Great expectations

How rules of thumb can help people engage with their pension planning to prepare for retirement
WHEN ACTUARIES DESIGN SOFTWARE, IT ACTUALLY WORKS THE WAY YOU DO.

FOR A MODELLING PLATFORM TO WORK THIS WELL, IT TAKES TECHNOLOGY DESIGNED BY ACTUARIES. Milliman Mind is a flexible and easy-to-use cloud-based platform that automatically converts Excel spreadsheets into more powerful models with the capabilities and controls of more expensive “black-box” systems, all within a secure, auditable, scalable framework. Learn more at milliman-mind.com.
Features

14 Interview: Deborah Ashby
The director of Imperial College’s School of Public Health talks ageing and antimicrobial resistance

18 Profession: In the public interest
Matt Gurden shares the work the Government Actuary’s Department’s does to advise on policy

21 Risk: Weathering climate risk
Paul Meins discusses how pension funds can boost their climate accountability

22 Pensions: Sowing seeds
Rules of thumb could boost the public’s engagement with pension planning, says Stephen Hyams

26 Pensions: For what it’s worth
Tiffany Honour discusses the IFoA’s research on cash equivalent transfer values

30 Risk: Skating on thin ice
It’s vital that with-profits investment takes climate risk into account, say Catherine Thorn and Sandy Trust

32 Cryptocurrency: A capital idea?
Ian Collier examines whether cryptocurrency could be more than a payment mechanism

At The Back

34 School of thought
Four years on, Jason Brett considers how the 2015 reforms have affected our pensions system

35 Puzzles

36 People/society news
The latest news, updates and events

38 Inside story
Karen Brolly on her role as deputy chair of the IFoA Life Board – and why she’d like to be locked in the Musée D’Orsay for a night

Get the app
Did you know you can now read The Actuary magazine on any tablet or Android phone? Click through to read more online, download resources, or share on social media via our links in the app. It’s an exclusive free benefit for our members. Download on the App Store at: www.theactuary.com
Visit: www.play.google.com

www.theactuary.com
Actuaries, act on climate change!

Tacitus, senator and historian of the Roman Empire, announced: “Truth is confirmed by inspection and delay; falsehood by haste and uncertainty.” His view, although overwhelmingly shared throughout history, hasn’t always been heeded in time. Scientific progress in modern times has placed research at the forefront of development, but human beings haven’t yet got rid of the habit of reacting late to known threats.

At the risk of sounding like a broken record, scientists have been flagging the potentially catastrophic consequences of climate change for decades. The topic has recently become mainstream and awareness is permeating among professionals, including actuaries. The Actuary has received numerous articles demanding that members of our profession get involved, many of which we have echoed. Although some have reservations about that view, the idea of actuaries getting professionally involved with climate change is widely shared.

Once agreement on the need to react has been achieved, the next step is to ask how the actuarial skillset can be applied. An actuary’s strength is in explaining risks and finding ways to mitigate them. However, experience in the climate field is scarce and lacks structure. We may need to come up with novel approaches.

The negative implications of climate change are what economists label ‘externalities’. The standard response to externalities is regulation, which isn’t novel, but a tested tool. In this issue, Paul Meins explains how a wave of regulation on climate change is coming to the pension fund world (p21) and discusses implementation shortcomings.

Regulation is most successful when accompanied by benefits to those who are subject to it. Catherine Thorn and Sandy Trust elaborate on this concept, discussing implementation shortcomings.

Once agreement on the need to react has been achieved, the next step is to ask how the actuarial skillset can be applied. An actuary’s strength is in explaining risks and finding ways to mitigate them. However, experience in the climate field is scarce and lacks structure. We may need to come up with novel approaches.

The negative implications of climate change are what economists label ‘externalities’. The standard response to externalities is regulation, which isn’t novel, but a tested tool. In this issue, Paul Meins explains how a wave of regulation on climate change is coming to the pension fund world (p21) and discusses implementation shortcomings.

Regulation is most successful when accompanied by benefits to those who are subject to it. Catherine Thorn and Sandy Trust elaborate on this concept, explaining how tackling climate change risks can make a positive commercial impact on with-profits investment strategies (p30).
One of Council’s top priorities is to ensure your professional body redoubles its efforts to deliver great value to you, our members. Value is in the eye of the beholder, so we’re keen to better understand what matters to you.

Back in November 2018, we conducted our first all-member survey since 2011. The online survey was part of a research programme designed to give us insight into what you value, and to make sure we are equipping you with the tools you need to succeed in a rapidly changing employment landscape.

As a member of Council, and now IFoA president, I have found it incredibly useful to hear directly what you most value about your IFoA membership, the challenges and issues you face and what we could improve to deliver better value for you. You were very clear that you expect more from the IFoA and that we have some distance to travel before we’re delivering the value you need.

We have already begun to use your feedback to shape our future strategy and activities, ensuring we are focusing our resources in the areas that you have told us are most important to you. It has been both inspiring and humbling to be able to put your voices at the centre of IFoA strategy and collaborate with members from across the globe in shaping the future direction of our professional body.

We have listened to your feedback and are making changes so that your IFoA membership is delivering the services and value you need, now and in the future. We have already reduced our subscription rates, and our Boards and Working Groups continue to review their current activities and future plans in light of your views. Our Council and Board members are committed to making your views count in the areas that you said were most important to you, including our fee structure, regulation and lifelong learning. Indeed, many of you have told us how effectively we have responded to your requests for more support on data science.

Incorporating the member research findings and recommendations into Council’s recent strategy review has embedded clear, member-led priorities in our strategic plans for the coming years.

To make sure that your feedback remains at the heart of our professional body, we are currently carrying out an all member online survey. We want you to let us know how we are performing so that we can refine our plans and direct our efforts accordingly.

I encourage you to take this valuable opportunity to let us know how useful you find your membership, how satisfied you are with our current membership offer and whether your IFoA membership is delivering value for you. The survey will be open until 27 November, so make sure your voice is heard.

“I have found it incredibly useful to hear directly what you most value about your IFoA membership”

www.theactuary.com
Antibiotic resistance

ABR Working Party research reaches surprising conclusion

Practitioners in the health sector have been concerned about antibiotic resistance (ABR) for many years. The IFoA’s ABR Working Party, set up in early 2017, was born out of the idea that although some modelling had been done on this topic in the past, the models were not readily usable. Many actuaries wanted to be able to explore plausible scenarios and quantify the impacts across various product types.

The working party was comprised of a range of participants largely from insurers (and one reinsurer). Nicola Oliver, a medical research consultant, also came on board as deputy chair and provided vital medical insights during the course of the project. The findings have now been published, and chair Matthew Edwards explains that the results are quite surprising – read about them at bit.ly/33ewP1i.

The working party, as it is, has concluded, but suggests that more work remains to be done on second-order impacts relating to the preventative use of antibiotics.

IN BRIEF...

Missed the deadline for membership renewals?
We would like to thank all IFoA members who renewed their subscription before the 31 October deadline. These members have taken full advantage of this year’s reduced or frozen subscription fees.

If you have not yet paid your subscription fee, you will now be subject to a 10% late payment fee.
You can still renew quickly and simply online by logging in to the My Account area of the IFoA website (bit.ly/IFoAlogin) and going to the My Payments section.

If you have any questions about your membership subscription, please email us at: membership@actuaries.org.uk or call us on: +44(0)131 240 1325.

The role of the CPD Co-ordinator – updated guide
Organisations that employ IFoA members are encouraged by the IFoA to appoint a CPD Co-ordinator. This is an IFoA recommendation.
Co-ordinators play a key role in the effective engagement between organisations that employ our members and the IFoA. This guide, which is given to each CPD Co-ordinator, has been updated, and includes case studies from nine CPD Co-ordinators. The new guide can be viewed at: bit.ly/2lHHRvR.
The IFoA maintains a database of all CPD Co-ordinators. The database is growing, and not all organisations are represented as yet. If you would like to check if your organisation is represented, or to volunteer to act as a CPD Co-ordinator for your organisation, please contact head of engagement debbie.atkins@actuaries.org.uk.

Prevention is better than cure
Meeting the needs of an ageing population poses some big challenges. Improvements in life expectancy are slowing, but overall people are still living longer than previous generations – and they are spending more of those later years with health needs. The UK government has been consulting on preventative health in the 2020s, focusing on the role that technology and data can play, and the IFoA recently submitted its response. IFoA immediate past president Jules Constantinou explains why finding ways to keep people in good health for longer must be a priority – read the article on p11.
In mid-September, president-elect Tan Suee Chieh went on a whirlwind four-day visit to Kuala Lumpur, Malaysia, to meet with industry leaders, associations, universities and senior members.

