012/2013. (See Overview of The Geneva Association, p. 11). Three topics directly related to LTC were addressed recently in some of our publications. These three topics respectively deal with the issue of how to support informal care givers, the measures of LTC risk mitigation schemes and the underwriting of LTC insurance.

How to support informal caregivers

LTC systems all over the world rely heavily on the provision of care by unpaid carers, also known as informal caregivers. These are mostly family members without specific training in this field. In several developed countries, the share of informal care provided to the elderly is estimated to amount to about three quarters of all LTC provided, thus forming one

¹⁶ See *Etudes et Dossiers* No. 395 for these conference papers.

¹⁷ OECD (2011) Help Wanted? Providing and Paying for Long-Term Care, Chapter 7 "Public Long-term Care Financing Arrangements in OECD Countries".
of the most important building blocks of national care systems.

However, several international developments raise concerns about whether and how this most important type of care provision will be able to deliver the current level of support. This is of crucial importance as one solution to slow down the increase of LTC expenditure is to promote the development of informal care. Most European countries have set up public policies to support provision of informal care in order to achieve sustainable LTC systems.

This monetary support for informal care can either be directed at the person in need of care, or at the person providing care. A recent article published in The Geneva Association's *Health and Ageing Newsletter*¹⁸ analysed the availability of cash benefits that can be used to finance informal care in 21 Member States of the European Union.

The measures of LTC risk mitigation schemes

One of the main objectives of LTC protection schemes, public and private, is to mitigate the risk to individuals of being exposed to the catastrophic costs of care that can occur when a person needs care for a very long period of time. The effectiveness of LTC protection schemes as risk mitigation instruments, i.e. in terms of their ability to protect people from catastrophic costs, has received little attention so far.

Recent research¹⁹ published in the October 2012 special issue on health of *The Geneva Papers on Risk and Insurance*, discusses risk measures to mitigate the risks of encountering catastrophic LTC expenditures and their potential use for comparing the

economic capacity of LTC protection systems as risk transfer instruments.

Such research proves to be useful to rank the effectiveness of public LTC protection plans across several countries and, at the same time, to assess the role of private insurance in protecting individuals against the risk of needing LTC.

Underwriting LTC insurance: the issue of dementia

As dementia prevalence increases with age, the illness is fast becoming one of the greatest challenges facing our ageing societies. In 2010, an estimated 35.6 million people worldwide were living with dementia. This number is expected to increase to 65.7 million in 2030 and may reach 115.4 million by 2050.²⁰

Dementia-related claims continue to present the single largest claim liability to LTC carriers. Carriers providing LTC insurance have historically invested significant resources in risk management activities designed to ensure that policies are properly priced and that premiums can remain relatively stable for consumers. An important focus of such risk management activities has been the medical underwriting process and, more specifically, dementia screening.

Recent research published in The Geneva Association's *Health and Ageing Newsletter*²¹ shows that the ability to accurately screen for dementia has important implications on mortality and for LTC insurance underwriting.

This leads to improved early claims experience and to more efficient LTC insurance underwriting. The successful use of these screens in the LTC insurance context even suggests that they could be applied to other market segments that are focused on selling to older individuals.

The Health and Ageing research programme of The Geneva Association is uniquely situated to tackle these increasingly pressing issues. Its aim is to understand better how best to plan the financing and the organisation of LTC schemes and the role of insurance mechanisms in covering LTC risks.



¹⁸ Riedel M. (2012) "Financial Support for Informal Care Provision in European Countries: A Short Overview", *Health and Ageing Newsletter* No. 27.

¹⁹ Guillén M. and Comas-Herrera A. (2012) "How Much Risk Is Mitigated by LTC Protection Schemes? A Methodological Note and a Case Study of the Public System in Spain", *The Geneva Papers on Risk and Insurance* 37(4): 712–724.

²⁰ Alzheimer's Association (2012) "2012 Alzheimer's Disease Facts and Figures", *Alzheimer's & Dementia*, 8, (2).

²¹ Cohen M., Miller, J. and Shi, X-M (2012) "Screening for Dementia and the Impact on Mortality and Morbidity in Long-Term Care Insurance", *Health and Ageing Newsletter* No. 26.

GENETIC TESTING: DISCRIMINATION OR NECESSITY?

The Geneva Association's 9th Health and Ageing Conference on Genetics and Insurance Stockholm, 8-9 November 2012



With the sequencing of the human genome, the map of all the human genes has now been completed. Not only will it provide clues to the understanding of human biology, but most importantly, it can revolutionise the diagnosis, treatment and even prevention of a number of diseases. In particular, gene therapy and pharmacogenetics open new and promising perspectives on curing patients.

Genetic testing makes it possible not only to diagnose disease, but also to predict how likely a person is to develop a particular disease and offer access to personalised prevention. In recent years, many companies have entered the direct-to-consumer genetic testing market, making genetic information easily available to a large public.

For insurers, genetic information can be a valuable tool in establishing efficient risk classification, particularly for health and life insurers. However, the use of genetic information by insurers generates controversy, as it is widely regarded as negative for consumers due to fears that it will lead to discrimination, ethical and privacy violations, loss of employment and confidentiality breaches.

The term "genetic discrimination" has even been coined to refer to the perceived differential treatment of individuals or their family members based on presumed or actual genetic differences rather than physical characteristics.

These issues were explored in depth at the 9th Health and Ageing Conference of The Geneva Association, which took place in Stockholm, Sweden, for the first time in a Nordic country. It was co-organised with Länsförsäkringar AB, and attended by more than 50 participants originating mainly from Europe, but also North America and Asia.

Regulation

To manage these concerns, policymakers and lawmakers have taken measures to "prevent" genetic discrimination. In Europe, the Council of Europe's "Oviedo Convention of Human Rights and Biomedicine" has clearly set the tone by prohibiting any form of discrimination against a person on grounds of his or her genetic heritage and restricting the use of genetic tests to health purposes or scientific research.

Since the 1990s, a substantial number of European countries have enacted genetic non-discrimination regulations. In the United States, the Genetic Information Non Discrimination Act (GINA) was signed into law in 2008 to provide protection against genetic discrimination for employment and health insurance.

These regulations should help alleviate public fears of genetic discrimination, enabling the progress of genetic research and use of genetics in clinical and preventive care. However, despite these protective regulations, many people still fear the use of genetic information by third parties, and fear that insurance may not be available.

Genetic testing and adverse selection

Yet, while the potential use of genetic testing by insurers is generating controversy, there is an argument that insurers have already based policymaking decisions on more basic genetic information, such as family history and diagnostic tests performed previously on applicants as part of medical care. The question is raised as to where to draw the line. For insurers, an adverse selection risk exists whereby someone who knows according to a genetic test that they will die in the next couple of years could insure himself for a huge sum and then sell the policy to a third party.

