

# THE EUROPEAN ACTUARY

- 1\_ There is a Rising Demand for Actuaries
- 3\_ Actuaries in Banking in South Africa
- 5\_ European Congress of Actuaries
- 6\_ Big data is like a Trojan horse
- 8\_ Europe Listens to Actuaries
- 10\_ Longevity in the Caribbean

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## There is a Rising Demand for Actuaries, says Dr Johannes Lörper



By David Nicholson

David Nicholson is freelance journalist

**For Dr Johannes Lörper, director at German insurance company Ergo Lebensversicherung Aktiengesellschaft, the emergence of Solvency II regulations in Europe has been a boon to the actuarial profession.**

'The role of actuaries is strengthening', said Dr Lörper in an interview for The European Actuary. 'Solvency II is a catalyst for more actuarial work. As risk management becomes more important, an actuarial approach is becoming more widespread.'



### Actuarial principles

From 2016, the new legislation obliges companies to establish that they have an actuarial or risk management function, something that some businesses (especially smaller ones) may have delayed. There are also pressures from the markets themselves, Dr Lörper argues. 'If you're a company that has given guarantees, you need to manage them. In Germany for example, there are many long term guarantees, compared with other countries, with a lot of recurrent premiums.' This means that the pressures to apply actuarial principles in Germany are higher than elsewhere, he believes.

### Need

The low interest rate environment continues to present difficulties for the life insurance market, according to Dr Lörper. Persistent low interest means that the environment for savers has become tougher. 'It is harder to convince people to make long term savings plans', says Dr Lörper. 'And it is harder for the industry to guarantee a premium. People find it hard to put their earnings aside and they don't tend to do this without an agent. Across Europe there is a need – if people want to keep their standard of living into old age – to do something about it.'

### Increase prospects

'However, if people do make long term plans for their old age, then actuaries will always be working in this arena', he believes. For example, actuaries can simply help to design products which mean that people are rewarded as far as possible for keeping to their payments. 'We can communicate what the necessary cost reduction to a product will be, in order to offer it to the public. And we can take bigger financial risks on behalf of clients to increase their prospects of higher returns, but we can't change the markets.'

### Big Data

One major change in the actuarial profession has been the advent of Big Data in financial analysis and insurance. 'From the point of view of the German actuaries group, we look into this in detail', says Dr Lörper. 'Of course in the insurance industry, it's always helpful to be able to gear the best products to the right customers. For example in health insurance, you can use knowledge of health topics about a particular group or person. In the field of disability, you can assign a product to someone based on more accurate differentiation. Product differentiation means you can better target potential clients. Equally, there are advantages in fraud detection using Big Data. It's easier to detect behavioural patterns which lead you to assume fraud, or to strengthen an assumption that there's something wrong.'

### Great possibilities

The outcome of this greater accuracy is that some clients will pay reduced premiums for better products, and others will pay more, Dr Lörper points out. 'I wouldn't necessarily say that it makes the industry as a whole more efficient. But from a distribution point of view, there are great possibilities. If I can contact a client at the right time, with the right product, that's very tempting.' Big Data is an excellent distribution tool for insurance companies, he argues.

### Secure profession

Despite today's low interest rates and the natural reluctance of young people to plan for their long term financial futures, Dr Lörper is convinced that the actuarial profession is secure. Their quantitative working methods and their relationship with the markets, dealing with longevity, disability, health and many other factors, will keep them in demand. 'Actuaries will still be needed in 20, 40, 60 years from now', he concludes.

# ACTUARIES IN BANKING – A ROARING SUCCESS AT THE FOOT OF AFRICA

By Mike McDougall

It started with a hunch. The chief executive of a merchant bank recognising the depth of analysis and strategic insight as well as the meticulously detailed calculations provided by the actuaries at the small insurer he had acquired. As the business prospered and they acquired a more established insurer and a leading commercial bank, he had an epiphany – if actuaries can provide this value to insurers, surely they can make a difference to the banks.