First stop was the Life Insurance Association of Malaysia (LIAM) where Suee Chieh met the CEO of LIAM, along with nine other life insurance companies’ C-suite representatives, including four CEOs and one deputy CEO. Key takeaways were:

- The industry is still facing a shortage of experienced actuarial talent
- Actuarial training should be widened and not too focused on technical silos
- IFRS17 is onerous and will require a lot of resources and expertise during the next three years and beyond.

The Malaysian Takaful Association kindly gave the IFoA team a whistle-stop overview of the world of takaful and the opportunities and challenges they faced. Malaysia is one of the world’s leaders in Islamic finance, and takaful currently accounts for more than 10% of insurance market share in the country.

An IFoA senior members’ roundtable was organised in the evening, providing the opportunity for an intimate discussion on the future of the actuarial profession. The session covered a wide range of topics, including the exam process and the importance of experience and judgement in daily work.

Friday began with breakfast with the General Insurance Association of Malaysia (PIAM). PIAM said there was currently a shortage of experienced GI actuaries within the market. Actuaries were advised by PIAM to be more versatile in their roles, particularly in this era of digitalisation, and to step out of their comfort zones.

The last three days saw Suee Chieh present to more than 180 undergraduate students at UCSI University Public Lecture and give a keynote speech at the Malaysian Actuarial Student Association’s (MASA) inaugural conference. The South-East Asia team also gave a talk on professionalism and attended MASA’s inaugural careers fair.

Call for Speakers

We are looking for innovators, subject experts and thought leaders to share their knowledge and passion at one of our 2020 conferences.

Protection, Health and Care Conference 2020
02-03 June, Brighton. Submission deadline: 25 November

Pensions Conference 2020
18-19 June, Manchester. Submission deadline: 21 November

Finance and Investment Conference 2020
May, London. Submission deadline: 22 November

Mortality and Longevity Seminar 2020
11 June, London. Submission deadline: 9 December

Asia Conference 2020
24-25 June, Kuala Lumpur. Submission deadline: 1 January

Find out more at www.actuaries.org.uk/call-for-speakers
POLITICS

IFOA at UK party conferences
Throughout September and October, members of the IFOA executive team attended the UK Labour, Conservative, Liberal Democrat and Scottish National Party conferences, representing the actuarial profession in a whirlwind of networking events and panel discussions with businesses, think tanks, politicians, and government and opposition ministers.

At the Conservative conference on 30 September, the IFOA hosted a joint fringe event with the Social Market Foundation think tank, entitled ‘Getting the UK retirement ready in the age of auto-enrolment and pension freedoms’. Two Conservative MPs spoke on the panel alongside the IFOA’s pensions board chair Mark Williams, including the pensions minister Guy Opperman MP. Journalists in attendance at the event were able to get the scoop on the government’s recently announced Pensions Bill, which it hoped to pass in the next session of Parliament, as Opperman outlined some of its contents in a wide-ranging discussion on the future of retirement saving in the UK.

The event was also an opportunity for Williams to preview an upcoming piece of IFOA research on pensions adequacy with the minister and other industry stakeholders in a packed room in the conference secure zone.

The event was live streamed and can be viewed online at: bit.ly/36oCw53

You can also read a round-up of the highlights from the other party conferences at: bit.ly2VQO4TV

EVENTS AND CONFERENCES

11/10/19
The Challenges for AI in Autonomous driving – professor Andrew Blake
(In conjunction with the Scottish Board and supporting the IFOA’s focus on data science)
ROYAL COLLEGE OF PHYSICIANS OF EDINBURGH, EDINBURGH, EH2 1JQ
Professor Andrew Blake, UK pioneer in computer vision and machine intelligence, will speak to delegates on artificial intelligence (AI) in autonomous driving. This lecture will focus on safety-critical operation and the computation of risk.

10/11/19
Sessional Research Event: Practical guidance to climate change for insurance practitioners
STAPLE INN HALL, HIGH HOLBORN, LONDON WC1V 7QJ
This session will provide actuaries and insurance practitioners with an overview of how life and general insurance could be affected by climate change, and highlight and discuss practical steps identified in the working party papers.

12/11/19
NED Event: Building Appropriate Trust and Maintaining Integrity as a Non-Executive Director
STAPLE INN HALL, HIGH HOLBORN, LONDON WC1V 7QJ
Led by Dr Jamie Dow from the Interdisciplinary Ethics Applied Centre at Leeds University, this session we will cover: challenges of trust for NED actuaries; the value of trust and scepticism for NEDs; a framework for placing and withholding trust; and understanding your own trustworthiness, cultivating trust.

20/11/19
Life Conference 2019
THE CONVENTION CENTRE DUBLIN, SPENCER DOCK, NORTH WALL QUAY, DUBLIN
The premier event for professionals interested in life insurance. Offering a wide range of workshops and plenary sessions, it’s the perfect opportunity to discover what’s hot and current in life insurance, ensuring you get up to date on the latest thinking and innovation while meeting and exchanging ideas with a broad range of professionals.

22/11/19
ARC Workshop: Modelling Socio-Economic Differences in English Mortality
STAPLE INN HALL, HIGH HOLBORN, LONDON WC1V 7QJ
The workshop will give participants detailed insights into how a large and detailed dataset can be used to assess levels of mortality inequality in England, using a number of novel statistical methods. We will also address the question: are regional variations in mortality real or imaginary?

22/11/19
A Holistic Study into Cashflow-Driven Investment
STAPLE INN, 4 HIGH HOLBORN, LONDON WC1V 6DR
Given that the cashflow-driven investment strategy has attracted growing interest from pension funds and insurers at the backdrop of current market conditions and clients’ circumstances, the objective of this event is to gather thought leaders from asset managers, banks and insurers to offer attendees their perspectives and insights on main aspects of consideration when adopting this strategy.

20/12/19
Sessional: Impact of E-cigarettes Working Party
ROYAL COLLEGE OF PHYSICIANS, EDINBURGH
This sessional meeting will be of direct interest to actuaries and others working in the health and care, life or pensions sectors, or indeed actuaries with an interest in morbidity or mortality.
Accountants, Actuaries, and IT Working Together for IFRS 17

Our IFRS 17 solution integrates with your existing infrastructure to connect data, models, systems, and processes between actuarial and accounting functions.

Visit moodysanalytics.com/IFRS17
RSS and IFoA publish new ethical guidance on data science

Data science – the rising use of large datasets for analysis and decision-making – is becoming of increasing interest with the growth of new data sources and increased computing power. As a result, the ethical significance of data science, and the implications for industries and the wider public, is constantly evolving.

As data science methods become more common practice within statistical and actuarial fields, there are both opportunities and challenges for practitioners. Given these challenges and opportunities, the Royal Statistical Society (RSS) Data Science Section and the IFoA partnered to consider the practical and ethical implications of data science. They established a Joint Data Science Focus Group, which developed a practical guide for RSS and IFoA members, as well as data science practitioners, on the ethical use of data science. The guide was developed through engaging with practitioners around the UK, and builds upon existing tools and frameworks.

This guide focuses on five broad principles of data ethics and ways of considering these within data science work: avoiding harm, supporting the value of data science for society, maintaining professional competence, increasing trustworthiness and maintaining accountability and oversight.

John Taylor, president of the IFoA, and Deborah Ashby, president of the RSS (see interview, p14), said: “By seeking to bring the core professional values and our commitment to the public interest, which lies at the heart of our respective professions to the field of AI and data science, our goal is to build public trust in the work that our members undertake through the application of data ethics.

“Created with practitioners in mind, this guide seeks to provide practical support to members on ethical practice. Structured around our five core ethical themes, the guide provides examples of common ethical challenges in the field and how they could be applied. We also provide a wealth of reference material, with links to a wide range of online tools, legal and regulatory reference points and a host of other practical resources on our websites.

“Although we’re sure that ethical theory and practice will continue to evolve in this fast-changing field, we’re pleased to be able to offer a strong framework for that evolution that aims to support the work of our members, maximise the benefits inherent in data science and protect the public interest.”

The guidance is freely available online at: bit.ly/znKhG8E
Prevention is better than cure

The IFoA’s immediate past president Jules Constantinou considers the importance of a preventative approach to health and care

Preventative health enables and empowers people to live fulfilling lives and promotes physical and mental well-being. However, it is hard to quantify and place a monetary value on the impact of preventative measures – how do you measure something that did not happen, as opposed to something that did? – and this has led to a focus on cure, rather than prevention.

The government is consulting on prevention in the 2020s – unsurprisingly focusing on the role of technology and data in delivering proactive, predictive and personalised health and care services. The IFoA has responded to this consultation, drawing on research from both the Actuarial Research Centre and a number of working parties, to urge the government to use information on population health to target health interventions and forecast future demand. This will help to inform policymakers and health providers.

The government reaffirms the Continuous Mortality Investigation findings that improvements in life expectancy are slowing and that people are spending more of those later years with health needs.