Similarly, if health insurers were not allowed to ask for the results of a genetic test, people who know that they are at high risk could buy more insurance and insure for higher amounts, while those at lower risk could buy less insurance, potentially significantly increasing the cost of insurance and therefore the costs for other policyholders. Some argue that this could even spell the end of the private health insurance market as well as the life insurance market.

Government involvement

Using genetic tests would clearly result in a segmented society, with a system of (health) insurance based on the predisposition to illness where policy holders with good test results would pay a lower premium and those with bad results a higher premium. This then raises two crucial questions in terms of equity.

First, should genetic information be cross-subsidised within the insured pool and thus be treated differently from other medical risk factors? This has to be discussed, as genetic information is arguably just another risk factor out of many.

Second, should governments provide a safety net for those at higher genetic risk? In that case, the only way to restore equity would be to make the test compulsory in order to be able to make a redistribution of low risks to high risks.

Genetic tests are in their infancy. Once they become widespread, medicine will never be the same. But their utilisation raises many questions in terms of the use of private individual information and of equity. The conference presentations addressed these important questions and proved to be very successful in offering a broad view of the issues at stake in the field of insurance and genetics.

Publications in 2012/2013 on global ageing

Research report

Geneva Report No. 6, Addressing the Challenge of Global Ageing—Funding Issues and Insurance Solutions, edited by Patrick M. Liedtke and Kai-Uwe Schanz (eds.), June 2012.

Journals

The Geneva Papers on Risk and Insurance—Issues and Practice
Volume 37, Issue 4 (October 2012) Special Issue on Health.
Volume 38, Issue 4 (October 2013), forthcoming Special Issue on The Four Pillars: The Next 25 Years.

Newsletters

- Health and Ageing Newsletter No. 27 (October 2012) and No. 28 (April 2013).
- Life and Pensions Newsletter No. 51 (September 2013) and No. 52 (March 2012).
- □ Life and Pensions Special Contribution (November 2012): "Ageing of the European Population and its Effects on Financial Markets", by the CEO of Swiss Life, Bruno Pfister.
- □ Life and Pensions Special Contribution (March 2013) "Business, Society and Governance in Shrinking Societies: Four Levers of Action for Japan and Switzerland", by Jonas Huber and Hans Groth.

Liability regimes and dynamics

Every week, there are cases highlighted in the press that drive home the changing nature of liability insurance and the emerging trends in tort law—such as scientists being held criminally responsible for not issuing an appropriate earthquake warning. The Geneva Association is examining the importance of these developments for the insurance industry.



In 2012, six Italian scientists were charged with manslaughter and sentenced to six years in prison for having provided "inaccurate, incomplete and contradictory" information about the danger of the tremors felt before a 6.3 magnitude quake that devastated L'Aquila, Italy, in 2009, killing over 300 people. It would appear therefore that science and the scientific community may now be held responsible for extreme event loss and can be considered a potential source for socialising loss.

In another liability shift which concerns insurance companies as financial institutions, the U.S. Securities and Exchange Commission (SEC) recently accepted a proposal, put forward by Boston Common Asset Management, that allows the shareholders of the bank PNC to question the institution about its financing of climate change.

The SEC stated that it considers climate change management to be a pertinent issue for investors, since loans, investments and other financial services can support projects that directly impact the climate through greenhouse gas emissions. These emissions resulting from an institution's lending portfolio could therefore now involve reputational and operational risks, and, in theory, make the institution liable for its contribution to climate change.

The regimes and dynamics of risk

The effective management of risk requires an understanding of the nature of the risk and the forces that influence its frequency and severity (the dynamics), as well as the laws, economic conditions and social forces (the regimes) that shape and change the ways in which the risk is processed.

Liability exposures are uniquely affected by these regimes and dynamics: unlike other major categories of insurance, they are the ways in which society adjusts responsibilities for the effect people and businesses have on one another. While historical data is enlightening for all classes of business, the effective management of liability risk also requires an understanding of the current and prospective influence of changes in the regimes and the dynamics.

These concerns are at the forefront of The Geneva Association's research and the focus of several publications in the past 12 months issued under the aegis of its Liability Regimes Project. In particular, the Association aims to demonstrate how insurance can strengthen the resilience of developing countries to climaterelated extreme events through preevent risk reduction and innovative product design rather than engaging in litigation after the fact.

Through its study and interpretation of the drivers of liability risk, The Geneva Association encourages the insurance industry to anticipate the economic and regulatory environment of the decades ahead. Indeed, these will need to be understood if the industry is to ensure the necessary renewal of stable and profitable casualty underwriting.

The need for this stability is shown in the case of Chevron. Exploration for oil in the Ecuadorian rainforests was carried out during the 1970s and 1980s jointly by Texaco and the national oil company of Ecuador, Petroecuador. After Texaco was acquired by Chevron in 2001, a class action suit was filed in Ecuador on behalf of 30,000 indigenous Ecuadorians who claimed that Texaco left insufficiently cleaned conditions at the drilling sites and allegedly polluted local water sources.

The Ecuadorian courts awarded the native Ecuadorians a judgment of US\$18bn, which Chevron claims was achieved through fraudulent means, with strong evidence that this was the case. Chevron is now conducting a worldwide effort to prevent collection of the judgment.

For the Ecuadorian plaintiffs, this is an expensive process. Funding of their claim is now being provided by a U.S. public investment company that is at the forefront of the emerging process of third-party litigation funding. If the case is settled for less than US\$1bn, the terms of the financing would see the funders and the attorneys obtain virtually all of the recovery.

The Geneva Association increased its visibility in the U.S. when it was called upon as a centre of expertise for the inaugural liability conference organised in October 2012 by the University of Connecticut School of Law. UConn Law aspires to be the leading academic centre on liability law in the U.S. and invited Secretary General John Fitzpatrick as the keynote speaker for its inaugural Climate Change: Risks & Liability conference. Richard Murray, Head of The Geneva Association's work on Liability Regimes, led a panel on climate liability developments outside the U.S.

Mr Fitzpatrick began by highlighting the rapid development of new theories and applications of traditional liability law in an effort to obtain third-party recoveries for climate condition victims. These innovations in litigation are the consequence of policymaker and government inaction, as governments are largely responsible for climate change mitigation—the reduction of CO₂.

The inability of governments to mitigate climate change will lead to a shift of liability to the private sector as victims turn to litigation for remediation. Similarly to asbestos and tobacco, insurance will be faced with the possibility of having to pick up this bill. It has no realistic capacity to do so. With frictional costs of compensating losses through liability litigation at 40-50 per cent of the throughput of funds, increased litigation and scope of claims could threaten the sustainability of insurance as a resource for sustainable development.

Extreme weather events adaptation, John Fitzpatrick added, is most efficiently done through cooperation between governments, the insurance industry and the potential victims. Indeed, insurance is based on risk assessments, risk pricing and risk transfer, and can thus promote cleaner technologies with lower risk potential by offering lower premiums for them.