Mike McDougall

Initially there was a trickle. A few bold actuaries and students leaving the familiarity of insurance and bancassurance and moving into the bank. It was however not long before they showed their value add in capital calculations, risk assessment, strategic management, data analytics and other areas. As a competitive industry with 4 significant players, the other three banks started asking what were the factors that led to their competitor moving up the rankings in all key areas including size, loan performance, customer services, profitability and return on shareholder capital. If you add to this mix the increasingly complex capital requirements under the Basel accord, you have the perfect recipe for the increased employment of actuaries by all significant banks, the banking arms of major auditing companies and actuarial and strategic consultancies focusing on banking.

#### Value add

As a professional body, the Actuarial Society of South Africa, realised that we had a need to ensure that we provide value to actuaries working in banking. >

**Michael Tichareva formally launches the Banking Fellowship exam at the Actuarial Society of South Africa Banking Symposium held on 24 July**



The value add of our members to the banks could be defined by both the technical and conceptual skills they possess as well as their professional discipline and adherence to the Society's code of conduct.

#### **Not appropriate**

With Garth Griffin – who was also the chairman of a large banking group – as President of the Society there was an active drive to ensure that the Society catered for the needs of those working in the industry. As with all new areas of work, it started with an interest group that grew in stature into a fully established practice area committee. Many of the working students employed in banking voiced frustration that in order to complete their Fellowship, they needed to study one of our 5 areas of practice examined at Fellowship level – namely health care, life insurance, short-term insurance, retirement benefits and investments. Although some of these had tangential relevance to their work – typically investments and short-term insurance – they were not appropriate. This resulted in many of these students ceasing their studies and resigning from the profession.

#### **Investigation**

A task team under the enthusiastic leadership of Council member, Michael Tichareva – who was working in banking himself – was tasked by the banking committee and the Education Board of the Society to investigate whether

banking could be developed into a full Fellowship level actuarial area of expertise. The syllabus was built and a full set of tuition material developed by employing both members of the Society and banking experts and academics from around the world. Ultimately the material was developed and reviewed by people in 5 countries spread across 4 continents – with the Society working in close co-operation with the Actuaries Institute from Australia.

#### **Strong support**

After extensive debate in the Society involving all relevant structures (practice area committees, education structures and the Council) and providing opportunity for all members to participate it was agreed with strong support that experience or fellowship level exams in a traditional insurance. Students will continue to have a strong grounding in all traditional fields of actuarial work through the technical subjects as well as acquiring skills that can be applied generically across all areas of actuarial work.

#### **Risk management**

After completion of the technical subjects, students need to take 2 of the 6 fellowship technical subjects we offer – life insurance, health, short-term insurance, retirement benefits, risk management and investments. Students working in banks and considering the banking Fellowship applications subject

can be expected to take the risk management course and one of the others – typically investment, retirement matters or short term insurance. We believe that the CERA designation and banking fellowship form a natural symbiotic relationship for all actuaries wanting to work in banking. The first 9 students will sit our Banking exam during October 2015. Although off to a relatively slow start, we expect this to grow in future years. This is comparable to the number writing the retirement benefits fellowship exam but still only a fraction of those writing our most popular subject, life insurance.

**Maybe actuaries will make a difference in banking**

While life insurance remains the biggest single field of actuarial work, over 20% of graduate students and new actuaries are now working in banking and related fields. The trickle has now become a torrent which all started when one business leader said “maybe actuaries will make a difference in banking” and proactive actuaries responded with an emphatic “yes we can”.

**Mike McDougall** is Chief Executive of the Actuarial Society of South Africa



BRUSSELS  
APRIL 21/22  
2016

## THE ACTUARIAL PROFESSION SPREADING ITS WINGS

NEW CHALLENGES, NEW OPPORTUNITIES



# Next year, in April 2016, the AAE will organize in Brussels the second European Congress of Actuaries.

By Ad Kok

The second European Congress of Actuaries will discuss the professional challenges and opportunities in the areas of new technologies, big data and cyber risks, behavioural finance, consumer protection, independence, capital standards, implementation of Solvency II, IORP, actuarial skills in wider fields and much more – all within the overall theme of “The Actuarial Profession spreading its Wings”.