The ongoing debate about the social care crisis has highlighted the fact that people are not receiving the care they need to live with dignity in later life. Age UK reports that 1.4 million people aged 65 and over have unmet care needs, and this number is expected to rise as the UK population ages. The proportion of people aged over 80 is set to double from 2010 figures by 2030, and reach eight million by 2050. A comprehensive ‘ageing strategy’, which prioritises keeping people in good health for longer, is required if we are going to meet the needs of an ageing population and ensure that people’s extra years of life are disability-free and fulfilling.

That is why the IFoA is supportive of this consultation’s focus on disability-free life expectancy. This consultation identifies the reliance of the health and care sector on other areas of social policy, such as employment and housing, thereby supporting a need for cross-government thinking and action in order to truly implement a preventative approach to health and care. It is also important to raise awareness of the high cost of social care, both for individuals and for taxpayers, as failure to tackle this could have significant economic consequences.

The paper also highlights that, in particular, people who live in deprived areas are spending more time in poor health. The IFoA’s latest research suggests that – in addition to the widely accepted lifestyle-related and cultural norms of different socio-economic groups, such as smoking, excessive drinking, obesity, drug abuse and mental illness – people living in deprived areas are also not accessing health services in the same way as those in more affluent areas. This has serious implications for our understanding of the service needs of different population groups, and how we tackle health inequality.

As you would imagine in response to a consultation focused on technology and data, we have drawn upon the experience of wearables in the insurance industry. While the use of wearables is just at the start of its journey, and their optimal practical application remains inconclusive regarding long-term behavioural change, they have been found to have a positive effect as part of a comprehensive approach to disease management. Chronic disability resulting from type 2 diabetes has been found to be largely preventable with the right incentives around nutrition and lifestyle. An annual estimate of the NHS cost for treating diabetes and associated complications is around £10bn. This is expected to increase year on year unless preventative action is taken on major challenges around poor nutrition, lack of exercise and obesity.

Turning the ideas in this consultation into concrete action will require input from a range of stakeholders, including actuaries, and will go some way to ensuring that the UK does its part in ensuring that the United Nations Sustainable Development Goals (SDGs) are met. Goal 3: Good Health and Well-being has a significant focus on reducing preventable deaths by improving access to health services and encouraging healthier behaviours – covering many of the topics identified in this consultation as requiring government intervention.

The ways in which actuaries are contributing to progress on Goal 3, as well as the full suite of the SDGs, is being explored through the IFoA’s SDG campaign.

The IFoA’s Policy and Public Affairs team will continue to work with members to get their analysis in front of policymakers and decision-makers on these issues. The best way to keep up to date with these activities is to read the bi-monthly Public Affairs Brief, or visit our policy web pages at: bit.ly/ifoaPubPolicy

www.theactuary.com
Very inspirational article from Abdul on getting through the exams – having been stuck on CP1 for a while I know the pain of ‘hitting the wall’ and have also questioned whether to keep going. You’ve inspired me so have succeeded with your mission 😃

In the UK, where we use the ddmmyy format, palindromists are much looking forward to 2 November next year. 021120

You’re welcome.

“The actuary’s danger may lie in too close preoccupation with his particular techniques … It is not the tools he uses which make a great craftsman. It is the way he feels and thinks.” Wise words from Frank Redington. Will you FEEL and THINK today?

“The issue of an ageing workforce could become a significant productivity challenge for the UK.” Businesses should have strategies in place to support older workers via @TheActuaryMag

Actuaries – any ideas? @TheActuaryMag

This is the homework my son was sent home with from year one. I’m totally baffled here. What is the “part, part whole” supposed to mean? Any thoughts from Twitter appreciated.
Features

INSIDE

Strength to strength
Discussing health risks with Deborah Ashby, director of Imperial College London’s School of Public Health and president of the Royal Statistical Society

In the public interest
Matt Gurden on 100 years of the Government Actuary’s Department

Weathering climate risk
Pension funds should give the public access to their reports to make them accountable for their management of climate risk, suggests Paul Meins

Sowing seeds
Stephen Hyams explains how simple ‘rules of thumb’ can help focus people’s minds on pension planning

For what it's worth
Do we need to alter the way we calculate cash equivalent transfer values? Tiffany Honour investigates

Skating on thin ice
Catherine Thorn and Sandy Trust make the case for placing climate risk at the heart of with-profits investment strategies

A capital idea?
Cryptocurrencies could play a role in raising money on the capital markets, says Ian Collier
Deborah Ashby is director of the School of Public Health at Imperial College London, as well as being president of the Royal Statistical Society (RSS). She became interested in medical statistics during her mathematics degree at Exeter University on realising that, as she puts it, “the skills I had could do something useful in that field”. Her work led to an OBE for services to medicine in 2009, having contributed not only to research but also to drug regulation.

I meet Ashby at St Mary’s Hospital in London, where Roger Bannister and Alexander Fleming, among others, were researchers. I ask about her main concerns regarding public health. Without hesitation she names her top three: obesity, antimicrobial resistance and the issues raised by an ageing population.

Obesity and ageing

While the risks posed by obesity are becoming clearer in the UK and globally (diabetes, heart disease, cancer), finding solutions is more difficult. “It’s far harder to even think what to do about it,” Ashby says. “The messaging is complicated. I was brought up on Susie Orbach’s book Fat Is A Feminist Issue. People are feeling incredibly vulnerable on the subject.” We also know that obesity in the UK correlates with those in lower socio-economic groups. “It’s not fair to say: ‘Why don’t you do something about it? Why don’t you learn to cook properly?’, because the struggling mother with three kids will say: ‘You try being me.’”

In Ashby’s opinion, focusing too much on individuals, rather than structural issues, leads to incorrect solutions. “If you’re living in a tower block in a city and there is no supermarket nearby but a pizza takeaway...
“Just having cities that are easier to walk and cycle in would help people be more active and enjoy wider benefits”
instead, what are you going to do? The economics of food is absolutely shocking.”

The food we eat is only part of the problem; Ashby says we should be doing more to make exercise a normal part of daily life. “Just having cities that are easier to walk and cycle in would help people be more active and enjoy wider benefits as well.”

Combining education, food economics and social infrastructure will start to drive behavioural and cultural aspects, too. “My mother stopped smoking when she realised that instead of there only being two non-smokers in the room, she was one of only two smokers in the room,” Ashby says, by way of illustration.

Our ageing population also has huge implications for public health. Ashby is reconciled to the challenges. “The older people get, the more they tend to have diseases – and managing that becomes
much more complicated. Never mind the whole pension issue! I spend half my life worrying about pensions, both here and at the RSS, because basically we can’t afford them anymore.”

An important part of public health and the ageing population issue is dealing with social care. While progress in parliament and the senior civil service has stalled because of Brexit, for Ashby there are signs for optimism. “The UK’s new chief medical officer, Chris Whitty, has a strong public health background. He’s very conscious of the changing demography. Policy is going in the right direction.”

**Antimicrobial resistance**

Sitting close to where penicillin was discovered by Alexander Fleming in 1928, Ashby’s mind is focused on antimicrobial resistance. As she puts it: “We’re running out of drugs. That is a global health nightmare.” For many people, resistant microbes are a pandemic risk, but even today resistance is killing people: it is estimated that more people in Europe die as a result of antimicrobial resistance than from influenza, HIV and tuberculosis combined. The UK government estimates that, by 2050, 10 million people will die globally each year because of antimicrobial resistance. Even against a rising death toll and the increase in resistance that it could cause, antibiotic use in humans is rising every year.

Across four faculties at Imperial, including engineering and the business school, there are more than 100 academics currently working as part of the Antimicrobial Research Collaborative @ Imperial. These include not only public health specialists and drug researchers, but many other disciplines, too: behavioural specialists and business analysts, for example.

Dealing with the unexpected is a crucial part of public health. We talk about ‘black swan’ events, such as the discovery that AIDS was an infectious disease. “The development of drugs, especially antiretrovirals, transformed that from being a fatal disease into a condition people live with as they would with diabetes,” Ashby says. “I use that when I’m teaching medical students or public health researchers, but many other disciplines, too: behavioural specialists and business analysts, for example.”

“I think what you can do is communicate. I was involved in the meningitis C campaign and that was the first one that was done proactively. Up until then, vaccinations had been rolled out and there’d be one or two unfortunate incidents… the media would reverberate and people would take fright. What they did with meningitis C was very clever. They talked to the media, got them involved in the campaign and reported on what the condition is like, for a young child it’s really emotive stuff.”

Ashby has been heavily involved in drug regulation over many years: “Every month, I spent two days making decisions about drug regulation within the UK, and I still do at some European level while we’re still in the EU. Imperial really likes that interaction with the outside world, civil service with industry, and so most of us are balancing a number of different strands.”