Further topics of research on liability issues

An important emerging focus of liability research consists of the nearterm conditions that could affect current underwriting. This initiative will be supported by the creation of a database that collates in-scope topics and provides a means of responding to the needs and inquiries of the Members of The Geneva Association.

The Liability Regimes Project will also focus its publications on the increasing frequency of sovereign and global governmental actions that treat insurance as a public utility, because in doing so, the public sector interferes with the value of the insurance industry as an independent source of expertise.

An important recent development was the enactment of the new China tort law. Its potential to establish tort law as a social instrument is vast and should not be overlooked by Western companies doing business in China, particularly insurers offering commercial and personal lines coverages there.

Publications in 2012/2013 on liability regimes and dynamics

□ *Risk Management Newsletter* No. 51 (May 2012): "Climate Liability Risk: Will it be the Next Chapter in the Global 'Blame Game'?"

In this article, Richard Murray highlights the transformations of liability law from civil justice to the compensation culture, and the current emerging Blame Game and its impact on insurance, with the retroactive application of rules that ease and amplify recovery.

Risk Management Newsletter No. 52 (November 2012): "The Social and Insurance Implications of the New China Tort Law"

Richard Murray offers views on why China has adopted a Western model of compensation for injury, how the China tort law follows and diverges from our Western experience, what its policy objectives appear to be and what insurers should consider in developing an enlarged liability market in China.

Richard Murray initiated research on this topic in the latest *Risk Management Newsletter* No. 52 in his article "The Social and Insurance Implications of the New China Tort Law".

Conferences and events

A cornerstone of The Geneva Association's research into liability issues is the Annual Liability Regimes Conference (ALRC), organised by the Liability Regimes Project in collaboration with several large firms affiliated with the Association. The ALRC addresses issues of global scope and involves approximately 50 senior insurance officers and topic experts from Europe and North America.

The 9th edition was held in November 2012 and was hosted by SCOR at its new facilities in Paris. The keynote presentation by Victor Peignet of SCOR addressed the business imperative for insurers to enhance their revenues, and the consistent profitability of casualty underwriting. In 2013, the event will be hosted by Lloyd's at its London centre in November, with CEO Richard Ward and John Fitzpatrick participating. Swiss Re has agreed to act as the 2014 host at Rüschlikon.

The primary topics addressed during the two-day session involved procedural challenges: multinational claims and the arising jurisdictional challenges, the expanding methods by which claims are aggregated to a degree that settlements often exceed the technical risk, and the rapid emergence of third-party litigation funding.

The Liability Regimes Project will continue to strengthen the ALRC in forthcoming years. The current Planning Board of Munich Re, Swiss Re, Zurich, RSA, SCOR, Lloyd's, XL Group and The Geneva Association will be gradually expanded. The Project has also organised a supplementary series of conferences directed at national and regional liability conditions. The first initiative was The Geneva Association China Liability Regimes Conference, hosted by Swiss Re in collaboration with Zurich Insurance Group.

It was held as a one-day event in Beijing and attracted government as well as market leaders from the region. The third edition will take place in August 2013. The conference is intended to be the first component of a series of International Liability Regimes Conferences (ILRC) which will be expanded with the first conference in Brazil and additional initiatives in 2014, likely to include an ASEAN (Association of Southeast Asian Nations) conference.

Tort law and its implications for the Chinese insurance market?

The Geneva Association's 2nd Annual China Liability Regimes (ACLR) Conference.¹ Hosted by Swiss Reinsurance Company, Ltd in Beijing, People's Republic of China, on 16 August 2012

Western societies have had 200 years of industrial revolution, followed by the digital revolution and then the Internet in sequential order. China has had the same three revolutions in an integrated package, within 50 years.

The enactment of a new tort law in China in July 2010 is therefore an important development, particularly for the insurance industry. The law is remarkably short, 12 chapters and 91 articles in total, but very comprehensive, covering a range of topics that, in the West, are dealt with by different laws.

One aspect of the new law is clear: the focus is on harm suffered, and it provides ways to justify recovery in most cases from a wide variety of parties. This contrasts with Western tort traditions that focus on fault and allow recovery only from those who have committed fault. For insurers, this presents opportunity for new products and growth of the domestic market.

However, "its potential to establish tort law as a social instrument is vast and should not be overlooked by Western companies doing business in China, particularly insurers offering commercial and personal lines coverages", wrote Richard Murray, Head of the Liability Regimes Project for The Geneva Association, in his article "The Social and Insurance Implications of the New China Tort Law" published in *Risk Management Newsletter* No. 52.

Indeed, liability products based on Western tort law assumptions could risk adverse loss consequences. A panel of experts at the ACLR conference held a discussion on "Understanding the various facets of tort law and its impact on [the] liability insurance market" and stressed that existing (Western) solutions cannot be applied "copy and paste" but need a "copy and paste-special" for Chinese markets.

Two papers presented at the conference dealt specifically with this issue of social media, in particular: "Social Media and Its Impact on Liability and Business Risk" by Keith Thomas² and Yuan Min,³ and "The Impact of Social Media on Liability and Business Risk under Chinese Legal Regime" by Yuan Min.

¹ See The Geneva Association website for conference programme and presentations.

² Global Chief Underwriting Officer Casualty Lines, Zurich Insurance Company.

³ Partner, King & Wood Mallesons Law Firm.

Liaison offices

The Geneva Association Liaison Office for Eastern Europe



Jan Monkiewicz, Vice Secretary General and Liaison Officer for Eastern Europe

The Liaison Office for Eastern Europe in Warsaw was created in 2008 as the first external office of The Geneva Association. The mission of the liaison office, under the direction of The Geneva Association Vice Secretary General Jan Monkiewicz, was to coordinate Eastern European exposure of The Geneva Association. It was established and is maintained thanks to the generous support of PZU SA, the largest insurer in Poland whose CEO is a Member of the Association.

The Central and Eastern European region is a highly diversified area, encompassing 11 of the 12 members of the Commonwealth of Independent States (CIS) and 17 Central European countries, eight of which belong to European Union (EU) with Croatia joining on 1 July 2013.

With gross written premiums of ca \notin 63bn in 2011, the region's insurance market is still insignificant and insurance penetration very low. The three largest countries' share in the insurance market of the region amounts to approximately 73 per cent: Russia, ca 43 per cent; Poland, ca 20 per cent; and the Czech Republic, ca 10 per cent. The population has reached 400 million inhabitants providing however, a high potential for insurance development in the region. Furthermore, laws regarding insurance were recently reformed in Central Europe, while in many of the CIS countries they are in the process of being modified. These developments have a positive impact on the prospects for insurance market development in the long run.