There will be three parallel streams covering the seven subthemes of the congress. These will include a variety of technical presentations, sessions on soft skills and scientific papers. The congress offers an ideal environment to update on the latest developments in key areas, and is an excellent opportunity for networking with other professionals.

Plenary sessions and smaller discussion groups on current and emerging issues will include actuarial experts as well as officials from various EU and global institutions, with influential figures from the financial services industry and regulatory authorities among the speakers.

The target audience includes actuaries and risk managers working in industry; other financial professionals, decision makers and other professionals interested in the future of risk management in Europe.

The various subthemes are

- Added value of actuaries outside the financial industry
- Development of the actuarial professions
- Ethics / Independence
- Consumer Protection
- Behavioural finance and non-actuarial attitudes to risk
- Big data and modern technology / cyber risk
- Scientific presentations

In the next coming months the congress website will become available and registration will start at the end of November 2015. Please check our website ([www.actuary.eu](http://www.actuary.eu)) for regular updates on the congress.

# 'BIG DATA IS LIKE

Interview by Mark Heijster

Mark Heijster is freelance journalist and lives in France

**They won the award for the best client relationship in the insurance field eleven times. Obviously the French insurer MAIF knows what their customers want. Heading the company for six years now, Pascal Demurger (51) speaks about pricing, new products and the adventure that lies ahead.**



Demurgers' personal adventure in MAIF started back in 2002. Being responsible for the financial development of the company he wrote a successful strategic plan that enabled the insurer to grow. Last year the insurer increased its own funds by almost 10 percent, to 2.2 billion euros.

'The French insurance landscape is on the verge of major changes', says Demurger. 'The past ten years have been characterized by a strong volatility of the financial markets and an extremely low interest rate. We have seen the development of bank insurers who account for almost 20 percent of the market. And the major change is still yet to come.'

***I will come back to that later. But first let's have a look at today's insurance products. What do you think about PRIIP's-KID and how do you assess the future design of KID?***

Demurger: 'What goes in the direction of better consumer information is obviously beneficial for us. This allows the customer to compare insurance products. But the best sometimes is the enemy of the good. Especially in France where we have a number of legislative provisions that already allow the comparison of tariffs, contracts or the monitoring of savings.'

'The problem of the regulation of prices started in 2007. New European regulation was not coherent with existing regulation and so we ended up complicating things. There is a real risk of overwhelming clients with too much information. For the benefit of the consumer we now need to start simplifying things.'

***What are your views on the level of insurance regulation in France?***

'The main issue is that new regulations could create potential conflict between the different standards. We have to deal with texts that are developed on a lot of subjects: governance, insurance, risk management, the establishment of mediation and the principle of "comply or explain". A different interpretation of these texts, or inconsistency between them, can lead not only to great complexity for the people who have to work with them but can also lead to market distortion which is not quite the objective of the single market in insurance and the EU in general. Let me give you an example that concerns pricing. In France there is the principle of mutualisation. I am not sure if our arrangements in case of natural disasters will remain compatible with the European spirit of tariff freedom.'

***How much scope do you think there will be for more cross-border or pan-European extension of the insurance market?***

'First, consumers do not want to apply for a contract with an insurer who is not established locally. Insurers who have tried to have a cross-border activity didn't succeed due to a lack of critical size. When you do not have a certain size, pricing is not obvious. And there are still a number of issues concerning the harmonisation of law, insurance contracts and fiscal rules. All of this doesn't facilitate the insurance business elsewhere other than their place of establishment.'

# A TROJAN HORSE'

## ***Are there one or two new products to which you would like to see actuaries apply more attention?***

'I expect them to focus on the automotive field that will be impacted by the influx of data through connected objects. New types of risks will appear and we need to understand those digital risks in order to be able to price them. We only have a small experience in this field. There are other risks as well that are evolving considerably. For example I'm thinking of pandemic risks but also risks related to climate change. Actuaries will be urged to respond to these new types of risks.'

