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European Parliamentarian Agnes Jongerius on working longer:

'Make the retirement date flexible'

By Paul Jurriëns _ Photography: Willy Slingerland

'It is logical to link the retirement age to average longevity,' according to Agnes Jongerius. She represents the Dutch Labour Party (Partij van de Arbeid) in the Progressive Alliance of Socialists and Democrats in the European Parliament. An interview on employment, policy in relation to the elderly and later retirement 'But employees must also be able to determine the age at which they feel they have worked long enough.'

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Agnes Jongerius

If we all live longer, it boils down to either working longer or receiving a lower benefit.

Agnes Jongerius (1960) was the chairman of the FNV (Federatie Nederlandse Vakbeweging, the federation ofthe trade union) from May 2005 to June 2012, the largest trade union organisation in the Netherlands. In this capacity, she was chosen to be the most powerful woman in the country on numerous occasions. The national discussion on a higher retirement age ultimately resulted in the termination of her career with the trade union organisation. Her career began in 1987.

At the beginning of the debate referred to above, Jongerius held the view that working until the age of 65, as the highest retirement age, was enough. The compromise which emerged from her later negotiations with the employers involved a gradual increase up to 66 years in 2020. However, the FNV appeared to be divided, which it remained. The FNV remained divided. Jongerius made her exit. In addition, due to the economic crisis, politicians decided to introduce a higher retirement age more quickly. This applied both to the state old-age pension, the AOW, and to the second tier, the company and industry-wide pensions.

Jongerius, who has the portfolio of employment and social affairs in the European Parliament, doubts whether the accelerated increase in the retirement age will benefit Dutch society all that much. The economic crisis, after all, has resulted in a wave of retrenchments and unemployed people, who receive related benefits for a longer period. The delayed economic recovery and gradual reinvigoration of the labour market has come too late for many older employees.

'What was good about our compromise was that people could choose when they wanted to retire. For some people, a retirement age of 65 is not enough by far. For heavy physical labour or, for instance, in the case of a community policeman, this limit is lower. Nevertheless, a solution has to be found somewhere. If we all live longer, it boils down to either working longer or receiving a lower benefit.'

Europe has enormous differences with regard to the age at which employees retire. Is it high time that this was harmonised?
'This is not my highest priority. In addition, pensions are formally not a power delegated to the EU. This is up to the national member states. Many countries have a pay-as-you-go system. As the population ages, this results in a considerable burden on public finances of country X, Y or Z. In all countries, there is therefore pressure to raise the retirement age.'

'The stability of public finances is a European matter. The European recommendations in this regard therefore point to an increase in the retirement age, linked to life expectancy. In addition, many countries are intending to promote savings systems. But saving at a time like this is difficult. It would have been wiser to have started earlier.'

Whatever the situation, the retirement age will be raised throughout Europe. This imposes a burden on older employees. What do you see as the role of employers in this?
'The policy of companies with regard to elderly employees can be summarised very briefly. It goes no further than measures to relieve the elderly of tasks, in other words adjusted timetables and slightly more free time. HR departments, on the other hand, know exactly what is needed. They are familiar with the handbook. But reality is difficult to manage.'

‘I do see some cause for optimism, however. By increasing the retirement age, employees will give more thought to what they would like to do in the final years of their careers. This increases the pressure on companies to develop a career policy for older employees. They have to consider what these employees need.’

‘To do so, employers must start by paying attention to appraisal interviews. Don't only focus on young high potentials, but also on people over the age of 40. In addition, employees must be given more scope to organise their hours of work. For instance, they should have the opportunity to care for someone for one day a week. If employees have the scope to do so, the benefit which companies reap from this is incredible. The third measure which I would like to mention is lifelong learning. Offer people the opportunity to develop new skills. This is necessary at every age.’

21st century
Jongerius is the vice-chairman of the Committee on Employment and Social Affairs of the European Parliament. The Committee is working on a report on the challenges of the labour market in the 21st century, which is dominated by globalisation and digitisation.

‘For instance, how will we deal with the welfare states and the fact that an increasing number of people are deciding to work as independent entrepreneurs, such as *Ich-AG* in Germany and the self-employed without personnel(so-called *zzp'ers*) in the Netherlands? In Spain, undeclared work is on the increase. With youth unemployment at 50%, people are increasingly providing each other with services. As a result, much work is disappearing from the formal economy. On balance the present austerity policy is not effective, but costs more precisely because people no longer pay taxes and social insurance contributions. How can these matters be linked up again?’

‘On the labour market of the 21st century, how to ensure that older employees are kept in employment is also an issue. European countries can learn a lot from each other with regard to topics such as these. In Germany and Austria, for instance, which cherish their traditions far more than the Netherlands, many experienced professionals take young people under their wing in a sort of master-apprentice relationship and teach them the tricks of the trade. This is pleasant for both generations.’

What can you expect of employees?
‘That they work on their future more actively. That they think about what they want and what they need to achieve this. As far as I'm concerned, the trade unions should place more emphasis on offering career orientation.’
‘For instance, the construction industry in the Netherlands has a successful project in which people can make use of an advisory service outside of their company to talk about their future. They can raise questions such as “At present, I am involved in installation work, but what could I do after that?” In addition, there is a budget for reskilling. Thought can also be given to introductory work placements for employees over the age of 50. In the Netherlands, with a certain cheerfulness, they look for new ways of giving form to their lives.’

‘No one needs a coal stoker anymore on an electric tram, according to the Dutch saying. The world of work is changing rapidly. So you must not wait until this overwhelms you, but you have a responsibility to explore new opportunities.’

May you also demand of employees that they live healthily and maintain their vitality? For instance, that they stop smoking or go on a diet?
‘This touches on the area of employees' private lives. After all, you are an employee for only a limited part of the week. In addition, people with less education and a lower income live for seven years less. Twelve of those years are spent with deteriorating health. Society is doing nothing about this. Should those with less education solve this problem themselves? To my mind, that would be going a step too far.’

Last opportunity
Jean-Claude Juncker, the chairman of the European Commission, sees the term of his team as a last opportunity to wrestle free from the grip of the Eurosceptics. With an investment plan of more than €300 billion, he wishes to stimulate the economy and increase employment.

‘It must be done now,’ according to Jongerius. ‘It's time to get down to business. Europe in its present state with 25 million unemployed is unsustainable. If we only focus on free trade, these people will be caught in the middle. We have to succeed in increasing employment.’