Statistical data further confirm these observations. In the past 10 years (2001–2010), premiums per capita and the penetration ratio in Central and Eastern Europe (CEE) increased more than twofold. After two years of declining growth, many countries of the region posted improvement or a moderate increase in the insurance market.

The situation further improved in 2011 and 2012, and the economic outlook in CEE countries for 2013–2015 is optimistic. The average GDP growth rate in the region will be 3 per cent according to the 2011 World Bank Report. This is twice the rate for the EU-27, though slightly lower than the forecast for the world as a whole. These positive trends in economic development should further strengthen growth of the insurance industry.

The Geneva Association is perceived in the CEE region as a major, wellpositioned international forum helping Eastern European and CIS insurance companies voice their needs and catch up with a rapidly changing global environment. In return, companies and institutions in the region have local knowledge and contacts to decision-makers and legislators that can greatly support the Association in its mission to further the interests of the insurance industry.

In 2012/2013, the liaison office in Warsaw monitored regulatory and supervisory developments in the CEE including the developments within the Regional Consultative Group for Europe of the Financial Stability Board (FSB). This group addressed issues previously identified by the FSB itself.

In its third meeting in Basel on 24 September 2012, the Regional Consultative Group discussed the Legal Entity Identifier (LEI) project, reviewed macro-prudential policy frameworks and tools of its members, received updates from the Basel Committee on Bank Supervision on the consultation process for the designation of domestic systemically important banks (D-SIBs), discussed recent developments in liquidity standards, and exchanged views on resolution regimes, in particular for global systemically important financial institutions (G-SIFIs).

In view of the current mandate of The Geneva Association, the liaison office has pursued even more vigorous relations over the past year with the two most significant non-EU players in the region: Ukraine and Russia, which currently chairs the G20.

To this end, Jan Monkiewicz held several meetings with key representatives of supervisory bodies in these countries, as well as with local trade associations. In particular, the liaison office strengthened its relationship with the All Russia Insurance Association (ARIA) and the Insurance Association of Ukraine (LIGA). Jan Monkiewicz also participated as a keynote speaker in the 17–21 September 2012 Yalta Insurance Forum in Ukraine, addressing the audience on "The emerging new global regulatory set up for insurance". On 15 November 2012 he attended the InsuranceCom conference in Vienna, contributing to a panel on the "Consequences of Solvency II: changes in the operating model". He held a number of side meetings with CEE insurers during this conference.

In Poland, the liaison office continued its cooperation with PZU and Poltext Publishing House on two new reports by young academics featuring select insurance topics. It coordinated with the Polish Insurance and Pension Ombudsman to include joint conferences and seminars, and ran joint projects with selected non-governmental organisations covering insurance-relevant topics, in particular "Pro Motor" and the Chamber of Risk and Insurance.

The Geneva Association Liaison Office for Japan and East Asia



Katsuo Matsushita, Liaison Officer for Japan and East Asia

The Liaison Office for Japan and East Asia, headed by Katsuo Matsushita, was established in 2009. Its role is to promote and increase recognition of The Geneva Association in the region by strengthening ties with Members' companies and developing new relationships with insurance companies, regulators, media and other stakeholders.

East Asia continues to be the focus of multinational insurers and investors.

Despite the economic slowdown in developed markets as well as in some emerging markets, Asia continues to present growth opportunities for multinational insurers and investors. This is due to the relatively brisk economy in the region, partly propelled by foreign direct investment in the industrial and service sectors, and a lower insurance penetration ratio. The growing middle class is contributing to the development of the insurance market.

While Japan has suffered a somewhat lacklustre economy for decades, the new government has launched a decisive economic policy named "Abenomics". This new monetary, fiscal stimulus and structural reform is expected to lead the economy into a new paradigm.

Even if this policy successfully boosts the domestic economy, Japanese businesses will continue to invest primarily in foreign markets and diversify their insurance portfolios internationally.

A unique aspect of the Japanese insurance market is that, while major Japanese insurers are investing cross-border opportunities. in international insurers, particularly reinsurers, are focusing on the Japanese market because of its size. The total of reinsurance premiums ceded by private non-life insurers to the international market in 2011 was ¥360bn (US\$3.9bn), slightly larger than the gross reinsurance premiums underwritten by reinsurers in Singapore, the reinsurance hub of the region.

The Geneva Association continues to address topics of concern for insurers in the Asia-Pacific region including, but not limited to, regulatory issues, climate risk mitigation and adaptation, and longevity risk and global ageing.

Analytical papers published by the Association, such as the cross industry benchmark study (*see* *p. 19*) have been well recognised and appreciated by local regulators and insurance executives, with the organisation contributing to or being cited in more than 30 press articles in the second half of 2012.

Challenges and opportunities in East Asian insurance market

1. An ever changing risk landscape

With the growth of their respective economies, Asian countries have all experienced rapid urbanisation. The resulting accumulation of people and property values in mega-cities has aggravated the total vulnerability of those countries to natural catastrophic (NatCat) events.

As reported in Insuring everevolving commercial risks,²² a sigma report published by Swiss Re, some exposures have moved to emerging economies as a result of globalisation. Contingent business interruption risk is therefore growing. The shift in location of manufacturing plants to emerging markets has further stretched international supply chains and made risk management even more complex. Yet business interruption insurance worldwide remains low.

Lessons learned from 2011

The impact of natural disasters on societies and economies is highlighted in Geneva Report No.7, *Insurers' contributions to disaster reduction—a series of case studies* (June 2013). In Asia in particular, the huge tsunami in north-eastern Japan and the devastating floods in Thailand in 2011 acted as a serious warning signal to local governments and the population.

While the necessity of building some kind of insurance scheme under government and private sector partnership is commonly understood in the region, translating these ideas into real implementation is progressing at a slower pace than originally expected.

²² Swiss Re (2012), Natural catastrophes and man-made disasters in 2012, sigma, 5/2012.

International institutions have expressed concern that without ex ante mitigation and ex post risk financing, economic achievement in Asia will be eroded by NatCat events. The Asia Development Bank (ADB) has urged regional governments to make various disaster risk financing instruments available, including tax credits, calamity funds and insurance-linked securities such as catastrophe bonds.

Multinational insurers are well positioned to provide value, expertise and services to mitigate disaster risk, notably by offering alternative solutions and reinsurance capacity.

Insurers' contribution to disaster recovery

In the wake of natural catastrophes, the staff of Asia-Pacific insurers, as well as adjusters, agents and supporting service providers, have worked very hard and in good faith to settle claims and help victims. Their ongoing efforts have helped promote the value of insurance coverage and improve the image of insurance companies.

However, in some markets such as parts of Australia and New Zealand, insurers offering flood or earthquake cover were forced to increase prices sharply and change the scope of coverage. This resulted in a lower renewal ratio and greater criticism of the insurance industry.