## ***Are actuaries taking enough lead roles in the development of the insurance industry?***

'One thing is certain: a key actuarial function will be created in insurance. A function that is recognised by the actuarial profession. This is a very positive development. Obviously, the new frontier for actuaries is big data. A great adventure for actuaries. Some modest advice: actuaries are too quiet on topics related to this digital revolution. They are among the first to be affected by these subjects and I am not sure we hear much from them whereas they probably have many things to say.'

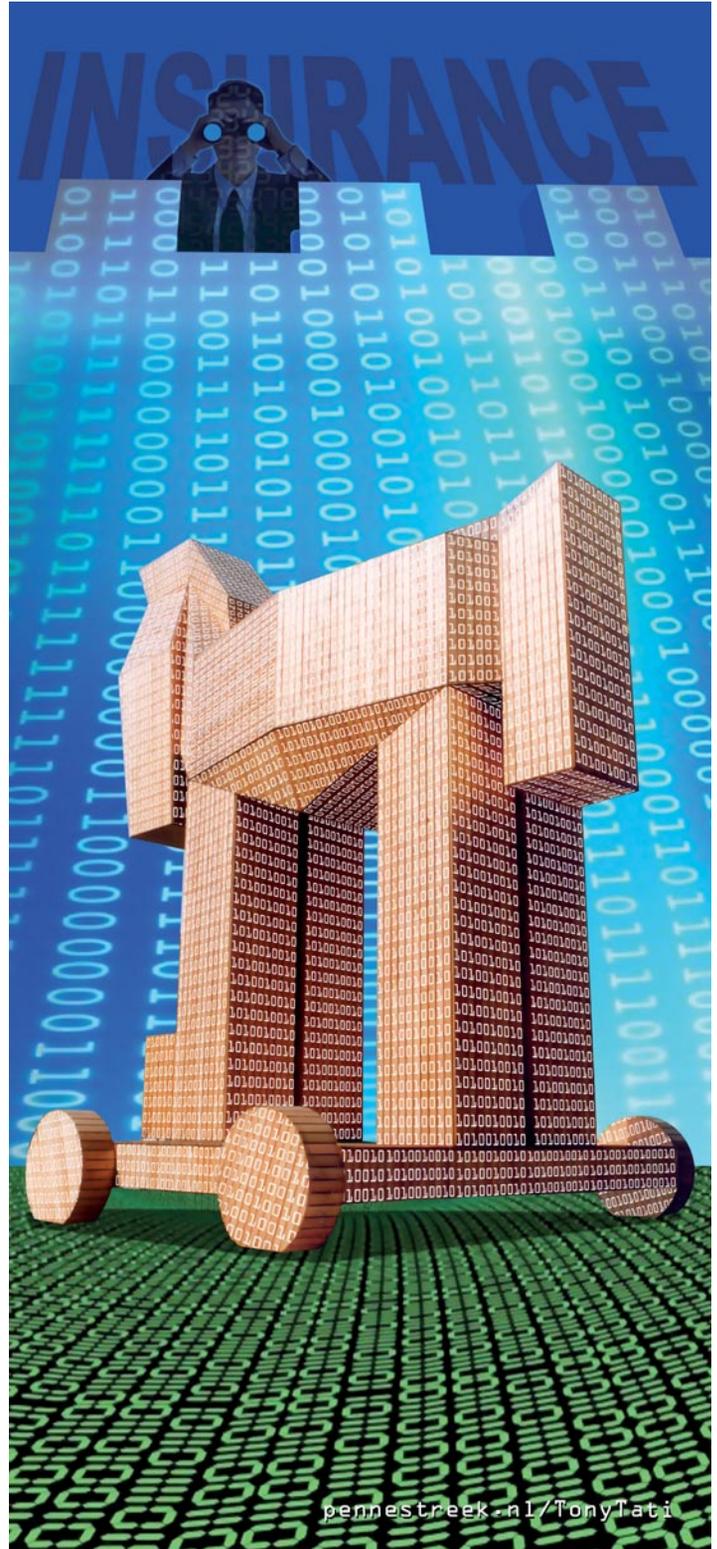
## ***So is this the major change you have mentioned earlier. What are the most important issues for the next 10 years?***

'The internet of things will have a big impact on the insurance industry. Tomorrow there will be connected objects embedded in all vehicles. These objects will capture information on our driving behaviour. This information is a relevant source to customise a product and an insurance tariff. This will change the situation completely.'