‘Take VDL Nedcar in Born, which produces the Mini for BMW. This company needs employees. Just across the border in Belgium, a car factory has been closed down. It is logical that you should ensure that people can overcome the barriers on the labour market more easily.’

In which sectors does the growth in employment have most chance of success?
‘The wisest option is to invest in areas which will not cause you to have regrets, such as sustainable energy and ensuring that buildings are energy neutral. The Netherlands has to raise its dikes because of the rising sea level. Let's do this in such a way that we benefit from the multiplier effect of these investments.’

Do you not see any employment opportunities in the financial sector?
(Resolutely) ‘No. (laughing) Sorry. Due to the rationalisation process, employment there will contract in the coming period.’

EIOPA HAS DEVELOPED A TOOL, T4U, TO SUPPORT XBRL

'EXIT THE MARKET AGAIN

By Paul Jurriëns

In order to support the reporting process in relation to Solvency II for insurers in Europe, the supervisor, EIOPA, has developed the Tool for Undertakings (T4U). This tool allows insurers to generate XBRL files. The beta version was launched at the end of December. In the 4th quarter of 2015, the final launch is scheduled. 'We wish to facilitate adoption by the market of XBRL as the standard,' according to Patrick Hoedjes, the Head of EIOPA Oversight and Operations. 'We will exit the market again as quickly as possible.'

Using the eXtensible Business Reporting Language (XBRL), organisations can collect, exchange electronically, analyse and process financial information easier and more efficiently. They can achieve important time and cost savings, as well as error reduction. The reliability of the figures increases as a result of XBRL.

'I like the comparison of XBRL to sea containers,' Patrick Hoedjes continues. 'You reach an agreement with each other on how you wish to transport the goods, in this case the data. If you all use containers of the same dimensions for this, of course this is efficient. You can design the entire logistical process, including trailers and trucks, on the basis of a single model. This is what one does with XBRL. It is a single specific way of packaging data for transportation for which the entire system is configured.'

It is therefore not strange that EIOPA, the European insurance supervisor, has made XBRL obligatory for national supervisors to submit data to EIOPA. EIOPA has also developed a taxonomy in XBRL. 'However, we also wish to market XBRL,' Hoedjes emphasises. 'The ideal scenario is that everyone reports using XBRL. If the market uses the same tools and reports, you can compare data and exchange it better. This in turn links up to our mandate, the aim of which is to improve the quality of supervision.

Free tool

Although 'easy' and 'efficient' are keywords in relation to XBRL, reality is more complex. On the insurance market, after all, there is relatively little knowledge of this digital language, which is also not that simple.

Hoedjes: 'We realise that if we launch XBRL as the vehicle for transmitting data, we have to compensate for the high investment costs which insurers have to incur for this. We have to offer smaller and medium-sized companies, in particular, a tool which they can use to generate XBRL easily in their reports. This is T4U, which we are offering free of charge and intend to release as an open-source tool.'

First step

By using T4U, insurers can validate data in accordance with EIOPA's rules, using the XBRL taxonomy as the basis. Hoedjes: 'Using T4U, we can primarily promote the use of XBRL as the standard on the market. T4U is a first step towards making reporting in XBRL possible. T4U has limited functionality and is therefore not a tool which you can use to generate all sorts of reports or obtain insights into one's own company. It is up to the market to produce a reporting tool such as this. T4U is a translation tool which we wish to use to break open the market, so that providers can start offering their own tools with much more added value than the T4U. For this reason we also intend to provide to all interested parties (insurance companies, supervisors, consultants), with extensive information on T4U in order that everybody can benefit of that. After doing so, we will exit the market again as quickly as possible.'

(Smiling) 'If you enter into something, you must know how you intend to exit. This is certainly the case if you wish to build a bridge between the world of today and the world, in which XBRL is the standard. You must not link a long-term strategy to this. We do not wish to become a software provider. That is outside of our mandate.'

If an insurer wishes to use XBRL extensively, it will therefore need a genuine reporting tool. 'A tool such as this will probably be based on T4U, but with additional functionality provided by market players,' Hoedjes expects. 'Actually everyone can do on the basis of the T4U whatever they find necessary. This will result in considerable further development of the market for XBRL, with numerous parties offering similar products. This is also healthy from a technical cost perspective. Now we already see that the price of reporting tools has fallen considerably because insurers are able to take the first step using T4U.'

When will you exit?

'We plan to launch the first version which has the full Solvency II taxonomy in the 4th quarter of 2015. What happens after that is not yet known. EIOPA's budget has been cut considerably. That also has consequences for the further development of the tool. It is certainly possible that the release in the 4th quarter of 2015 will be the last. This depends partly on how successful we are in approaching the market. We wish to share the knowledge acquired as quickly as possible with the wider world and stimulate competition so that additional tools can be offered based on T4U.'

XBRL is an open standard which must therefore be accessible. Why is a tool like T4U therefore necessary?

'XBRL is a standard for describing, packaging and transporting data from A to B. Since XBRL also

AS QUICKLY AS POSSIBLE'

transmits a considerable amount of meta information with the data, it is a fairly intensive language for which you require knowledge. This knowledge is not widespread. Since both the European Banking Authority (EBA) and EIOPA work with XBRL and because of our tool, we expect this knowledge to increase. A better and more diverse range of experts in this language will emerge.'

Why does EIOPA focus on the smaller and medium-sized insurers?

'Large companies have the means, expertise and capacity to make the transition to XBRL. They do not depend on a tool produced by EIOPA to introduce XBRL. Nevertheless, they may use the tool. Everyone may do so. However, the functional specifications of T4U, for instance, do not take into account the fact that a large company has to be in a position to draw up a report within five minutes. Within a large company, the tool may perhaps be slow. We will not consider that an issue, which should be solved by this tool.'

'T4U can also be used very well as a sort of data model for the basic internal administration. The tool links up well with Solvency II providing a DPM based database. But ultimately, a commercial reporting tool which is integrated with the entire administration is the most efficient solution.'

Is T4U compatible with the reporting architecture of banks?

'Yes, fully. T4U also includes bank reporting because it is based on the same structure as the EIOPA taxonomy. In principle, you can import any taxonomy into the tool as long as you adhere to the same structure. This can then generate a report.'

'This is possible because EBA and EIOPA made use of the same Eurofiling Architecture. By doing so, we were able to aim for uniformity between the model used for banks and insurers. There is, after all, considerable overlap. This is the case, for instance, with regard to the instruments on the asset side. It is useful in this case if they are described in the same way and have the same meaning. After all, if EBA and EIOPA are not in agreement, insurers will be confronted with two sets of reporting models. We have avoided this by cooperating closely.'