Such episodes remind us of the basic role of insurance and insurance companies, which operate as stock companies but are also responsible as one of the basic facilitators of sustainable societies and economies.

Insurers have a difficult balance to maintain, needing to abide by prudential regulation and restoring their solvency/capital position quickly after mass claims even as the affected area/community remains in a difficult situation socially and economically. Insurers cannot make social responsibility a secondary concern and must work to accommodate this responsibility in parallel with the other regulatory and financial concerns while satisfying an increased demand for insurance protection at reasonable prices, or at least at incrementally revised prices and conditions.

These sometimes conflicting concerns require insurers to communicate more closely with communities and societies, helping them understand the tough balances between these conflicting requirements.

2. Talent pool

One of the current top concerns of regional CEOs of multinational insurers is a shortage of local talent. In China and Japan, for example, foreign insurers are facing stiff competition with large, well-known local insurers, not only in marketing but also in recruiting young talented staff.

On a positive note, however, growing clusters of independent service vendors/providers are increasing in number and variety, including risk management consultants, actuaries, risk modellers, IT and communication service providers, adjusters, educational institutions, law firms, rating agencies, fund managers and so on.

This is rather unique in the emerging Asian region. The rapid pace of market growth and competition, the recent participation of international insurers, the increasing number of mergers and acquisitions, as well as restructuring in the region, are driving the demand for these services.

The industry should realise—and communicate to policymakers and the general public—that its efforts to increase insurance penetration not only provide job opportunities to younger generations, but also promote the development of related services, thus creating a host of wellpaying jobs in the tertiary sector.

3. Life insurance liabilities and long duration bonds

There is a growing gap between life insurance liabilities and long duration bonds due to the limited availability of such bonds in capital markets. Insurers could benefit from addressing this disparity by formulating policy recommendations to governments.

In some Asian countries, including China, governments are designing regulations to allow the flexible allocation of assets for infrastructure investment. The key issue, however, is how to reconcile the need to increase investment assets with asset-liability management (ALM) requirements, a core element of insurers' enterprise risk management (ERM).

4. AEC in 2015 and its implication for insurance markets

By encouraging intra-region trade and investment, the ASEAN economic community or AEC aims to make regional economies stronger and therefore more resilient to volatile economic and fiscal conditions in major countries and regions such as China, the U.S., the EU and Japan.

This will lead to increased competition among businesses, and a number of small-size insurers in countries such as Thailand, the Philippines and Indonesia may experience new challenges in this environment. Will they consolidate, or respond by increasing capital? Undoubtedly, their decisions will have strategic implications for foreign investors.

International insurers, for their part, should closely monitor how regulatory harmonisation develops in the region. Local insurers hold ambivalent views. On the one hand, they expect harmonised regulation; on the other they observe the euro zone situation and remain cautious, wary of an approach where too much institutional reform could mean uniformity rather than harmonisation and national policies that complement one another.

Connected fields of research

In the course of its activities, The Geneva Association has established a series of affiliated organisations that operate in parallel and connected fields of research, independently in a coordinated way. The affiliates are often supported by the Association but have their own identity and stand apart from the Association's main research activities.

- World Fire Statistics Centre (WFSC): each year the Centre collects and collates fire cost statistics under seven main headings from a steadily increasing number of leading countries worldwide.
- Amsterdam Circle of Chief Economists (ACCE): ACCE was created in 1999 by The Geneva Association with the objective of bringing together a special group of insurance economists and strategists to interchange ideas and visions.
- Chief Risk Officer (CRO) Networks: the CRO Networks involve a series of regular events to promote understanding about modern risk management in insurance and the role of the chief risk officer through a series of workshops and studies.
- Applied Services Economic Centre (ASEC): ASEC is a consortium of researchers and practitioners brought together by the shared perspective that services increasingly underlie and drive national economies as well as the global economy.
- □ The European Group of Risk and Insurance Economists (EGRIE): EGRIE is a European-based non-profit organisation dedicated to promoting research on risk and insurance through scientific conferences and meetings, publication of research, and a contact network between concerned parties.
- □ The Silver Workers Institute: based on the extensive work of The Geneva Association's Four Pillars (now Life and Pensions) programme, the aim of the Silver Workers Institute is to study the work environment of seniors, and to propose policy actions for companies and governments in response to demographic change.
- The Geneva Association/EALE collaboration: since 1985 The Geneva Association has developed a close collaboration with the European Association of Law and Economics (EALE). Joint seminars are organised every two years. Thirteen such conferences have been held so far. In addition, contributions to the seminars are included in a special "law issues in insurance economics" issue of The Geneva Papers on Risk and Insurance.
- World Risk and Insurance Economics Congress (WRIEC): the purpose of the Congress is to stimulate corporate awareness and interest in risk-related research, and to provide a forum for networking among academics, and industry and government professionals worldwide.







Events

13th Asia CEO Insurance Summit, 20–21 March 2013, Bangkok

Co-organised with Asia Insurance Review. Presentation by John H. Fitzpatrick on "The Regulatory Challenges to the Industry".

Consult the conference papers on our website.

15th Meeting of the Amsterdam Circle of Chief Economists (ACCE), 28 February–1 March 2013, Amsterdam

Hosted by ING, this annual meeting of chief economists touched upon a variety of topics including: the comparative roles of insurers and banks as investors, maintaining insurance industry profitability, proposed accounting changes for insurers and reinsurers, long-term guarantees in capital frameworks and the impact on investments, impacts and implications of superstorm Sandy for insurers, reinsurers and the debate on climate change.





Press Conference, General Assembly 2012.

9th International Insurance and Finance Seminar, 11–12 December 2012, London

The seminar was hosted by Lloyd's. See the section on Financial Stability, p. 17 of this report or read a full summary of the event on our website.



Andrew Bailey, Managing Director, Prudential Business Unit, FSA



From left to right: Lynda Sullivan, Executive Vice President & Controller, Manulife Financial, Pat Finnegan, IASB Member and Co-Chair of Insurance Working Group, David Martin, Head of Financial Accounting, Prudential plc, Susanne Kanngiesser, Head of Group Accounting, Allianz SE and Jerry de St Paer, Executive Chair, GNAIE.

The Four Pillars: The Next 25 Years (Life and Pensions Seminar), 3–4 December 2012, Geneva

Hosted by The Geneva Association.

Read a full summary of the event or consult the conference papers on our website.

8th CRO Assembly, 28-29 November 2012, Munich

Co-organised with Munich Re, this event is open to chief risk officers from all insurance companies and related sectors. The 8th edition focused on insurance strategies and risk management in times of austerity, with panel discussions on various aspects of regulation and supervision, and the role of the European Central Bank.

4th Climate Risk and Insurance (CR+I) Seminar, 16 November 2012, Zurich

Hosted by Zurich Insurance Group, this year's CR+I seminar focused on "Adapting to Extreme Events and Climate Risk".