**Health tech**

At both the RSS and the School of Public Health, the influence of technology is changing the landscape, with clear opportunities and responsibilities for researchers. “I absolutely think every time I go to the GP that this should feed into improving healthcare for myself and future generations. I regard it as a social contract; I expect the best healthcare they can reasonably give me and my data is part of what I put into that system. It’s almost like taxation.”

But again, reality falls short of the ideal: “I had a minor problem, had to go to one hospital for a consultation and then the related scan at another. The struggle it takes to get all these scans in different places, and that’s with hospitals that are all connected to one another… it’s farcical!”

However, progress is being made. Ashby reflects on how far we’ve come in such a short space of time, especially around automated image processing, which could lead to huge advances in areas such as skin or eye cancer recognition. This comes with responsibilities when thinking about face recognition, for example. “What’s interesting with technology is that it’s like money. It can be used for great good or great evil. The technology itself is actually neutral. There are so many new possibilities, so we have to think about what’s the correct use.”

**Communication**

The influence that social media has on public health is mixed – it’s a really effective communication tool, but neutral when it comes to the facts. Anti-vaccination and other misinformation movements have thrived. Is this a new concern? “I think these things have always been a problem – social media exacerbates and magnifies them, but it’s not that they’re fundamentally new problems.”

On anti-vaccination campaigns, Ashby comments that prevention is always a more difficult conversation than treatment. “If you’ve got cancer, you might not want a drug that’s going to make you sick, but actually you’ll have a discussion and you’ll probably take a hard decision. Prevention, when you’re unlikely to get meningitis C, is entirely different, and when it comes to teaching what’s for a young child it’s really emotive stuff.”

“I think what you can do is communicate. I was involved in the meningitis C campaign and that was the first one that was done proactively. Up until then, vaccinations had been rolled out and there’d be one or two unfortunate incidents… the media would reverberate and people would take fright. What they did with meningitis C was very clever. They talked to the media, got them involved in the campaign and reported on what the condition is like, because people need personal stories.”

Of course, as president of the RSS and director of Imperial College’s School of Public Health, Ashby has quite a lot on her to-do list that isn’t linked directly to public health. There is, however, a lot of crossover between the two roles. “We’re a very numerate, data-intensive School of Public Health; the Royal Society has its origins in what is essentially public health and collecting data.”

The focus of the School of Public Health is currently three-pronged: research, teaching and external relations. “For Imperial, research is what it does at scale. We are top in the rankings. For us, it’s pretty much our bread and butter.”

“The connection between her roles certainly seems to be enriching both institutions – and, of course, society as a whole. As Ashby says: “Balancing everything means a lot of variety. Every day is different, which is absolutely great.”
IN THE PUBLIC INTEREST

With the Government Actuary’s Department celebrating its centenary this year, Matt Gurden shares some of the ways in which it is advising and supporting policymakers.

Since its establishment 100 years ago in 1919, the UK Government Actuary’s Department (GAD) has been at the heart of actuarial advice, serving the public interest by providing specialist risk and finance advice to public policymakers. This is directly related to a requirement of the IFoA Royal Charter, under which the profession has a duty to put the public interest first.

GAD’s role has changed significantly since its inception. In the early years, it advised the National Health Insurance Joint Committee, providing advice to support the financial management of the newly introduced old age pension and health insurance systems. Over time, its influence widened as it provided advice on public service pensions, expanding social security benefits and population projections.

Evolving the actuarial skillset

The risks and financial uncertainties for the country continue to evolve, and the need for actuarial advice has similarly developed. Challenges include climate change, Brexit uncertainty and an ageing population demographic, to name a few. These developments pose ongoing policy questions for government.

In recent years, the department has placed an emphasis on developing its people and embedding new skills in order to provide the support government requires. This extends beyond the work of the profession, which has been considering the actuarial exam syllabus and the skills that new actuaries will require.

Given the role GAD performs in the public sector, it often has very large data sets available to inform its analysis. New analytical approaches and a wider range of software tools are used on these data sets to enhance its advice. This has led to improvements such as:

- Faster response to requests
- Developing tools for more immediate comparison of alternative policy options

(continued on page 20)
Disaster risk financing

Financing to manage the impact of natural disasters is increasingly important as climate change is expected to impact the frequency and severity of events such as floods, hurricanes and droughts. Experts at GAD have developed modelling tools that help the World Bank and developing countries better understand and plan for the financial losses relating to such natural disasters.

The tools can be used by a diverse range of stakeholders, from financial experts to non-technical audiences in developing countries. GAD’s aim is to build capacity in countries in relation to planning for the financial impact of natural disasters and considering the use of risk transfer products to mitigate large losses. GAD helps developing governments to understand their risk profiles so they can get the right support from financial or actuarial experts.

This work involved combining actuarial and statistical techniques with programming skills and understanding the requirements of a range of different users.

The year-long project involved GAD producing a suite of user-friendly spreadsheet tools, supported by more than 20,000 lines of code, in an iterative development process with the World Bank.

The work that GAD put into developing these tools included designing clear interfaces on which users can:

- Input loss data and model a risk profile by fitting distributions to the data
- Input financing assumptions to meet disaster losses and compare multiple options
- Interact with 40 dynamic exhibits that display results of underlying risk profiles and the impact of financing strategies
- Investigate more advanced modelling options.

Thanks to GAD’s models, developing countries are better equipped to manage the financial consequences of natural disasters.

Within the public sector, there are often areas in which financial liabilities are expected to arise over the year, but for which the size and detail of the liabilities is relatively uncertain. GAD works with public sector colleagues to help better understand these risks and ways in which they can be managed. Two such examples are the risk protection arrangement (RPA) and NHS Resolution.

Risk Protection Arrangement (RPA)
The RPA is an alternative to commercial insurance for academy trusts. Under the RPA, the Department for Education (DfE) covers the property and liability losses incurred by academies instead of using commercial insurance. The RPA was only established in 2014, and GAD has been working in partnership with DfE to further improve the value for money the arrangement offers. It has provided analytical support to better understand the risk profile and potential costs of new areas of cover. For the 2018-19 academic year, protection for overseas travel and cultural assets has been provided by RPA at no additional cost to academies as a result of this improved understanding of the risks and related costs.

By building upon the techniques used in the commercial insurance market, GAD also provides support with pricing decisions. This work helps the RPA better understand extreme but plausible loss events, providing an indication of the size of losses that the RPA may need to absorb in shock scenarios. This analysis has supported DfE when making decisions on the price of membership, leading to a recent announcement that the price will drop from £20 per pupil to £18 per pupil from September 2019.

NHS Resolution
NHS Resolution provides indemnity schemes for the NHS in England and fairly resolves claims for compensation. GAD has been providing advice to NHS Resolution for a number of years. Part of GAD’s role is to provide relatively typical actuarial advice on reserving and pricing in relation to the compensation claims. NHS bodies are exposed to – including NHS Resolution’s new professional indemnity scheme for GPs in England, which was launched in April 2019. However, GAD’s support extends beyond this, making use of its public sector expertise to partner with NHS Resolution and address other policy and financial challenges that arise.

2001-2005
Restructure of GAD operations
Responsibilities for insurance supervision and production of UK population projections transfer to the Financial Services Authority and Office for National Statistics respectively.

2010
Public service pension schemes
The Independent Public Service Pensions Commissions recommended changes to ensure public service pension schemes remained sustainable. GAD helped implement the reforms.
Greater awareness of the factors, or combinations of factors, that have the greatest impact on outcomes.

Considering the impact of a wider range of options.

However, GAD’s importance to policymakers across the public sector comes from its ability to translate the results of its analysis into implications for policy decisions. Actuarial training provides a wider financial grounding than many other analysts receive; this enables GAD actuaries to understand how analysis relates to practical policy implementation and the other potential impacts of such an approach.

The following case studies summarise some of the diverse areas in which actuarial expertise is being applied to improve decision-making for the benefit of the public at large.

**Just the beginning**

GAD is a hub of talented analytical experts who combine technical expertise with financial and business acumen to support the government. This draws on the skills learned through the actuarial exam process, and provides opportunities to apply these in new ways to policy areas that affect millions of individuals across the country.

The department is not resting on its laurels as it reaches 100, but instead continues to progress, exploring new data analytics techniques and sharing thought leadership across government. With continued climate change, demographic pressures and societal issues, the next 100 years will present further challenges that actuaries within GAD will be helping policymakers address.

**CASE STUDY 3**

**Data analytics**

Many of the projects GAD works on involve larger datasets than are typically seen in private sector consultancies. It values pension schemes with millions of members, analyses the state pension system applying to the entire UK population, and advises in relation to student loans with millions of borrowers.