'We found another example of uniformity in Data Point Modelling, DPM. This is not directly related to XBRL. Where the taxonomy describes a firmament of stars, DPM describes the universe and how the stars relate to each other and move relative to each other. In other words, it describes the financial reality of an insurance company and how all these interconnected data points are related to each other. DPM is a type of bridge, a translation between the technical side and the business side. Trying to describe the galaxy using the sea containers referred to earlier is complex. That is also the shortcoming of XBRL. It is a very technical description which makes it difficult to view the situation from the business side.'

The Polish company BR-AG has been the advisor in the development of the DPM and XBRL tool for both EIOPA and EBA. Hoedjes: 'As a result, cross pollination, as it were, of knowledge has taken place. In addition, we could make use of a number of elements developed for EBA. That meant spending less taxpayers' money.'


Patrick Hoedjes

Patrick Hoedjes is the Head of Oversight and Operations at the European Insurance and Occupational Pensions Authority (EIOPA). As a member of the Senior Management Team, Mr Hoedjes is responsible for the area of oversight, financial stability and information collection and for establishing and overseeing internal procedures and operational processes within the Authority. Mr Hoedjes is in charge of the financial administration, including the preparation and monitoring of the budget. Furthermore, he is the Chair of EIOPA's IT & Data Committee.

ILS VS REINSURANCE

By Chris Parry

In the fast evolving world of financial markets, the ebb and flow of capital is something every industry is accustomed to seeing. Within the reinsurance industry we have witnessed huge inflows of new capital over the past 10 – 15 years.

This flow of capital represents a fundamental shift in the way the industry is funded, and it is having a profound impact on the way the market operates and the future direction of the industry.

Chris Parry

The graph below highlights the growth in this capital, which has been coined "Alternative Capital". The bulk of the capital originates from pension funds, institutional investors and high net worth individuals who see reinsurance as a way to obtain diversification within their current investment portfolio. There is also a strong argument that reinsurance remains largely uncorrelated to broader macro investment strategies such as equity and debt.

According to Aon Benfield Securities, the investment banking division of reinsurance intermediary Aon Benfield, a total of $62B of alternative capital is currently invested in the reinsurance market; the team believes that alternative capital has the potential to grow to over $150B by 2018.

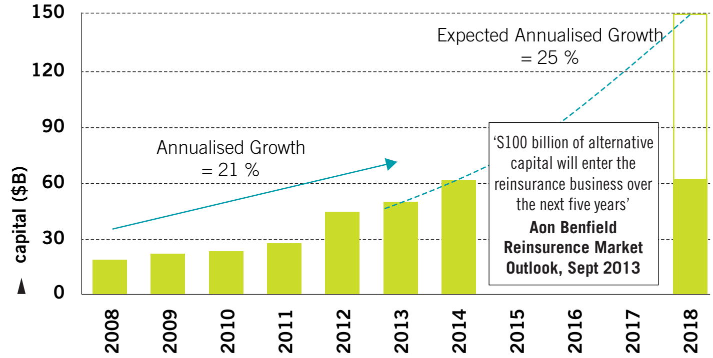


Figure 1: Historical ILS Market Growth and Aon Benfield Forecast

The direct involvement of the capital markets in insurance is not a new phenomenon and actually began shortly following Hurricane Andrew and the Northridge Earthquake in the early 1990s. The first catastrophe bond was issued by Hannover Re in December 1994.

Growth in the market accelerated following the 2004 and 2005 Atlantic hurricane seasons, which resulted in both an increase in demand for reinsurance cover and a reduction in available capacity.

An investment in the Insurance Linked Securities ("ILS") space is now a very attractive proposition to the investment community due to low correlations with mainstream financial markets and the high and stable returns that have been achieved relative to the current yields currently attainable in other asset classes.

Overview of ILS Products

The ILS definition is broadly defined as a financial instrument of which the values are driven by insurance loss events. The product range encompasses catastrophe bonds, industry loss warranties and sidecars.

- Catastrophe bond ('Cat bond'): The most well known and most liquid ILS product – Cat bonds are financial instruments that transfer a specified set of risks from a sponsor to capital markets investors. Structured via a fully collateralised special purpose vehicle ("SPV"), the SPV issues a bond to investors whereby the proceeds are invested in high quality collateral and then used to pay any future losses to the sponsor if specified trigger conditions are met.
- Industry loss warranty ('ILW'): Losses are based on the total industry loss for an event rather than a cedant's actual losses. The contract can be structured as a derivative or as reinsurance.

- Sidecar: Independent financial entities that allow capital markets investors the opportunity to take on the risk/return profile of a particular reinsurance entity. Typically structured as a quota share proportional reinsurance agreement between the ceding reinsurer and the vehicle.

Catastrophe bonds make up the largest proportion of the ILS market and represent over 30% of the total alternative capital invested into the reinsurance market. The major balancing figure is made up of a product called "Collateralised Re" which is not strictly an ILS product but is often grouped together with the alternative capital product base.

- Collateralised Re: Reinsurance contract which is fully collateralised via a segregated trust or Letter of Credit.

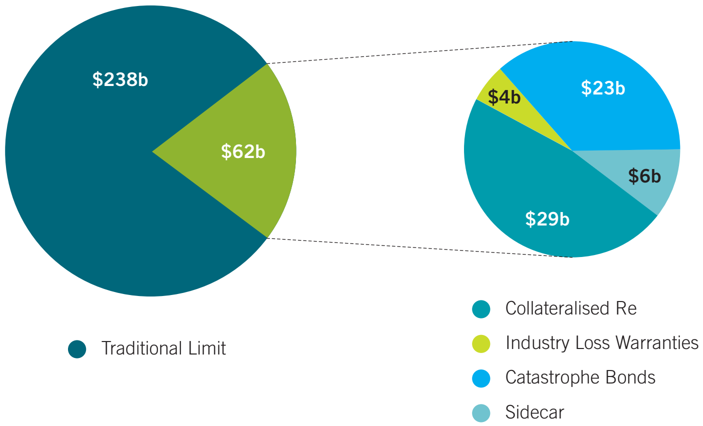


Figure 2: Breakdown of Alternative Capital in the Global Property Catastrophe Reinsurance Market

The growth of ILS products has been fairly rapid since the 1990s, with the exception of a slight reduction in issuance volume following the credit crisis in 2008. Current outstanding bond issuance stands at $23B.