9th Health and Ageing Conference: Genetics and Insurance, 8–9 November 2012, Stockholm

Hosted by Länsförsäkringar AB.

See page 36 for a review of this conference or consult the conference proceedings on our website.

9th Annual Liability Regimes Conference, 5–6 November 2012, Paris

The 2012 event focused on "Evolving Litigation Tactics and Procedures Affecting Liability for Insurers".

See p. 41 of this report or consult the conference papers on our website.

39th Seminar of the European Group of Risk and Insurance Economists (EGRIE), 17–19 September 2012, Palma de Mallorca

The 2012 EGRIE seminar touched upon a wide range of issues, including the amount of risk mitigated by long-term care protection schemes, the management of pension funds under market jump risk, comparisons of the treatment of risk in quantum physics and economics, the influence of interest rate guarantees and solvency requirements on the asset allocation of life

insurance companies, and policyholder behaviour in private health insurance.

Consult the conference papers on our website.

2nd Annual China Liability Regimes Conference, 16 August 2012, Beijing

Hosted by Swiss Reinsurance Company Ltd, this year's event focused on "Tort Law and its Implications for the Chinese Insurance Market".

See p. 41 of this report or consult the conference papers on our website.



Bruno Pfister, Swiss Life SA Group CEO, at the Four Pillars Conference.



39th General Assembly, 6–9 June 2012, Washington D.C.

The General Assembly of The Geneva Association is the most prestigious gathering of insurance executives in the industry calendar and has been an annual event since The Geneva Association's founding by former French prime minister Professor Raymond Barre, in 1973. It allows Members to exchange their ideas and discuss key strategic issues that are major opportunities or challenges for the sector and to prioritise long-term strategic issues.

The 39th General Assembly focused heavily on financial stability and regulation, with speeches by Christine Lagarde of the IMF, Michael McRaith of the FIO, Gabriel Bernardino of EIOPA. It also touched upon issues of global ageing and retirement funding, longevity and pandemics, climate risks, cyber attacks and the impact of space weather.

The General Assembly Review is available on our website.



The Geneva Association/IIS Research Award Partnership, 17–20 June 2012, Rio de Janeiro

See Prizes and grants p. 50 of this report or read the press release on our website,



2012 IIS Seminar. From left to right: Michael Morrissey, President and CEO, International Insurance Society, Christophe Courbage, Head, Health and Ageing and Insurance Economics, Yong-kil Shin, President, Kyobo Life Insurance, Korea and Olajumoke Olaosebikan, an award recipient.

Management of Risks in the Economy (M.O.R.E.)—Mapping and Modelling Risks and Opportunities, 29 May 2012, London

The 26th edition of M.O.R.E. was chaired by the chief scientist of RMS London, Robert Muir Wood, and evaluated the world risk model of the United Nations International Office for Disaster Risk Reduction.

10th ART of CROs, 12-13 April 2012, The Hague

Hosted this year by Aegon, the Annual Round Tables of Chief Risk Officers, open to CROs of Members' companies of The Geneva Association, fosters discussions of topics that CROs are confronted with in their activities.

16th International Space Insurance Conference, 6–8 April 2012, Rome

This event is organised by Pagnanelli Risk Solutions Ltd and co-sponsored by The Geneva Association.

28th PROGRES Seminar–Regulation and Supervision, 22–23 March 2012, Geneva

This high-level event attract attendees from global and national supervisory and standard setting bodies, government ministers, Member chief executives, academics, and senior insurance industry executives, to discuss the current state of insurance regulation and its potential development.

The 28th edition focused on "New Regulatory and Supervisory Landscape. Who runs the show and who pays the bill?"

See the Financial Stability section, p. 18 of this report, for more details, or read the full summary on our website.

Prizes and grants

Ernst-Meyer Prize

The Geneva Association annually awards the prestigious Ernst-Meyer Prize (CHF5,000) for university research work, usually in the form of a doctoral thesis, that makes a significant and original contribution to the study of risk and insurance economics. Last year's judging committee comprised Christophe Courbage, Sandrine Spaeter and Richard Watt.

The Ernst-Meyer Prize for 2011, bestowed in 2012, went to Petra Steinorth for her Munich University Economics Ph.D. dissertation on "Three Essays on the Economics of Selected Multi-Period Insurance Decisions with Private Information".

See *Insurance Economics Newsletter* No. 66 for a full summary of Petra Steinorth's winning contribution.

Geneva Association/IIS Research Partnership— Shin Research Excellence Award

The Geneva Association and the International Insurance Society (IIS) jointly offer the Shin Research Excellence Award, designed to foster original applied research in the insurance area addressing issues of concern to global insurance leaders by examining subjects which directly influence business operations and operational business issues on a practical level.

The winners were Olajumoke Olaosebikan, from the University of Bath's School of Management, U.K., for her paper, The Determinants of the Profitability of Micro-Life Insurers in Nigeria, and Yi (Kitty) Yao from the Actuarial Science, Risk Management Insurance Department and of University of Wisconsin's School of Business, Madison, U.S., for her paper, Development and Sustainability of Emerging Health Insurance Markets: Evidence from Microinsurance in Pakistan.

Authors won US\$5,000 and were invited to present their work during the International Insurance Society's 48th Annual Seminar at Rio de Janeiro, Brazil, 17–20 June 2012, where their research was presented in front of more than 400 insurance leaders attending the seminar. The papers were also published in a special edition of *The Geneva Papers* on Risk and Insurance—Issues and Practices (see Publications p. 52 of this report).

See the press release on the winning papers for more details and read the abstracts of the winning papers in *Insurance Economics Newsletter* No. 66.



2012 IIS Seminar: from left to right: Yong-kil Shin, President, Kyobo Life Insurance, Korea, Yi (Kitty) Yao, Olajumoke Olaosebikan, award recipients and Christophe Courbage, Head, Health and Ageing and Insurance Economics.

SCOR-EGRIE Best Paper Awards

SCOR-EGRIE Young Economist Best Paper Award

The SCOR–EGRIE Young Economist Best Paper Award was created by SCOR, the Institut d'Economie Industrielle (IDEI) and the University of Paris-Dauphine to honour the best paper presented by a young economist at EGRIE's annual seminar .

The amount offered to the laureate of the award is $\in 2,000$. This award is organised under the supervision of the chair "Risk Markets and Value Creation" at IDEI and Dauphine University, which is sponsored by SCOR and the Fondation du Risque.

The selection committee is composed of five people representing the following institutions: EGRIE, SCOR, Fondation du Risque, Dauphine University and IDEI.

The 2012 SCOR–EGRIE prize for the best paper presented by a young economist at the annual seminar of EGRIE was awarded to Andreas Milidonis for his paper *Compensation Incentives of Credit Ratings Agencies and Predictability of Changes in Bond Ratings and Financial Strength Ratings*.