These large datasets are being used with new and evolving analytical approaches. For example, machine learning techniques such as random forests and neural networks are being used to identify and gain insights into drivers of change within large and multi-faceted datasets. As well as enabling an improved predictive quality to modelling, combining advanced technical output with actuarial judgment leads to greater understanding and the ability to deliver clear messages and better advice.

For example, Figure 1 illustrates how output from machine learning techniques can be visualised to better understand the factors of most importance. Here, importance is a measure of how useful the test algorithm finds information within each feature in making improved predictions.

**FIGURE 1**: Feature importance by age

- **FEATURE 1**
- **FEATURE 2**
- **FEATURE 3**
- **FEATURE 4**

**FEATURE 4 HAS A DIFFERENT PATTERN OF IMPORTANCE BY AGE**
Weathering climate risk

Pension funds must improve disclosure in this area, argues Paul Meins

The climate emergency is posing material financial risks that could threaten the security of members’ benefits. My contention is that significant pension funds should be obliged to disclose how they are managing their climate-related financial risks. They can do this by making their report and accounts available to the public – as well as showing the extent to which they have followed the recommendations of the Financial Stability Board’s Task Force on Climate-Related Financial Disclosure (TCFD), if the report does not already make this clear.

Pension funds are already obliged to produce accounts and a Statement of Investment Principles (SIP), and to make them available to their members on request. Some large funds publish their accounts online, sometimes using a log-in that excludes the general public. Recent regulatory changes mean that defined contribution pension funds must publish SIPs online, and this will apply to defined benefit funds from October 2020. However, the extent to which climate change is addressed in the SIP depends on the trustees and the extent to which they consider it a ‘financially material consideration’.

The justification
Public disclosure acts like a powerful, informed commentator looking over the shoulders of trustees, who may be called to account by public opinion and required to justify decisions. Although this is unlikely to happen, the knowledge that stewardship will be in the public domain serves to focus attention and gives climate issues their rightful priority.

Occupational pension funds are private trusts, and public interest may be questioned. However, they proliferated and accumulated as a result of generous tax reliefs financed by the public at large. And their current magnitude – more than £2trn – means that they have a significant influence on the UK economy. In a recent speech (Tokyo, October) the governor of the Bank of England, Mark Carney, stated: “With our citizens – led by the young – demanding climate action, it is becoming essential for asset owners to disclose the extent to which their clients’ money is being invested in line with their values.”

The June 2017 TCFD recommendations are voluntary and still at a relatively early stage of implementation. In June 2018, the UK Parliament’s Environmental Audit Committee called for all listed companies and large asset owners (including pension funds) to report in accordance with the TCFD on a ‘comply or explain’ basis.

The TCFD recommendations have received widespread support from around the world, according to the latest June 2019 TCFD status report, including from the UK government, the Prudential Regulation Authority and the Pensions Regulator. The government’s July 2019 Green Finance Strategy took this a stage further by setting up an industry group to develop TCFD guidance for pension funds, with a view to ‘putting it on a statutory footing during 2020’, and expecting ‘large asset owners’ to be disclosing in line with the TCFD by 2022.

The TCFD recommended that disclosures should be incorporated in mainstream financial statements, rather than being a separate report, so that the context and significance can be appreciated by all stakeholders. However, this level only applies to pension funds if they also provide public access to their accounts. It is not clear whether public disclosure is intended in the Green Finance Strategy measures summarised above.

Many large funds have signed up to the UN Principles of Responsible Investment, which commits them to environmental, social and corporate governance (ESG) considerations. However, these principles do not require disclosure of the potential financial impact of climate risk, and pension funds that have signed up do not necessarily make their accounts and SIPs publicly available. In relation to personal pensions, further disclosures will need to reflect their different structures. Independent Governance Committees (IGCs) currently provide oversight of the value for money of workplace contracts. The Financial Conduct Authority recently consulted on extending the IGC brief to include reporting on ESG policies, including climate change. The outcome is awaited.

The bottom line
Proposing further requirements for pension funds should not be undertaken lightly in view of the additional burdens that have been applied over the years. However, no additional documents are being proposed; only that the report and accounts should be publicly available through a website, and, where not already covered by this document, showing the extent to which they have followed the recommendations of the TCFD. Recognising the potential burden for smaller schemes, it should only apply to funds above certain thresholds, for example, more than 1,000 members or £100m of assets.

Pension funds are major investors in public companies engaging with the TCFD approach. They should use this information for their own strategies, to apply the TCFD recommendations themselves and allow public access.
n a world of defined contribution (DC) pensions, many people in the UK are not building up enough savings to provide for an adequate retirement. How can we engage young people to plan early, since starting too late makes the cost prohibitive? That is the challenge addressed by the IFoA’s Saving for Retirement Working Party, in our paper Saving for Retirement: Rules of Thumb.

The IFoA has advocated a ‘bottom-up’ approach to assessing pension adequacy, in which the first step is to define the objective – the standard of retirement someone aspires to, and thus the required pension. This can encourage savers to explore how they can achieve their goals. In Australia, this approach is promoted by publishing target retirement incomes, based on research into the basket of goods and services a retiree typically requires, for two different retirement lifestyles. In October, the Pension and Lifetime Savings Association published similar Retirement Living Standards for the UK.

Once the target income is chosen, there are plenty of tools available to calculate how much needs to be saved in order to achieve that target – but not enough people are using them. Rules of thumb aim to bridge that gap: heuristics that offer simple guides to young savers which can be followed in order to help turn inertia into action.

**Lifetime Pension Contribution**

The Lifetime Pension Contribution (LPC) tells people what a sensible pension contribution would be over a working life. For illustration purposes, we based the LPC on a target pension of £18,000 a year, or about two thirds of average UK earnings. We assumed retirement at 68, the state pension age for current young savers. A full state pension is about £8,500 a year, leaving £9,500 a
year to be funded from pensions and other savings. We assumed annual increases in both the monthly contributions and target pension in line with average UK earnings, and that the pension in payment is indexed to inflation, with no survivor benefits.

The calculated LPC assumed payable from age 22 was £525 per month, or about 23% of average UK earnings. The old rule of thumb of contributing half your age (as a percentage of earnings) when you start saving has changed to contributing your full age in order to provide a decent retirement income. £525 per month is likely to be unaffordable for many people, and suggests that retiring later than 68 might need to be considered; I show later another rule of thumb to help understand how much cheaper it is to retire later.

We envisage a single LPC for maximum impact, which could be promoted in the media alongside well-known market indices so that it becomes ingrained.

**Target pension rule of thumb**

The LPC of £525 per month, or £6,300 a year, provides a pension of £9,500 a year from age 68. This is close to a multiple of 1.5, leading to another memorable rule of thumb: “For every £1 per month contributed over a full working life, you can expect to get a pension of £1.50 per month from age 68.” For example, a monthly contribution of £300 would target a monthly pension of £450.

We developed further rules of thumb to understand the cost implications of alternative retirement ages. The first is that the LPC reduces by £55 per month for each year retirement is delayed beyond 68. For example, at age 71 the LPC becomes £525 – (£55 x 3) = £360 per month, or around 16% of average UK earnings – a much more affordable level of contributions.

For the target pension rule of thumb, the multiple varies according to retirement age. For example, for retirement at age 72 the multiple increases from 1.5 to 2, and so a monthly contribution of £300 would target a monthly pension of £600. For a retirement age that is earlier than 68, the multiple is lower than 1.5.

**Am I on track?**

We developed one final rule of thumb for savers as they get older to check if they are on track to meet their retirement objectives: the ‘benchmark’ fund derived from the expected accumulation of fund, as shown in Figure 2. At age 52 the benchmark fund is the annual contribution x (52 – 18) = £214,200.

The actual fund is lower than the benchmark fund, indicating that the saver is not on track. The pensions dashboard will be important to help

---

**FIGURE 1** Target pension rule of thumb at 68

For the target pension rule of thumb, the multiple varies according to retirement age. For example, for retirement at age 72 the multiple increases from 1.5 to 2, and so a monthly contribution of £300 would target a monthly pension of £600. For a retirement age that is earlier than 68, the multiple is lower than 1.5.

**FIGURE 2** Accumulation of fund when paying the LPC of £525 per month

---

**Table 1** Target pension rule of thumb at 68
aggregate the total fund across what may be multiple plans for comparison with the benchmark fund.

Rules of thumb can go no further in guiding people, and bespoke tools are needed to evaluate the different options for getting back on track: pay more; choose a lower target pension; retire later; a combination of these; or wait to see if market conditions improve.

Our simplified stochastic modelling illustrates the considerable uncertainties faced by a saver in a DC world. For example, Figure 3 illustrates a saver paying the LPC from age 22 to 68, resulting in disposable income before tax of about £21,000 and the very wide range of pensions that the resulting fund at age 68 could purchase, with a significant risk of a pension well below the target of £18,000 a year.