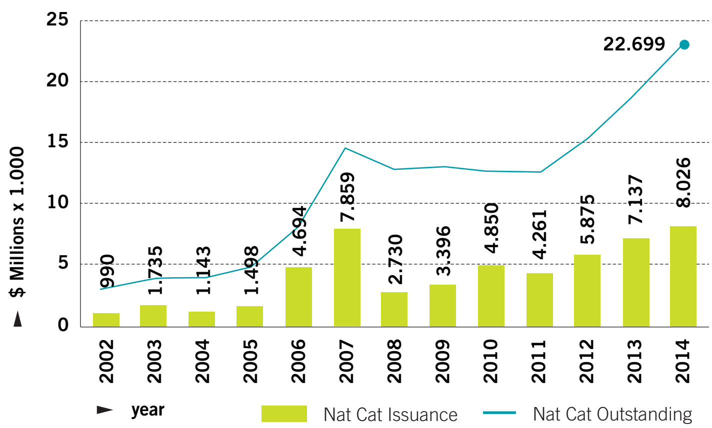


Figure 3: Historical Cat Bond Issuance and Outstanding by Year

There are a range of advantages and disadvantages for ILS products, which are listed below:

Benefits of ILS products

- Diversification: One of the key arguments for using ILS products is that it provides cedants and purchasers of insurance/reinsurance with a way to broaden and diversify their reinsurance. This increased capacity provides reinsurance brokers/buyers with additional leverage to excerpt downward pressure during the course of the traditional renewal process.
- Reduced Counterparty Risk: The collateralised nature of the structure enhances the credit profile of the reinsurance contract. The underlying collateral is usually AAA-rated securities which are placed into a ring-fenced collateral account managed by an independent third party. In a major post loss event scenario, the importance of recovery will become most acute and the true value of collateralised reinsurance should pay dividends.
- Strategic: Concentration risk can be a major concern for large insurance and reinsurance entities, especially those that are heavily reliant on a number of key markets for capacity. ILS products provide a means to access new capacity often on a multi-year basis. ILS funds can now be seen as a form of long term strategic capital.

Developments of ILS products (and how the ILS market is adapting to address these)

- Reinstatement: As the full limit of the contract is collateralised on inception, it is cost prohibitive for ILS products to offer a reinstatement (as twice as much collateral would have to be posted). This can be a disincentive for traditional reinsurance buyers who are uncomfortable with the uncertainty of not having backup protection in place immediately following a major event. This has led to the increased use of aggregate structures and also the emergence of deals that are fronted by reinsurance entities such as Hannover Re and Tokio Millennium.
- Coverage: Traditionally, cat bonds have been structured on a named peril or named geographical scope basis, which has limited its appeal to certain buyers. The cat bond market has evolved significantly over the past 12-18 months and in most cases can offer a commensurate level of coverage to that offered by the traditional market.
- Basis Risk: For certain ILS transactions involving either a parametric trigger (i.e. recovery based upon the occurrence of a specific trigger event such as wind speed or moment magnitude) or industry loss trigger (i.e. recovery based on the occurrence of a certain industry event), there can be a mismatch between actual losses incurred and the recovery achieved through these product types, this is known as basis risk. Certain buyers are happy to take on basis risk, as usually it is accompanied by a significant price break relative to the traditional market; however, it should be noted that the vast majority of cat bond transactions are now executed on an indemnity basis, alleviating buyers' concerns over basis risk.
- Time and Cost: In the early days of the market, the issuance of a cat bond was a time-consuming and expensive process. However, today, with the introduction of cat bond platforms such as Aon CATstream^{TM} [1], sponsors are able to access the market in a more cost-efficient and expeditious way.

Conclusion

ILS is now embedded within the fabric of the reinsurance industry. Despite the reservations that some traditional reinsurer commentators may have, it is expected that its meteoric rise to date will continue as further sponsors embrace the benefits that ILS can bring.

The flow of new capital into the reinsurance market has improved its efficiency and has led to significant cost savings. The by-product of this will hopefully be growth in the overall insurance market.

Chris Parry is Managing Director at Aon Benfield Securities, London

1 – Aon CATstreamTM provides new entrants with the ability to issue a cat bond in an expeditious way by using a standardised set of cat bond offering documents to access the capital markets.

Central and Eastern Europe: an actuarial focus

By Charles Levy

I am Chief Actuary for the largest insurance company (both Non-Life and Life) on the Polish market, Secretary of the Polish Society of Actuaries, representative of Poland at Insurance Europe for Solvency II, member of the Supervisory Board of the reinsurance company Polish Re. This sounds normal for a Polish actuary but in fact it is not true because being a French citizen and French actuary I am currently holding these different responsibilities.

How did that situation happen and what did I learn from the insurance market in Poland and more generally in Central and Eastern Europe (CEE)?

Born in Paris I have been studying in Paris and living there for almost 50 years. Nevertheless my connection with Poland is lasting for almost 40 years. It started when I realized that I had a link with Poland as my great grandmother was born in a small village now situated in the South of Poland and then in the nineteenth century belonging to the Austro-Hungarian Empire. So still being a student I went to Poland for holidays and met my future wife there. Being married, instead of serving in the army for my military service, I became economical attaché at the French embassy in Warsaw. That was in 1980 and 1981, the years of the creation of Solidarity, so a fantastic time for a young guy as I was in those years.

At the end of 1981 we went back to France and I thought that my story with Poland was finished at least from a professional point of view. Nothing is stable and things change more quickly that you could imagine. In 1983 I developed the actuarial department of a French reinsurance company Compagnie Transcontinentale de Reassurance and in a few years became a member of the management of this company, which in those years was a nice achievement for a less than 30 years old actuary.

> In 1989 communism came to an end in Poland

In 1989 communism came to an end in Poland and a new dimension for my career started. At that time I was already an actuary having published a few actuarial papers among others in the ASTIN Bulletin (one of them was devoted to the use of the Bühlmann-Straub credibility model for building the French fire tariff for industrial risks).

After the fall of communism in Poland and more generally in CEE I became active in these markets in two different ways. Firstly, my company then ranking 50th reinsurer in the world was the second more active reinsurer in Poland (after Swiss Re) as Munich Re, SCOR and others yet were not really active in CEE markets. Secondly, I became a lecturer on reinsurance in Moscow (Lomonosov University) and at the Actuarial Summer School of the Polish Society of Actuaries (for almost 10 years). In the meantime I was elected to the board of the IAA ASTIN Section and became for a few years Secretary of ASTIN. In 2000 I joined the reinsurance broker Guy Carpenter to develop their actuarial department. Working for Guy Carpenter I was still involved from a broker and actuarial perspective in the Polish market.