'Those who control the market in some way are the ones who are able to collect this information. For a long time data constituted a barrier to entering into the insurance market and it protected the established players. You needed to have a critical mass of data without which we could not price a product. Today data is no longer a barrier to entering, but rather a Trojan horse. It is exactly the opposite. Data used to protect our industry. Tomorrow there will be other actors, car manufacturers, who will have access to important data that will allow them to compete with us very effectively.'

## ***A competitive price is one thing, but customer satisfaction is more than that I guess. What is the secret behind all the awards the MAIF has won so far?***

'It's definitely the quality of service and our good customer relations. They have always been part of MAIF's culture. Today we are committed to a new management model that is based on trust, leaving each member large margins of flexibility, because we are convinced that there must be symmetry between management style, company culture and the type of relationship that we wish to have with our customers.'



pennestreek.nl/TonyTati

# Europe Listens to Actuaries,



Philip Shier

# says Philip Shier, AAE Vice Chairperson

By David Nicholson

David Nicholson is freelance journalist

**For Philip Shier, incoming Chairperson of the Actuarial Association of Europe (AAE), the key measurement of the effectiveness of the AAE is whether Europe's legislators have listened to them.**

**'The only test is whether they have taken on board the points we've put to them, regarding pensions and insurance', he states. 'But I believe we have been successful with Solvency II. There is a workable agreement and the governance structure will be beneficial to policyholders.'**

## **Amendments**

The AAE can boast a membership of 20,000 actuaries across 37 national actuarial associations Europe-wide, with the group working to represent their interests and to ensure 'they are as highly thought-of as possible', says Shier, who was previously President of the Society of Actuaries in Ireland. Recently, Shier has been largely concerned with the proposed amendments to the IORP Directive which regulates occupational pensions. Here, two principal areas of discussion have been disclosure of information to members and the regulation of cross border pensions.

## **Preferable**

'I think the general approach which is being adopted by the Council and the lead rapporteur in Parliament, in trying to leave sufficient flexibility for member states, particularly with regard to disclosure and governance, with the principles being set out in the Directive, has been positive', says Shier. 'This is preferable to the more rigid structure that was proposed by the Commission.' The concept of a one size fits all pan-European pensions regime is clearly unworkable, he argues, given the disparity between member states in social security provision and tax regulations among others.

## **Continue**

Crucially, Shier is pleased that the actuarial function will be part of the governance structure as proposed but notes that: 'There is a requirement under Solvency II for the actuarial function holder for an insurance undertaking to have actuarial expertise or knowledge, and we can see no reason why the corresponding function holder in a pension plan should not be required to have similar qualifications.' The AAE will continue to press the legislators to introduce this requirement before the Directive is passed.

## **Acceptance**

Meanwhile, there is a further debate on whether cross-border pension plans must be fully funded as required under the current Directive. This, the AAE argues, would place unnecessarily onerous conditions on some companies, particularly large ones, who would prefer to fund pensions over a longer term. 'There's an acceptance that a cross border pension plan is useful for a multinational company with a small workforce in some countries, as it permits proper governance and control which is ultimately to the benefit of the members as well as the employer', says Shier.

## **Era of very low interest rates**

The vexed issue of future pensions liabilities whether public, occupational or individual will require increased input from actuaries, according to Shier. An era of very low interest rates, together with greater longevity, has also changed the pensions environment, with consequent raised demand for actuarial skills.

## **Actuarial review**

In relation to insurance issues, the AAE has responded to the recent statement by EIOPA on the need for high quality public disclosure and the potential role for external audit of the solvency and financial condition report required under Solvency II by stressing that the independence and rigour of actuaries' work means that they are ideally placed to undertake such reviews, thereby helping to protect consumers and to increase transparency. 'We're not expecting the actuarial review to become a legal requirement, but we'd like it to be seen as good practice. We're staking our claim to be the best people to give advice on these topics. We think it's good for policy holders to have a clear view of the risks and likely future performance of pensions and insurance policies.' Equally, ratings agencies and investors are keen to see independent reviews of reports, whether conducted from within a company or by an external agency, says Shier. 'In our view, an actuary who is independent of the process and has to uphold professional standards is the best person to conduct this review'.