The two other nominees were Robert Kremslehner (*Limited Liability Provisions and Directors' and Officers' Insurance*) and Annette Hofmann and Richard Peter (*Intertemporal Self-Insurance-cum*-*Protection: Saving, Imperfection, and Background Risk*).

SCOR–Geneva Risk and Insurance Review Best Paper Award

SCOR, the Institut d'Economie Industrielle (IDEI), and The University of Paris-Dauphine created the SCOR-GRIR Award to distinguish the best paper of the year published in *The Geneva Risk and Insurance Review*. The amount offered to the laureate of the award is $\in 1,000$. This award is organised under the supervision of the chair "Risk Markets and Value Creation" at IDEI and Dauphine University, which is sponsored by SCOR and the Fondation du Risque.

The selection committee, composed of the editors and associate editors of *The Geneva Risk and Insurance Review*, choose and reward the best paper published the previous year.

The 2012 SCOR-GRIR Award for the best paper of the year published in *The Geneva Risk and Insurance Review* was bestowed on Christian Gollier, for "On the Underestimation of the Precautionary Effect in Discounting", *The Geneva Risk and Insurance Review*, 36(2), pp. 95–111, December 2012.

Research grants and subsidies for theses

Each year, The Geneva Association also awards up to two research grants for submissions—usually doctoral theses carried out in the field of risk and insurance economics.

Each grant is worth CHF10,000 and past topics awarded include: climate change and public health, nonparametric testing for asymmetric information, the impact of demand conditions and technological change on the structural evolution of the insurance industry, adverse selection and moral hazard in agricultural insurance contracts.

Subsidies of up to CHF3,000 are also granted to authors of university theses on risk and insurance economics to help defray printing costs and to support the publication of high quality work.

Snaebjorn Gunnsteinsson from Yale University was awarded one of these research grants in 2012. His work focused on Information Asymmetries in Crop Insurance. An overview of his research can be found in *Insurance Economics Newsletter* No. 67.

Publications

The Geneva Association publications take different forms in addressing its various audiences:

- two journals, The Geneva Papers on Risk and Insurance—Issues and Practice and The Geneva Risk and Insurance Review (formerly The Geneva Papers on Risk and Insurance Theory);
- reports on major themes discussed throughout a part of the year, otherwise known as *The Geneva Reports*;
- seven different newsletters;
- conference papers, known as *Etudes et Dossiers*; and
- special reports, presentations and white papers (monographs) written by The Geneva Association staff and/or external collaborators.

Journals

Founded in January 1976 under the auspices of the first President of The Geneva Association, Prof. Raymond Barre, *The Geneva Papers on Risk and Insurance* was separated into two series in 1990:

- The Geneva Papers on Risk and Insurance—Issues and Practice
- The Geneva Papers on Risk and Insurance Theory, later changed to The Geneva Risk and Insurance Review.

As stated by Prof. Barre, the goals of *The Geneva Papers on Risk and Insurance* were first and foremost to become the voice of insurance at the highest global level to help elaborate and confront key strategic issues for the sector; and second, to stimulate a constructive dialogue between insurance and its social and economic partners.

Both journals are peer-reviewed and published by Palgrave Macmillan. Articles older than three years are publicly available in the resource centre of The Geneva Association website.

Online access to many Palgrave Macmillan journals provides users with Advance Online Publication (AOP)—definitive, citable version of papers (complete with Digital Object Identifier, or DOI) available online ahead of print.

The Geneva Papers on Risk and Insurance—Issues and Practice



The Geneva Papers on Risk and Insurance—Issues and Practice quarterly publish papers aimed at improving the scientific knowledge of the insurance industry. The Editorin-Chief, Dr Christophe Courbage, Head of the Health and Ageing and Insurance Economics programmes of The Geneva Association, assisted by the editorial board, assesses the quality of submissions, determines their potential contribution to the field of isnurance and organises the peer-review process.

The publication is essential reading for academics and researchers in insurance, insurance industry executives and other professionals who are searching for deeper insight into the strategic options for their sector. It bridges the gap between these groups, highlighting overlapping areas of interest and providing mutually beneficial research and dialogue.

The Geneva Papers on Risk and Insurance—Issues and Practice has displayed healthy growth since 2009. The latest edition of the Thomson Reuters Journal Citation Reports saw the impact factor²³ of the publication rise to 0.533 from 0.464 last year, and its five-year impact factor rise to 0.452.

Issues published since April 2012:

- GPP 37(2), April 2012, a special issue on climate risk and insurance with an editorial on "Insurance Law and Economics Research for Natural Hazard Management in a Changing Climate" by Reimund Schwarze.
- GPP 37(3), July 2012, a special issue on insurance and finance,

²³ A measure of the frequency with which the "average article" in a journal has been cited in a particular year.

with an editorial on "The Financial and Economic Attributes of Insurers" by Etti Baranoff.

- GPP 37(4), October 2012, a special issue on health, with an editorial by Christophe Courbage and Mike Hoy.
- GPP 38(1), January 2013 showcased the two Geneva Association/ IIS award-winning papers in 2012 focusing on the topic of microinsurance.
- GPP 38(2), April 2013, a special issue on insurance and supervision, with an editorial on "Dialectics of the Current Regulatory and Supervisory Developments in Insurance" by Jan Monkiewicz.

The Geneva Risk and Insurance Review



The Geneva Risk and Insurance Review targets academics and university scholars in economics. The Review is published by Palgrave Macmillan in annual volumes of two issues. Its purpose is to support and encourage research in the economics of risk, uncertainty, insurance and related institutions by providing a forum for the scholarly exchange of findings and opinions.

The Editors-in-Chief of *The Geneva Risk and Insurance Review* are Prof. Achim Wambach, Director of the Institute for Economic Policy, University of Cologne and, since 2012, Prof. Michael Hoy of the Department of Economics and Finance, College of Management and Economics, University of Guelph. The journal is considered to be the official journal of EGRIE.²⁴ Its five-year impact factor is 0.725 and ranked as category 2 in the Finance and Insurance field of the 2011 categorisation of Journals in Economics and Management issued by the National Center for Scientific Research (Centre National de la Recherche Scientifique).

Issues published since April 2012:

- Vol. 37(2), September 2012, with a lead article on "Beyond Risk Aversion: Why, How and What's Next?" by Louis Eeckhoudt.
- Vol. 38(1), March 2013, featured the EGRIE keynote address on "Risk and the Endogenous Economist: Some Comparisons of the Treatment of Risk in Physics and Economics" by Neil Doherty.

The Geneva Reports

The Geneva Reports series tackles issues of strategic importance to the insurance industry that warrant special attention and particular analysis.