In 2005 PZU, the company number 1 on the Polish market (40 % market share both Life and Non-Life), proposed me a new position to become their Group actuary. In 2009 my position was cancelled but I decided to stay in Poland. Meanwhile I was elected Secretary (equivalent to Vice President) of the Polish Society of Actuaries (see below some ideas regarding the situation of actuaries in Poland and CEE). After leaving PZU I was invited for a few years by RGA, the life reinsurer, to become their actuarial consultant for CEE. In addition, I introduced the Fairfax group (Canada) to Poland and they bought Polish Re (a state owned reinsurer and some state owned companies as PZU) and after the sale to Fairfax kept my position as member of the Supervisory Board. I became the representative for CEE Greece and Turkey of one of the largest French actuarial consulting firms Addactis Worldwide (known in France as Actuaris) for selling their state of the art actuarial software for pricing reserving and modeling. Additionally in 2012 I was offered the position of adviser of the Board of the Polish Association of Insurers in charge of Solvency II. So as a French citizen I am representing the interests of Polish insurers at Insurance Europe in Brussels.

What is the situation of the actuaries in CEE and particularly in Poland?

CEE has 27 countries with a population of roughly 350 million people. But non-life premiums in CEE is lower than in France and life premiums equal to the collected premium in Belgium. The situation of actuaries is similar. Associations are young (less than 25 years old). The total number of actuaries in CEE is no more than 1200 (in France there are roughly 3 times more actuaries). Most companies (at least those of a large or medium size) belong to international (mainly) European groups. Exceptions are Poland (PZU) and the former USSR (excluding Baltic States). Belonging to the national actuarial association is not compulsory (for example in Poland almost 200 members on a total of more than 300 belong to the Polish Society of Actuaries). Standards and level of education still have to be upgraded. So there is a lot to be done but actuaries in CEE are on the right road and want to meet with the requirements of IAA and the Actuarial Association of Europe.

In the last 4 years almost 60 seminars have been organized

To give an answer to the needs and the increased demand from Central and Eastern European countries for actuarial knowledge, the EAA (European Actuarial Academy) was founded in 2005 by the Actuarial Associations of Germany, Switzerland, Austria and the Netherlands. EAA is delivering on a very regular basis 2 days seminars on different actuarial topics. In the last 4 years almost 60 seminars have been organized in many different places in CEE. A small number of these seminars are also available online.

Actuarial associations on their own are active for providing education to their members. In addition to internal local lectures actuarial associations from the Baltic States are organizing the Baltic Summer Days. Poland is holding an actuarial summer school for more than 20 years. In Prague every Friday an actuarial lecture is delivered at the Karol University. Many other examples from other CEE actuarial societies could be given.

Overloaded

Although the mathematical background of actuaries in CEE is rather high you will not very often meet them in actuarial conferences for different reasons. They are overloaded with work, their companies are either poor (when not subsidiaries of international groups but then CEE actuaries attend rather in house international meetings) or their management is not convinced it is worth for the actuaries to attend such conferences. Nevertheless the quality of CEE actuaries makes me think that in the near future they will be more and more present in the international actuarial landscape.

Nevertheless you will find actuaries from CEE who are having or had in the recent past important positions within the IAA (Tarmo Koll from Estonia is the chairman of the IAA Advice and Assistance Committee which is supporting the development of the actuarial profession and actuarial education in areas of the world in which the actuarial profession is not present or is not fully developed) or the Actuarial Association of Europe (Gabor Hanak was the Chairman of AAE in 2012, then known as Groupe Consultatif).

Nowadays the situation has changed

As my career has been connected with reinsurance during the major part of it, let me say a few words about reinsurance in CEE. If in the nineties CEE companies were undercapitalized and needed large proportional cessions (as the famous Casco and MTPL PZU quota share amounting to more than 300 million Euros ceded to reinsurers) nowadays the situation has changed. Companies belonging to international insurance groups have internal cessions and regional reinsurance programs ceding less and less premium to reinsurers. Independent but smaller companies are not in a position to cede much premium. Instead they transfer a lot of catastrophe risks (for example earthquake exposure in Romania, Hungary and Bulgaria, flood exposure all over Central Europe). Ceded premium from CEE amounts to less than 1 200 million Euros so roughly 1% of the worldwide reinsurance premium.

Non-life reinsurance is the major part of it (more than 90%) as life reinsurance remains small. Because of the underdevelopment of the life insurance market the sums insured are quite low and for a large part of the business coming from savings insurance the need for capacity on a per risk or per event (catastrophe) is very remote. For example, on the Polish market PZU which 2014 has a 30% market share in life and even a higher share regarding protection insurance is buying less than 25 million Euros of capacity for a life catastrophe. Figures for ceded reinsurance (excluding intra-group transactions) are not available. Even for a large country as Russia Munich Re when writing about its fast development was giving just relative figures (percentage of increase of its reinsurance portfolio) avoiding any absolute amount. Reinsurers are getting some business by reinsuring some products they have been developing for the insurers as critical illness. Medical expenses insurance is still at a starting phase.

CEE in general even if it aggregates very different types of people is definitely a very nice region to live and work in and my sincere hope is that it will attract in the near future other actuaries coming from Western Europe or even further countries.

Aviabel CEO Cécile Coune: ‘Pragmatism that gets things done’

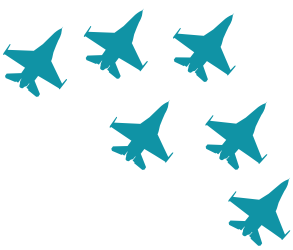
A BELGIAN PASSION FOR AVIATION RISKS

By Mark Heijster

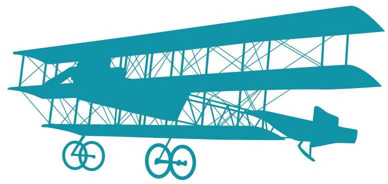
Implementing the requirements of Solvency II is a major operation for the Belgian aviation insurer Aviabel. Standard models do not reflect adequately the situation of niche players like Aviabel who prefer to use their own specific parameters. Pragmatism and a devoted CEO are key to finding solutions for this very specific set of problems.