## **Lowering barriers**

While many European regulations are pushing towards greater harmonisation and lowering barriers, at a political level Europe faces a testing future, with new physical barriers rising every week to combat a sudden influx of migrants. For Europe's legislators, pressing on with their pensions and insurance plans in parallel with this political estrangement may cause some future tensions. But we can be sure that the AAE, with representatives like Philip Shier, will offer sound advice and that their judgment will be heeded.

# LONGEVITY IN THE CARIBBEAN – THE END OF LA DOLCE VITA?

By Servaas Houben

For the past decades, longevity risk has been a concept which seemed to circumvent the Caribbean: lack of adequate healthcare, natural disasters, and the joy of life have all been suggested as explanation for this phenomena. (Un?)fortunately, also life expectations have improved in the Caribbean leaving pension funds and insurance companies with significant challenges: due to lack of data and relatively small populations, the impact of random events, and sample error can be significant. Furthermore, distinguishing between life expectancy of the insured and uninsured parts of the population becomes even harder when taking into account the relatively high level of immigration. How can governments, insurance companies and pension funds prepare for these upcoming changes?

## Historical developments

Despite the geographical distance between Western Europe and the Caribbean, both regions share several striking similarities when it comes to life expectancy: both regions haven't suffered the tragedies from war or public revolt after 1960 and there haven't been any major regime shifts. The downfall of the Soviet union and Comecon, had a significant impact on the life expectancy in Central and Eastern Europe:

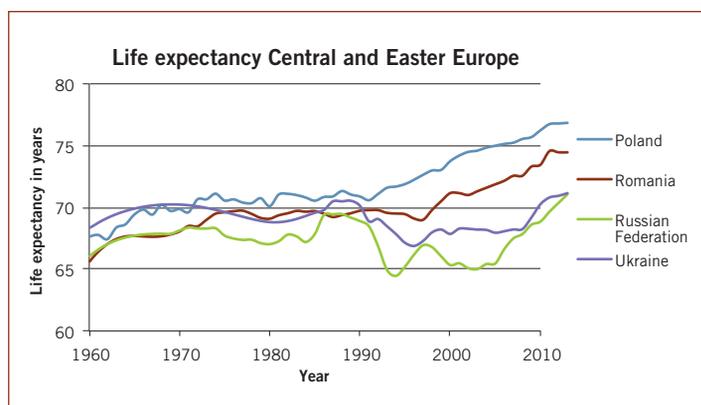


Figure 1: life expectancy in Central and Eastern Europe over the past 50 years

On the other hand the relative stability in both the Caribbean and Western Europe resulted in a steady increase in life expectancy since 1960:

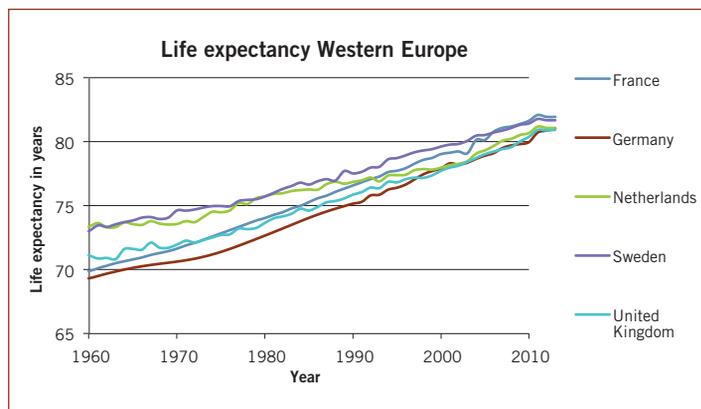


Figure 2: life expectancy in Western Europe over the past 50 years

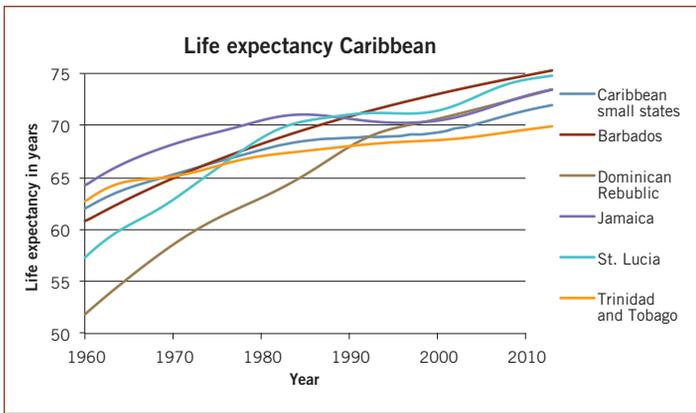


Figure 3: life expectancy in the Caribbean over the past 50 years

Especially the steady increase in life expectancy in Western Europe across the entire area is quite remarkable: the five countries shown in the graph above show correlations in the range of 0.986 and 0.998, despite the variety in social economic policy. For example the GINI index of the most “equal” country in this region, Sweden, varied between 1960 and 2013 between 25.4 and 27.4, while the most “unequal” country, United Kingdom, showed values in the range of 36.2 and 38.0. Despite these differences in views regarding social equality, this hasn’t reflected in material differences in life expectancy trends reflecting a correlation of 0.997 between the two countries.

The Caribbean on the other hand have also witnessed a steady increase in life expectancy. However, the progress has been less homogeneous throughout the region: fast growers like the Dominican Republic and St Lucia have witnessed substantial increases in life expectancy of +20, and +15 years respectively, while Trinidad and Tobago has experienced a rather modest increase of +7 years throughout this period. Apparently throughout the Caribbean region, country specific circumstances play a more essential role than is the case in Western Europe.

### Preparing for the future

Fortunately, most Caribbean countries have already taken steps to prepare for this increased life expectancy by changing their basic pension age for government pension schemes, in line with their Western European counterparts, although the percentage of GDP spend on pensions does not always seem to be in line with this:

Country	Men	Women	Public pension spending as % of GDP
France	62	62	13.7%
Germany	65	65	11.3%
Netherlands	65-67	65-67	5.1%
Sweden	61-67	61-67	8.2%
United Kingdom	65-66	60-66	6.2%
Barbados	65-67	65-67	3.0%
Dominican Republic	55-60	55-60	4.6%
Jamaica	65	60-65	0.7%
St. Lucia	60-65	60-65	Not available
Trinidad and Tobago	60-65	60-65	4.4%

Table 1: government basic pension scheme retirement age and % pension spending of GDP

However, table 1 also confirms the heterogeneity within the Caribbean region: while some countries like Barbados have already implemented significant changes in their retirement age (which even exceed some Western European countries), it seems like other countries like the Dominican Republic haven’t kept up their state pension retirement age with developments in life expectancy. As long as the working population is still significantly outnumbering the retired part of the population, this should not result in immediate issues in the short run, however changes in the retirement age in the long run might be inevitable.

### Conclusion

Recent data indicates that longevity is also affecting the Caribbean and fortunately some governments have already been pro-actively preparing for these effects. However, pension funds and insurance companies have less flexibility changing either participants’ contributions, retirement income, or retirement age and hence need to start preparing for these developments. The lack of longevity reinsurance at present, and relatively small insured populations (resulting in additional statistical uncertainty) make this task even more challenging. Product innovation like flexible annuities based on indexation or profit sharing may share the longevity risk between insurance company and policyholder. Nevertheless, for the moment the basic but crude tool of additional capital requirements and buffers might be the most practical solution for a development which remains very difficult to predict in a diverse region.

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Servaas Houben

# European agenda

## 2016

21 – 22 April 2016

European Congress of Actuaries, Brussels, Belgium

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31 May – 3 June 2016

ASTIN Conference in Lisboa, Portugal

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## 2018

4 – 8 June 2018

International Congress of Actuaries in Berlin, Germany

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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](mailto: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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