**FIGURE 3** Lifetime disposable income before tax (£)

Taking action by varying contributions or modifying the retirement objectives helps, but substantial uncertainties remain.

A wide range of assumptions are used across the pensions industry to estimate how much people need to save for retirement, and we suggest a greater consistency would be helpful to pension savers. Rules of thumb might act as a catalyst to help make this happen.

Assumptions affect the balance of risk and reward, as opposed to the ultimate cost. Our rules of thumb are based on an estimated cost using assumptions we judged suitable for a medium risk investor in the period before retirement, and to provide a high degree of confidence that the money will not run out in retirement. We deemed this appropriate for our target audience of rules of thumb: non-advised people who will be substantially relying on pension savings to achieve their target retirement income.

**The burden of cost**

It is costly to provide a decent retirement income, and our LPC can help to highlight the point – £525 per month, or about 23% of average UK earnings, is a lot of money.

For example, Figure 3 illustrates a saver paying the LPC from age 22 to 68, resulting in disposable income before tax of about £21,000 and the very wide range of pensions that the resulting fund at age 68 could purchase, with a significant risk of a pension well below the target of £18,000 a year.

**“We believe rules of thumb can grab people’s attention, encouraging them to take more interest in their pension planning”**

One reason for the high cost of pension provision is the very low interest rates that currently prevail; real government bond yields of about -1.5% a year when we prepared the report, and which have since fallen further. A modest rise in interest rates would substantially reduce the cost.

Another factor is that the decumulation market is inefficient. Individually purchased annuities are currently around 15%-20% more expensive than the bulk terms typically available to defined benefit pension schemes, while drawdown products lack the pooling of investment and mortality risks that would make DC pension provision more affordable and predictable. The growth of master trusts and potential introduction of collective defined contribution schemes can hopefully address these issues.

We envisage that our LPC and other rules of thumb would be reviewed periodically, for example annually, in order to keep them in the news and to reflect changes in market conditions or in the decumulation market. For example, as interest rates rise, the LPC will fall and this could be big headline news – pensions have become cheaper!

Employers have an important role to play in making pensions more affordable. In the UK, automatic enrolment (AE) has been hugely successful in increasing the number of pension savers, but the minimum required contributions are only 8% of earnings above about £6,100 a year, of which the employer’s share is 3%.

The minimum contribution rates required by AE were only intended to be sufficient to provide a basic level of retirement income – less than many people’s aspirations. The LPC can help to ensure that this is widely understood, thereby encouraging more employers to increase their contributions beyond the AE minimum level – perhaps by matching employee contributions up to a limit. Through competitive pressure, this could quickly become the norm.

We believe rules of thumb can grab people’s attention, encouraging them to take more interest in their pension planning. Their promotion might be enhanced through a simple, independently branded smartphone app.

Rules of thumb can also help stimulate debate about the high and uncertain cost of pension provision in a DC world, leading to actions that alleviate the problem. With savings at such a low level, there is no time to lose!

One reason for the high cost of pension provision is the very low interest rates that currently prevail; real government bond yields of about -1.5% a year when we prepared the report, and which have since fallen further. A modest rise in interest rates would substantially reduce the cost.

The Saving for Retirement Working Party’s paper (bit.ly/2SzedmP) was presented at a Sessional Meeting in Staple Inn on 20 May 2019. The IFoA has issued a related policy paper to be found at: bit.ly/IFoAsavingsgoals

**STEPHEN HYAMS**

is chair of the IFoA Saving for Retirement Working Party. The other members of the Saving for Retirement Working Party are Alan Smith, Graham Warren, Oliver Warren and Paul Willetts, with input and analysis from Chris Squirrell and the team at Sciurus Analytics.

---

The Actuary November 2019
With IFRS 17 on the horizon, actuaries play a critical role in calculating and reporting insurance reserves, reinsurance recoverables and forward-looking profitability—now is your chance to step into the limelight with ReMetrica’s new components.

- Carry out an eligibility test for the simplified model
- Identify if a contract is onerous and track its account balance over time
- Automate the necessary calculations, assumptions setting and cash flow projections with flexibility and a transparent audit trail

Sign up for a demo today at www.aon.com/remetrica_demo
The practice of transferring benefits out of defined benefit pension schemes by payment of cash equivalent transfer value (CETV) has been getting a certain amount of media attention in the UK. Low interest rates have driven up the size of CETVs, while the ‘pension freedoms’ introduced in 2015 allow people to transfer into defined contribution schemes without the need to annuitise. This combination of factors has led to high levels of CETV activity, especially for those near to retirement, and there are fears of another ‘mis-selling’ scandal.

Are CETVs being set at the right level? That is the question addressed by the IFoA’s Current Pensions Review Working Party.

The IFoA’s last significant review of CETV methodology was in 2005, when Exposure Draft 54 proposed significant changes. These changes were not implemented, and the government decided instead to amend the legislation in 2008, with the Pensions Regulator (TPR) also issuing new guidance.

The Working Party engaged with different stakeholders, including:

- Pensions actuaries – at the IFoA’s 2018 Pensions Conference
- IFoA members with an interest in pensions – via a survey in Q2 of 2019, with 61 respondents

These discussions have not highlighted a need for a fundamental change in the way that CETVs are set.

FOR WHAT IT’S WORTH

Tiffany Honour of the Current Pensions Review Working Party asks: are cash equivalent transfer values being set at the right level?
calculated. However, a number of interesting views were raised that merit consideration by actuaries advising on CETV calculation.

**Commutation**

For most schemes, we would expect lower CETVs if an allowance is made for the option to give up some pension for a cash sum – that is, commutation. Legislation says that: “The trustees must determine the extent … of any options the member has which would increase the value of his benefits under the scheme,” but is silent on what consideration should be given to options that would decrease the value of scheme benefits.

TPR guidance states: “Only those options which would increase the value of benefits may be included within the benefit for cash equivalent purposes under the best estimate method.” This reflects its interpretation that the legislation does not allow for member options that reduce CETVs, but others believe the legislation is unclear on this point, as shown in Figure 1 (overleaf).

Around two thirds of respondents either agreed or strongly agreed that allowance for commutation should be permitted. However, presumably because of TPR’s view that this is not permissible, the survey also identified that very few schemes actually allow for commutation. Responses include arguments for making such an allowance where evidence suggests members tend to take up the option, as this is more in line with a best estimate view. Arguments against include that CETVs should reflect the value of the promised benefits and it is not appropriate to reduce that value by assuming members will take an option.

The Current Pensions Review Working Party expresses no view on the matter but feels the policy intention could be more clearly reflected in the legislation.

**Discount rate**

The discount rate is one of the most material assumptions used in calculating CETVs. The Regulations state: “The Trustees must have regard to the scheme’s investment strategy when deciding what assumptions will be included in calculating the best estimate method.”

TPR guidance states: “Trustees must have regard to their investment strategy when choosing assumptions. This includes the appropriate investment returns to be expected, which in turn will influence the choice of interest rates with A combination of factors has led to high levels of CETV activity, especially for those near to retirement, and there are fears of another ‘mis-selling’ scandal.”
which future expected cashflows are discounted.”

As shown in Figure 2, most respondents felt CETVs should be based on the cost to the scheme of providing the benefit, either based on the current investment strategy, or, more commonly, allowing for assumed future changes in investment strategy. Either approach would seem acceptable under legislation and TPR’s guidance. If allowance is made for future changes in investment strategy, then how this is achieved may not be straightforward – if, for example, the investment strategy is contingent on certain events, such as reaching a given funding level. Most respondents considered that the level of investment returns assumed for setting the discount rate is broadly acceptable and are comfortable with the ‘cost to the scheme’ principle and the flexibility available as to how this can be applied.

“Actuaries will need to exercise judgment when advising on the level of granularity and types of groupings for setting demographic assumptions”

**FIGURE 1:** Do you consider that trustees should be permitted to allow for commutation and other options, even where they reduce the CETV?

<table>
<thead>
<tr>
<th>%</th>
<th>STRONGLY AGREE</th>
<th>TEND TO AGREE</th>
<th>TEND TO DISAGREE</th>
<th>STRONGLY DISAGREE</th>
</tr>
</thead>
<tbody>
<tr>
<td>60</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>50</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>40</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>30</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>20</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**FIGURE 2:** Assuming the scheme is sufficiently well-funded, what do you think a CETV should represent?