Two reports were issued 2012/2013:

• GR6: Addressing the Challenge Ageing—Funding of Global Issues and Insurance Solutions Governments, corporations and individuals around the world are feeling the financial strain of ageing populations. With contributions from leading academics and experts on ageing, insurance professionals as well as the International Monetary Fund and the Center for Strategic and International Studies, this report analyses the implications of global demographic change employers' governments', for individuals' and retirement financing. The report suggests that insurance solutions will need to be a fundamental part of a global



²⁴ The European Group of Risk and Insurance Economists (EGRIE) is a European-based non-profit organisation dedicated to promoting research on risk and insurance. See p. 45 for more details.

response to help individuals achieve a secure retirement.

See p. 31 for more information on the challenge of global ageing.

• GR7: Insurers' contributions to disaster reduction-a series of case studies. Through a series of case studies, this report examines the cooperation between governments, insurers and citizens in their endeavours to mitigate extreme events, which are worsened as much by poor risk management as by the effects of climate change. Given insurance's unique capacity for mitigating the losses resulting from extreme events, this report focuses on the arrangements, regulation and conditions that best exploit its deep knowledge of risk management. The ultimate goal is to draw lessons learned-from obstacles faced and successes achieved in specific circumstances-for broader use in the domain of disaster risk reduction.

See p. 25 for more information on the issue of climate risk and disaster reduction.

Newsletters

Each research programme of The Geneva Association publishes a dedicated newsletter twice annually. In addition, the Association publishes an annual World Fire Statistics bulletin.

These publications have been, since early 2013, disseminated almost exclusively in electronic format.

Insurance Economics

This newsletter for risk and insurance economists serves as an information and liaison bulletin to promote contacts between economists at universities and in insurance and financial services companies with an interest in risk and insurance economics.

Risk Management

This publication summarises The Geneva Association's initiatives in the field. It is open to contributions from any institution or company wishing to exchange information on the subject.

Life and Pensions (Four Pillars)

The Life and Pensions newsletter provides information on the programme's activities and showcases articles on the structuring of social security and retirement systems, as well as the insurance industry's potential role in addressing the challenge of retirement security.

Regulation and Supervision (PROGRES)

The aim of this newsletter is to contribute to the exchange of information on studies and initiatives aimed at better understanding the challenges arising in the fields of insurance regulation and supervision, as well as other legal aspects.

Health and Ageing

This publication seeks to bring together facts and figures linked to issues in health, and to try to find solutions for the future financing of health. It also highlights the role that insurance solutions can play in them.

Insurance and Finance

The research programme on insurance and finance comprises academic and professional research activities in the fields of finance where they are relevant to the insurance and risk management sector.

World Fire Statistics

This information bulletin presents statistics on national fire costs from over 20 leading countries in an effort to persuade governments to adopt strategies aimed at reducing the cost of fire.



Conference Papers (Études et Dossiers)

The conference papers series of The Geneva Association, traditionally known as *Etudes et Dossiers*, presents proceedings, the presentations, special reports and research done by The Geneva Association in the context of an event. In May 2013 this publication will be discontinued and conference presentations on programmes in the future will be available on the website individually. All past copies of *Etudes et Dossiers* will remain available on The Geneva Association server.

Special reports, presentations and white papers

Surrenders in the Life Insurance Industry and their Impact on Liquidity (July 2012)

In this report, The Geneva Association examines consumers' motives for the liquidation of their assets in both normal and extreme circumstances, and the means by which insurers manage surrender risk, drawing on empirical evidence of surrender behaviour in the recent and previous crises.

Offering a comprehensive understanding of the effects of liquidity stresses in insurance, the report further seeks to highlight the mechanisms and existing resilience and responses of the industry to liquidity crunches and thereby provides a basis of understanding for any further discussions on the issue.

Finally, the report analyses the potential role that regulators, supervisors and policymakers play during times of liquidity stress; what tools do they have to prevent mass surrenders from occurring and how can they support the insurance industry in dealing with them if they occur.

See Financial Stability p. 17 for more details.

The General Assembly Review 2012 (September 2012)

The Review is a retrospective on some of the key discussions at the 39th annual General Assembly of The Geneva Association in Washington, D.C.

The Review comprises accounts of keynote speeches by Christine Lagarde, Managing Director of the International Monetary Fund, Michael McRaith, Director of the Federal Insurance Office, Gabriel Bernardino, Chairman of EIOPA, and Senator Mark Warner of Virginia on issues of insurance regulation and financial stability.

Providing an insight into the most prestigious gathering of insurance CEOs worldwide, the Review also features essays by Members on highly relevant and forward-thinking issues such as industry valuations, longevity and pandemics, cyber risks and the impact of space weather.

The Social and Economic Value of Insurance (September 2012)

This paper seeks to highlight the role of insurance in society, expounding upon the very real value that it offers to individuals, institutions and the economy by providing a sense of security and peace of mind, mitigating loss, increasing prosperity, and making people more aware of the reality of risks and their consequences. It also examines some of the misunderstandings about insurance coverage, in particular those areas where they have led to disappointment or disillusionment about the industry.

The Institutional Framework for Global Insurance Regulation and Supervision: The Changing Landscape (December 2012)

by Jan Monkiewicz and Patrick M. Liedtke

The aim of this report is to provide a primer-type overview of the regulatory structures relevant to the insurance industry and review the









changes that are taking place or are likely to take place in the global institutional framework for financial regulation and supervision.

Cross industry analysis: 28 G-SIBs vs. 28 Insurers— Comparison of systemic risk indicators (December 2012)

The purpose of this analysis is to provide policymakers and other stakeholders with a factual analysis that quantifies the systemic risk of banks versus insurers using comparable criteria required by the IAIS data calls. The report was updated in February 2013 to account for the three banks that were removed from the list of Globally Systemically Important Banks.

See Financial Stability p. 18 for more details.

IAIS Policy Measures Consultation Response (December 2012)

Concerned that the proposed IAIS methodology and policy measures did not sufficiently match the specifics of the insurance industry, The Geneva Association published this response proposing a process for applying appropriate policy measures to insurers using a three-step "ladder of intervention".

See Financial Stability p. 18 for more details.

Variable Annuities—An Analysis of Financial Stability (March 2013)

While VAs share many of the features of other life insurance products, they can be more complex and require more sophisticated risk management tools. As a result, they have become an area of discussion between the industry and regulators in the development of a global regulatory architecture to tackle systemic risk.

The Geneva Association has published this report on variable annuities to inform those discussions by providing a clear analysis of the functioning of VA products and the activities of insurers in providing them. The research did not identify a scenario that would make a variable annuity writer a source or amplifier of systemic risk to the global financial system and the wider economy.

Group-Wide Risk and Capital Management of Internationally Active Insurance Groups— Current Practices and Challenges (April 2013)

A survey analysis that aims to support the discussions underway at IAIS on a Common Framework for the Supervision of Internationally Active Insurance Groups (ComFrame).

See Financial Stability p. 20 for more details.









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