CEO Cécile Coune, 53 years old, manages the implementation of the Solvency II requirements. There are plenty of obstacles, but Coune is a strong supporter of American pragmatism: ‘If we put our shoulders to the wheel we will manage to find the right solutions. It’s a “roll up your sleeves” approach; solutions are found by jumping into the work.’

She believes in the teamwork as a driving force in achieving success. Despite the difficult economic conditions, the company has a stable rating. The economic outlook for the next two years is good. Standards and Poor’s reviewed Aviabel’s market position last year and rated the company a stable A-status.



Cécile Coune joined Aviabel two years ago. She is thriving in her work. She speaks passionately about her company as a community of specialists working in concert to bring about change. 'In a competitive world we need to maximize the use of all our team members’ capacities’, she says. ‘It is really not an easy world, but my goal is to enable our team to work together for optimal results.'



Her career reached a peak at a young age when she became the first female European CEO of the Belgian branch of the US Chubb Group, an insurer which is among the largest in the US and which offers its services in more than one hundred countries in the world. An international career lay ahead. Yet ten years later she changed direction. Coune wanted to see if it would be possible to make a major career change.

She chose to work in the field of international law and became a partner in Liedekerke, a major law firm in Brussels where she worked as a specialist in the field of insurance. She continued in this capacity for seven years.

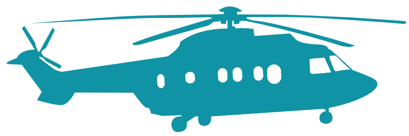
In 2012 she was asked to lead Aviabel. Once again Coune decided to spread her wings. The Belgian air insurer - ‘a small company, with a human size' - suited her perfectly. Though the company was small, its international reach provided an extended horizon. As Coune puts it: ‘Insurance work is too often limited to a small group of countries. I like international challenges; the world is our territory.’

Pragmatic approach

There are plenty challenges at home however. The actuarial field is prime example. January 1st, 2016, the effective date for Solvency II, looms large for every insurance company especially the small ones, like Aviabel. ‘One of the challenges is to find a sufficient amount of data regarding our liabilities,’ says Coune. ‘Liabilities are very much related to the nature of accidents. On the average a claim is settled in two years’ time, but we do have a few large claims which are long tail, so we have to differentiate how we treat these catastrophic claims versus how we treat easily settled, short term claims.’

Another challenge concerns the EIOPA guidelines regarding the segmentation of the insurance liabilities. Coune: ‘We have to segment our business into these predefined lines. Sometimes we need to aggregate these categories for practical reasons. We consider that our business is focused on aviation rated risks. Therefore, with the approval of the regulator, we decided we won’t have that many segments and we can deal with a very small amount of data in each of the sub segments.’

Another problem, according to Coune, was with the interpretation of the standard EIOPA approach regarding catastrophe risk. Coune refined this approach with regards to localization of aviation risks: ‘The way the



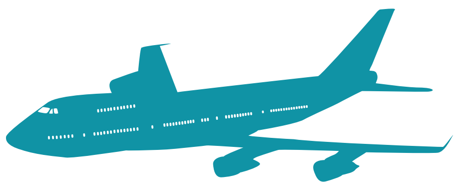
natural catastrophe risk is defined by EIOPA is not really appropriate for the aviation business. We came up with a more pragmatic approach, defining specific scenarios to better capture the risk location and our risk exposure. We decided to use the country of operation as the more relevant criteria. Thus we are able to calibrate the catastrophe exposure according to country specific historical data.'

Specific risks

Coune decided to move ahead and work with a standard model but realized that there was a lack of information from an actuarial standpoint. 'There was a market risk on the other side of the balance sheet', says Coune. 'You have to take into account the market consistent valuation. This means that you have to provide detailed information on all assets held, which was very difficult for an important part of our investment portfolio, namely asset funds. So we had to buy an additional "transparisation" tool. We are in the process of implementing it right now. It is just an example because we also have to pragmatically solve problems that are specifically related to aviation insurance: liabilities to passengers, physical damage to people injured on the ground, damage or loss of the aircraft. The rules are really not always adapted to this specific business.'

> I have to keep the helicopter view and the strategic approach

The preparation for Solvency II was considered an exercise that could work out as an added value for Aviabel. Therefore it was viewed not merely as a means to comply with regulations, but also as a means to hone the efficiency of management for the long term. Aviabel did not shrink from investing in tools and training for this purpose, regarding it as a wise investment for the future.



'We took the regulatory guidelines published by the National Bank which are often refined to the EIOPA's works, says Coune. 'We had to digest the documentations and to translate it into practical measures, at the level of Aviabel. We have done this in a pragmatic way, so we can use the principle of proportionality at all three pillars. The resultant derived plan has to be followed rather strictly according to what was agreed upon with the regulator.'

The selection of tools and technical solutions took quite some time. As Coune says: 'Each supplier came with a different approach and different solution. We have special niche requirements and we sought an integrated approach between the pillars. I didn't want to have to do something for pillar one, the SCR, and then have another supplier for the quarterly reports.'

Today Aviabel is working step by step. Pillar one is under control and the company is able to produce a Solvency Capital Requirement (SCR) for

Cécile Coune

Aviabel SA, Aviabel RE and the group. The next step will be to analyse the various elements which contribute to capital consumption and to look at what can be done to optimize the SCR components.

Counes' vast experience helps her to be involved at a very detailed level. 'In a small company the CEO is close to every activity', she says. 'At the same time I have to keep the helicopter view and the strategic approach to the business.'

Women on board

But Coune is not only focusing on aviation insurance, she is also very active in social issues. She realized some years ago that there are still not a lot of women in these executive positions. Coune: 'When I came back to insurance after seven years, the number of woman CEO's in the insurance industry had not changed.' Therefore, five years ago, she decided to set up a pool of talented women that was baptised 'Women on board'. 'It is not a lobby', she says. 'It is a business oriented organization to build a new model of society by getting women into those board positions. We believe in the power of diversity. Gender balance will give better results for the economy as well as for risk-management'.