<table>
<thead>
<tr>
<th>%</th>
<th>COST TO THE INDIVIDUAL OF REPlicATING THE DB PENSION</th>
<th>COST TO THE SCHEME OF PROVIDING THE BENEFIT BASED ON CURRENT INVESTMENT STRATEGY</th>
<th>COST TO THE SCHEME OF PROVIDING THE BENEFIT BASED ON CURRENT INVESTMENT STRATEGY ALLOWING FOR ASSUMED FUTURE CHANGES</th>
<th>COST TO THE SCHEME OF PROVIDING THE BENEFIT BASED ON TYPICAL INVESTMENT STRATEGY</th>
<th>COST TO THE SCHEME BASED ON LOW RISK MANAGING INVESTMENT STRATEGY</th>
<th>BONDS</th>
<th>OTHER</th>
</tr>
</thead>
<tbody>
<tr>
<td>60</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>50</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>40</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>30</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>20</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Mortality and family statistics assumptions**

Legislation states that: “In determining the demographic assumptions, the trustees must have regard to – (a) the main characteristics of the members of the scheme....”. TPR’s guidance states that trustees should discuss with their actuary whether a particular assumption is likely to be influenced by scheme-specific, industry-specific and/or member-specific factors when determining a best estimate assumption.

We focused on whether sex-dependency, health status and selection should be taken into consideration when setting mortality and family statistic assumptions. There were mixed views on whether sex-dependent assumptions should be used to calculate transfer values. Those in favour noted that there is clear evidence to support the use of sex-dependent mortality rates and that these should lead to a best estimate basis. However, many respondents said that views may change in light of overall gender equality in society.

When asked whether trustees should be permitted to use mortality assumptions that reflect known or expected health impairment when calculating CETVs, some respondents were in favour, commenting that members should be treated as individuals. However, many cited practical issues in obtaining the relevant evidence to...
Where reduced CETVs are permitted, actuaries should ensure that trustees have gone through a sufficiently thorough process before reaching a decision to reduce (or not), taking into account measures that are in place to mitigate the risk of the scheme not being able to pay out its benefits in full. They should also keep this decision under periodic review.

We also asked whether actuaries considered the minimum size of CETV that would enable a member’s financial advisers to make a transfer recommendation. We found this tended to be considered for bulk transfer exercises only, where it was done as a matter of awareness but not to influence the level of CETVs.

Overall, the existing legislative and regulatory framework for calculating CETVs is viewed as being reasonable, with sufficient flexibility for appropriate judgment. Clarity on the permitted allowance for members options is welcome. The Current Pensions Review Working Party is discussing this topic with relevant stakeholders and welcomes your comments — email professional_communities@actuaries.org.uk

Reducing CETVs and other factors

We asked two questions about reducing CETVs to allow for a scheme being underfunded. These indicated that a high proportion of schemes, which could (under the legislation) pay reduced CETVs, were choosing not to do so, and that this proportion was unlikely to fall materially if regulatory constraints were relaxed.

As a result, the Actuaries have said that they will not back this assumption as a reason for not doing so. Trustees also need to be satisfied that they do not fall foul of disability discrimination legislation.

A significant majority were in favour of permitting an allowance for potential selection against the scheme when calculating CETVs, but most schemes don’t do so. This may be due to practical difficulties or, as some people said, because selection against the scheme is expected to be less of an issue if other factors are accounted for (for example, gender, location, health and commutation) – a smaller risk for larger schemes than for smaller ones.

Actuaries will need to exercise judgment when advising on the level of granularity and types of groupings for setting demographic assumptions, in regard to the strength of available evidence, materiality of potential differences, the risk of discrimination and practical considerations.

REGULATORY REMINDER ON DEFINED BENEFIT (DB) TO DEFINED CONTRIBUTION (DC) PENSION TRANSFERS FROM THE IFoA POLICY TEAM AND THE ASSOCIATION OF CONSULTING ACTUARIES

- Trustees are required, by law, to quote transfer values and, before they can calculate them, must have taken advice from their actuary as to the appropriate assumptions to use.
- If a member has gone through an appropriate advice process and provided trustees (within statutory time limits) with the information the trustees require to complete the transfer, trustees are obliged by law to pay the transfer.
- Actuaries are intricately involved in this process but do not make either of the key decisions involved: how to calculate the transfer value, and, for an individual member, whether to take the amount offered. They are not even involved in the second of those decisions.
- The trustees’ actuarial adviser may have a hand in the mechanics of the calculation. This could be a direct role – calculations carried out by the actuary – or, more usually, an indirect role, where calculations are carried out on the basis of instructions issued by the actuary. These could include, for example, a spreadsheet provided to the administration team. However, in this role, the actuary or their firm is helping to implement a decision taken by trustees as to the assumptions and method to be used to calculate transfer values.
- The actuary will provide advice to the trustees to enable them to decide on the basis of calculation of transfer values. This will include advice on assumptions, allowance for discretionary benefits and options, and whether to cut back values to allow for underfunding. However, the eventual decision is one for the trustees, who must act in accordance with legislation, their scheme’s rules and their duties to members.
- While the ongoing regulatory focus is on the quality of financial advice provided to those looking to transfer, it is important to emphasise that the scheme actuary plays no part in the advisory process. Those who advise on DB transfers are regulated by the FCA and operate separately and independently from the scheme actuary.

Sources: IFoA Policy Team and the Association of Consulting Actuaries

NOVEMBER 2019 | THE ACTUARY | 29
It’s time for with-profits investment strategies to consider climate-related risks and opportunities, say Catherine Thorn and Sandy Trust

Although implicitly captured by the recent Prudential Regulation Authority (PRA) supervisory statement on climate change, with-profits is unusual in long-term savings as one area in which UK regulators have not explicitly specified requirements relating to the management of climate change as a material financial risk – as has happened with trust-based pensions, for example.

Are actuaries who are not considering this at risk of breaching their regulatory responsibilities – as well as missing out on investment and customer engagement opportunities?

With-profits regulations are lengthy, but the guiding principles can be paraphrased simply: run the fund well by securing good investment returns to provide fair, smoothed long-term returns for each generation of policyholders.

Put another way, with-profits funds must meet the needs of current policyholders without compromising the needs of future policyholders. This is similar to the widely used definition of sustainable development: “Development which meets the needs of the present without compromising the ability of future generations to meet their own needs.”

Climate risk management in financial services

Climate change risks are now accepted to be financially material; already occurring; potentially impossible to hedge completely; interconnected in complex ways; foreseeable; and highly uncertain, in that the actions we take in the next decade will be critical to either avoiding or accelerating catastrophic climate change.

However, climate is a new language for financial services. It is not well-understood, and not particularly welcomed by some. For many, consideration of longer-term risks and real-world impacts, such as climate change, represents a major shift from thinking about purely financial outcomes.

Development of data, models and methodologies is rapid, meaning any long-term portfolio manager can assess climate risk in their portfolio at both a holding level and at a macro-economic level. Of course, models are not perfect – it is challenging to capture all the interactions between the Earth’s complex physical climate system and the financial system. Nonetheless, major global financial institutions are now using them to manage risk and disclose their approach.

A key first step is to formulate a climate policy that reflects Paris Agreement goals. Institutions can then move on to risk assessment. Strikingly, all of the institutions that have done the maths appear to have come to a similar conclusion: here is a material financial risk and opportunity that we should manage appropriately.

As well as the range of data, models and consultancy players in this space, there are significant resources available to support institutional investors, including the risk taxonomy and methodology of the Financial Stability Board’s Task Force on Climate-Related Financial Disclosures (TCFD, Figure 1), and guidance from the Principles for Responsible Investment initiative and membership groups such as the Institutional Investors Group on Climate Change.

Investment implications

In its 2015 policy briefing (bit.ly/30tRHs), the IFOA stated: “The cost of delay is high and early action on emissions will improve future options.” Recent developments have quantified the cost of delay – ie how expensive failure to achieve the Paris Goals.
occasion is completely aligned with their fiduciary
that mitigating climate risks and positioning for
impact returns. Many asset owners have concluded
and governance (ESG) aware investment does not
academic research shows that environmental, social
opportunities may be missing out on returns. An increasing amount of
transition. Any long-term investor not alert to these
company playing a meaningful role in the energy
on astonishing growth projections, predicated on the
Musk’s remuneration proposals at Tesla were based
investing in mitigation and adaptation efforts. Elon
consideration of climate factors, could you be taking
I f your investment portfolios do not yet include
There are already winners and losers in the market.
stock-level impacts arising from the transition, and
disguise are the very different national, sectoral and
limits are likely to be impacted.

What does this mean for with-profits funds? Simply,
that choosing a higher warming pathway will have
severe macro-economic implications – interest rates,
inflation, growth and so on are likely to be impacted.
This in turn impacts the key assumptions that
actuaries use to manage with-profits funds.

But what these high level macro-economic impacts
disguise are the very different national, sectoral and
stock-level impacts arising from the transition, and
the physical risks associated with climate change.
There are already winners and losers in the market.
If your investment portfolios do not yet include
consideration of climate factors, could you be taking
risks you do not understand?