Reinsurance in the Dutch Caribbean: a challenging business

By Servaas Houben

Although the ABC islands (Aruba, Bonaire and Curacao) have been hit by natural disasters in the past, the frequency of these natural disasters has been rather limited. The most recent hurricane occurred in 2010 (Tomas) and damage was mainly caused by water instead of wind. Another flooding event occurred in Aruba in 2004 (Hurricane Iwan). However the number of natural disasters in the ABC islands is small when compared with most other Caribbean islands:

Country	Nr of disasters
Anguilla	2
Antigua and Barbuda	7
Bahamas	8
Barbados	5
Belize	6
Bermuda	3
British Virgin Islands	5
Cuba	23
Dominica	9
Dominican Republic	12
Grenada	2
Guadeloupe	8
Guyana	1
Haiti	22
Jamaica	19
Martinique	13
Montserrat	6
Netherlands Antilles	3
Puerto Rico	11
St Kitts and Nevis	7
St Maarten/Saba	2
Saint Lucia	9
Saint Vincent and Grenadines	13
Suriname	2
Trinidad and Tobago	8
Turks and Caicos	2
US Virgin Islands	17

Table 1: natural disasters across the Caribbean from 1899 to 1996

The table above also highlights the concentration of risks within the Caribbean. Therefore one can hardly speak of a homogeneous geographical area for which risk assessments can be easily combined. Furthermore, the limited size and population of most countries, resulting in limited data on premium income and expense outgo, creates a further pricing challenge. Wind and flooding disasters are the most relevant risks for the Dutch Caribbean and the exposure to earthquakes is very limited.

Despite these challenges, most insurance companies apply reinsurance. These reinsurance companies tend to be generally foreign, as the limited scale has so far discouraged any local reinsurance companies to play an important role. Furthermore the current local legislation, based on a kind of Solvency I regime, is not risk based yet and hence the focus is mainly on P&L and solvency ratios, instead of risk measurement and management. Nevertheless, the latest draft guidelines are showing a move towards risk assessment and quantification and hence the risk reducing role of reinsurance may be expected to play a more central role in the coming years.

Apart from the traditional reinsurance companies (with worldwide coverage), a regional collaboration has been created from mainly former West-Indies countries. The Caribbean Catastrophe Risk Insurance Facility (CCRIF) tries to reduce natural disaster expenses through the pooling of risks, and by avoiding potential mark-ups that would occur when using traditional reinsurance. Especially the access to immediate liquidity might be an attractive characteristic which is so vital when natural disasters occur.

An interesting development is the introduction of micro insurance in Haiti, a country prone to natural disasters. This program is especially focused on the poor who rely on small-scale farming, whose income is heavily affected by natural disasters.

Conclusion

Reinsurance pricing in the Dutch Caribbean is a challenging business as the islands are not part of the more homogeneous hurricane belt: although this is a huge advantage in respect of less human tragedy, the lack of data and events makes the pricing of natural disaster risks all the more difficult. Pooling of risks like in the CCRIF framework might be an interesting alternative, although most countries in the CCRIF not only suffer from hurricanes but also from earthquakes, while the Dutch Caribbean are not exposed to the latter. Therefore, looking for countries with more similar risk characteristics to share risk exposure might be a sensible alternative.

Servaas Houben is manager of the actuarial department at Ennia, Curaçao

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WHAT'S BEST FOR YOUR COMPANY? BEHAVIORAL ECONOMIC STRESS TESTING

By Jos Berkemeijer and Sander Boon

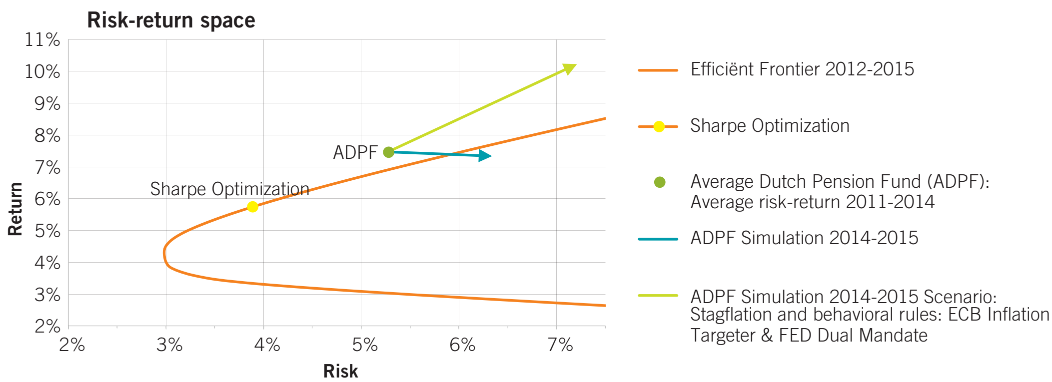
Models of financial institutions are at risk. For years now, captains of financial industries were able to rely on their financial risk and investment models. But how robust are those models? Do they pass the test the current crisis has provided?

Regulatory stress tests
For sure, European regulators have implemented a series of stress tests. Financial institutions like banks, insurers and pension funds invest hundreds of millions to report and comply with regulatory stress tests. But is it enough to be just supervisory compliant? Do regulatory stress tests really test enough stress?

The key strategic question: 'how can my company survive in this chaotic global economy' is hardly ever answered by those regulatory stress tests. To answer this question, a different approach and a more inquisitive mindset for risk management is called for. It starts with the sincere and firm conviction that strategic risk and investment management is not just a matter of pure financial and statistical forecasting. Beside extensive knowledge about the evolution of monetary and financial frameworks, it is also and moreover a question of integrating the behavioral responses of economic actors like consumers and regulators into our models.

The need for new models in a new economic reality
In 2014, Jos Berkemeijer, Sander Boon, Martijn van Eck and Peter Heemeijer founded Symetrics, a European FinTech50 2015 company. They took up the challenge to develop a revolutionary new risk model as a replacement for 'old school' linear models with their lack of expressive power.

Based on Wolfram Mathematica, a new SaaS-based stress testing model was developed that allows users to create, test and calibrate more realistic economic scenarios in minutes. With this new model, financial institutions are able to assess risks real time and in a very interactive way. Users can include behavioral rules adopted by central banks (i.e. forward guidance) and behavioral aspects of other economic players ('herding') in scenarios they wish to stress test their portfolio with. >



A Behavioral Economic Stress Test (BEST) combines best of both worlds: statistical information of historic economic data including the risk-return developments of a wide range of asset class data and behavioral rules that in combination allow financial decision-makers to study the outcome of realistic near future scenarios. This way, financial institutions are better enabled to optimize their portfolio. Risk-return optimization is facilitated by a wide range of optimization techniques, including a new pragmatic solution called 'Minimal Change', that optimizes a portfolio towards the efficient frontier under the condition of a minimal change of the portfolio asset mix.

As with any other model, also BEST cannot predict the future nor can it simulate the exact moment of a crisis. However, BEST is an indispensable instrument that functions as an early warning indicator, helps financial institutions prepare for a timely response and supports them adapting their portfolios to new realities. This way, damage can be prevented instead of managed afterwards.

Informed decision making

This new nonlinear BEST approach to risk management offers financial institutions an essential tool that helps them accomplish the long-sought holy grail of 'informed decision making'. They no longer have to depend on contested 'beliefs' or linear extrapolations. Instead, on basis of early warning indicators, they are able to define a dynamic investment strategy based on logged data and decisions. In doing so, financial institutions develop a strategy that not only complies with regulatory requirements but also address their accountability sought for by other stakeholders.

BEST added value

With the help of a Behavioral Economic Stress Test (BEST), it becomes possible to effectively stress test existing investment strategies, asset portfolios and business plans in a realistic and comprehensible way. Value is added due to an optimized performance under realistic economic conditions. Why stress test the old way if you can do it the BEST way?

Jos Berkemeijer and **Sander Boon** are both Managing Partner Symetrics

Practical benefits

By Paul Sauvé

Solvency II is not just about back-office studies to work out how much capital an insurance company needs to set aside in its books. This article is about how I have used the principles of Solvency II to bring about reinsurance arrangements which beneficially serve both the insurer and the reinsurance company in improving their businesses.

I decided early in my university studies to become an actuary, even though I had only first heard of the profession a short while beforehand. The reason for that decision was that I was assured that actuarial science was the perfect combination of mathematics and business. The rest is history and I have never regretted the choice nor doubted the soundness of my original reasoning and decision. Now, more than 25 years later, the insurance regulatory environment in Europe is proving to be an excellent platform to observe and experience this perfect combination.

Solvency II is the new insurance regulatory regime for the EU, and is a framework setting out how insurance companies work out how much capital they should be holding to meet the risks they cover. It has an official effective date of 1 January 2016. Some countries – for example the Netherlands – have, however, already implemented very large parts of Solvency II and it is already affecting how insurance companies manage their risks and their capital. Solvency II is based on the deep theoretical foundation of *market consistency* and uses prospective projections with fully explicit assumptions to measure an economic balance sheet and to determine a current solvency capital requirement. I work for a reinsurance company, dealing with insurance companies as clients and focusing on capital management, so this is my daily bread.

Others have written volumes about Solvency II and its wide-ranging impacts. Today I only want to tell you about a reinsurance transaction from 2014 which was a wonderful example of actuarial science marrying mathematics and business. Like many European life

from Solvency II – an example

insurers, our Dutch client has a significant amount of longevity risk on their balance sheet and therefore has a significant capital requirement related to that longevity risk. While fundamentally comfortable with that risk, they always look for ways to improve their financial position via risk management or capital management, and these portfolios with longevity risk afforded them another opportunity to explore this possibility.


Paul Sauvé

The basis for the solution lay in two places

Solvency II addresses a life insurer's solvency requirement for longevity risk. This is to be based on what the impact is on long-term projections when there is a defined stress to the expected annuitant mortality rates. So we had many opportunities and many challenges. The core challenge was the natural tension between (i) needing to take the risk of changes in projections fairly far into the future in order to have the necessary impact on the life insurer's capital requirement and (ii) the commercial reality that capital solutions (whether via reinsurance or capital markets) are most efficient when they are no more than 10 years in expected duration. If we had made the contract too short, it would have had too little impact on required capital to be worth the effort; if we made it too expensive, it would no longer have been attractive relative to the alternative of just holding the risk and the required capital. The basis for the solution lay in two places.

Maximum capital benefit
First, we needed to make the transaction relatively short (e.g. between five and 10 years), but without cutting off the impact from the tail of the projections beyond that short horizon. This is a classic problem in doing short-term solutions for longevity risk. The solution was a special new commutation at the end of the contract, which will project trends in mortality from during the contract period to far into the future beyond the end of the contract. The agreement today – prior to entering into the agreement – about this future prospective projection based on not yet observed data was a major new accomplishment. To give maximum capital benefit to our client, that future projection needed to be with the same sophisticated, complex method that they use now, and expect to keep using in the future, for their Solvency II economic balance sheet. That precise mathematical and statistical method needed to be included in the contract documentation.

Sweet spot subset
Second, we had to find a subset of the Solvency II required capital where RGA could bear the risk for a lower cost than the life insurer. Solvency II's detailed assumptions and projection bases allow us now to isolate such subsets of the risk and capital for most risks, something which was previously impossible due to the opaque solvency requirements. We simply undertook this optimisation search regarding our client's longevity risk and capital requirements. This "sweet spot" subset, which we did eventually find, could probably be conceptually attributed to detailed differences in our respective mortality projection models, in our economic capital models, or many other elements of our respective commercial and legal realities. In practice, however, all we will ever know is that both parties accepted the commercial terms in the final agreement.
Solvency II will introduce many such opportunities for more innovative capital and risk management in Europe and will certainly present assorted other rewarding challenges for actuaries in all parts of the insurance industry.

Paul Sauvé FSA, FCIA, Aktuar DAV is Senior Vice President Global Financial Solutions at RGA International

European agenda

2015

9-30 April	**Aktuarvereinigung Österreichs – Seminar on "A Benchmark Approach to Investing, Pricing and Hedging"** Vienna
11-12 May	**Stochastic Models in Life Insurance** Copenhagen
28-29 May	**Modelling and Validating Mortality under Solvency II** Stockholm
11-12 June	**How to Set Up an Effective ORSA Process?** Milan
8- 9 September	**Eleventh International Longevity Risk and Capital Markets Solutions Conference** Lyon
7-10 June	**Joint IAALS & PBSS & IACA Colloquium** Oslo
23-27 August	**ASTIN and AFIR/ERM Colloquium** Sydney

2016

21-22 April	**European Congress of Actuaries** Brussels

2018

4-8 June	**International Congress of Actuaries** Berlin

For all events see also http://actuary.eu/forthcoming-events/

colophon

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It will be released as e-mail newsletter, as well as in print. The Editorial Board welcomes comments and reactions on this edition under contact@the-european-actuary.org. Please also feel free to direct them to one of the members of the Editorial Board.

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Agenda: Actuarial Association of Europe

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In October the theme will be the Insurance Industry. Any suggestions or ideas can be e-mailed to contact@the-european-actuary.org