Conversely, significant opportunities exist for
investing in mitigation and adaptation efforts. Elon
Musk’s remuneration proposals at Tesla were based
on astonishing growth projections, predicated on the
company playing a meaningful role in the energy
transition. Any long-term investor not alert to these
opportunities may be missing out on returns.

There is no speculation or implication that this
involves giving up returns. An increasing amount of
academic research shows that environmental, social
and governance (ESG) aware investment does not
impact returns. Many asset owners have concluded
that mitigating climate risks and positioning for
opportunity is completely aligned with their fiduciary
duty to provide good returns to their beneficiaries.

The moral imperative
Financial services companies are also waking up to the
fact that connecting with people through their values
might lead to a different customer relationship. Few

Panel on Climate Change’s 2018 special report (bit.ly/2A5BEhi) made clear that the
window of opportunity for avoiding catastrophic climate change is shrinking
rapidly, and that keeping the world’s warming as far below 2°C as we can is vastly
preferable from a societal survival perspective. Actuaries are well positioned to understand climate change. We understand
probabilistic scenarios and long-term risks, and are comfortable with uncertainty.
We have the technical skills, but we also often have responsibility for oversight
and governance of large pools of assets, which can be used either to accelerate
or mitigate climate change. We therefore have an enhanced responsibility.

For example, a large with-profits fund can do things ordinary people cannot,
such as invest in renewable energy. Conversely, such a fund can also finance
the discovery of more fossil fuels by investing in the corporate debt of oil majors that
are not transitioning to a low carbon future. By doing so, the fund is not only taking
on investment risk as a consequence of the energy transition, but is also facilitating
a very negative real-world impact. As actuaries, surely we need to own this
responsibility and play our part in shaping a positive future for our species?

Regulatory vigour and taking action
The PRA, Financial Conduct Authority, Financial Reporting
Council and The Pensions Regulator are heavily engaged
with climate change, with a series of papers and initiatives
taking place, including the July 2019 joint statement on
climate change (bit.ly/2xI80Nu) that accompanied the
government’s Green Finance Strategy (bit.ly/2KUNfUT). Globally,
an increasing number of regulators are also moving
and high-profile voluntary initiatives are being
remarkably well supported. From a regulatory perspective
the message is simple – here is a material financial risk that
you should now be managing. So actuaries must:
• Understand climate change risks – what they are and how
they could impact the with-profits fund
• Assess these risks – use appropriate tools and techniques
to understand the impacts on the fund
• Act – implement appropriate investment or hedging
strategies and consider whether Principles and Practices
of Financial Management should be updated to be explicit
on material ESG risks, including climate change.

Given that the IFOA issued a risk alert to all actuaries on
climate change in May 2017, those who fail to take these
steps now may well, like polar bears, be skating on
increasingly thin ice.

www.theactuary.com
Cryptocurrency could potentially outgrow its use as a payment mechanism and replace established methods for borrowing capital, says Ian Collier.

Until recently, the accepted view of major central banks such as the Bank of England was that cryptocurrencies would have minimal impact on the formal economy and create little or no risk to domestic financial stability. These central banks have set up departments that monitor the progress of cryptocurrencies and reflect on their impact. Some have considered the consequences of issuing their own digital currencies (central bank digital currencies, or CBDCs) and have concluded that, for now, the risks of CBDCs outweigh any positives that they would create (see the IFoA paper Understanding Central Bank Digital Currencies by Sabrina Rochemont and Orla Ward, and Take the Reins by Orla Ward and Ian Collier, which appeared in The Actuary in December 2018. All authors are members of the Cashless Society Working Party).

Facebook’s June 2019 announcement that it is planning to issue its own cryptocurrency, Libra, must now challenge the negative and dismissive attitudes of central banks. It should prompt questions about how significant cryptocurrencies will become, and whether they should be treated as a currency or a capital market instrument.

Promises and rewards
Money, in the form of either bank notes or bank accounts, constitutes a form of loan. The paper cash in one’s pocket states clearly that the issuer ‘promises to pay the bearer’, and a bank deposit can be considered as a loan made by the depositor to that bank. As a reward for making that loan, as with any commercial or capital market instrument, the borrower pays a reward to the lender for that loan. Banks will usually pay an interest rate on bank accounts – although these are currently very low. Even if the interest rate is zero, the bank will provide payment and other banking services as an incentive to acquire these deposits. Banks with better perceived creditworthiness are able to offer lower rates of reward, just as their ‘paper’ pays a smaller return on the capital markets.

Other ways that banks, and indeed any borrowers, can raise money include debt issuance or equity issuance through the capital markets. Here, the trustworthiness of the borrower and the liquidity of the issued instrument determine what the market will pay or receive in order to lend that money.

The issuance of cryptocurrencies, up until now, has not satisfied traditional lending criteria. In most cases, the borrower has not even been known, let alone offered the lender the ability to assess their creditworthiness – and the liquidity of the currency is at best varied. This is not going to attract funds in the sort of size that would seriously affect economies, and it is hardly a wonder that authorities have not believed they can create a threat to financial stability.

However, what would happen if, instead of raising money through conventional capital markets, major international borrowers, corporate or public authorities were to issue currencies in return for fiat currencies, instead of issuing bonds or equities?

Could the borrowers offer a rate of interest on their ‘coins’ linked to their creditworthiness as they do with their debt?
IDEA?

WHAT NEXT?
Will the cryptocurrency of the future be a payment mechanism, or will it effectively be an efficient way to borrow money? Will future issuers of cryptocurrencies need or wish to pay rewards to holders that are over and above the ability to use it to pay for goods and services? The view of the author is that once (or if) the market matures, the value at which that currency will trade on markets will reflect the ‘yield’ on that asset, much as happens with capital market instruments. Cryptocurrency’s status as a payment mechanism alone should not be sufficient to attract substantial capital to it.

Once the market is mature, cryptocurrencies could well encroach on or even replace the traditional capital markets as a method of raising funds. Facebook’s announcement is a wake-up call for central banks and regulatory authorities. Regulatory issues will include data privacy, anti-competitive practices and cross-border activities, and rigorous regulation will be necessary to ensure financial stability. With Libra, we are offered a cryptocurrency issuer that is a major international corporate and respected borrower, for whom the credit risk is understood. Facebook is working with payment providers, which could allow Libra to be widely accepted as a payment method, making it perhaps more liquid than current Facebook capital market debt or equity instruments. It is possible it will become a cheaper way to raise money than traditional capital markets because there will be no need to pay interest on the loan. The project has faced a series of challenges recently, with key partner organisations having pulled out and mounting regulatory opposition. But it would be negligent of authorities to ignore the possible appeal of the Libra, or future coin offerings by internationally respected borrowers. Central banks may find no alternative but to issue CBDCs in order to keep control of monetary policy – despite the risks from the resulting change to the fractional banking system, as set out in the Understanding Central Bank Digital Currencies paper.

IAN COLLIER is a retired actuary and chair of the Cashless Society Working Party. He has just finished a five-year term on the IFoA’s Health and Care Research Committee.

www.theactuary.com

innovations, or even a share of profit akin to dividends on equities? The coins could float on foreign exchange (FX) markets, replicating the pricing of bonds or equities on capital markets.

An example
Let us suppose a large international bank called Megabank wants to raise capital in a fiat currency. Instead of issuing bonds or equities it decides to issue its own currency, Megabank dollars (M$). This would be done by issuing a prospectus, just as it might when raising money in the capital markets. Megabank would receive fiat currencies and ‘swap’ them into M$; it could then ‘drop’ payments of M$ into a depositor’s account on a regular basis in lieu of interest. This interest could be ‘fixed’ or ‘floating’. The amount of interest paid would be similar to the rate that Megabank would have to pay on the capital markets for any debt issuance.

Investors who might otherwise buy Megabank debt would now have the choice of purchasing Megabank bonds or M$. The latter would float in value depending on the general level of interest rates, and Megabank and others would maintain an active market for the exchange of M$ with all other currencies – an effective FX market. This would be akin to its debt or equity instruments floating in value on the capital markets. Megabank would always guarantee payment of M$ through its normal banking services at the prevailing FX rate, making this ‘loan’ more liquid for lenders (especially for small purchases) than their capital market equivalents.

As with the various capital market instruments that it might issue, Megabank might issue a number of different types of dollars. The interest-bearing dollars might attract either fixed or floating interest. Megabank could issue equity dollars, too, and it would ‘drop’ a share of Megabank’s dividends to account holders instead of making interest payments. The price of each of these equity dollars would also fluctuate according to general market conditions, just as their equity would fluctuate on capital markets.

Such disintermediation of the capital markets would require regulation, but this might be more questionable if the coins were ‘domiciled’ in territories where the regulatory regimes were light or non-existent. Prospectuses would be prepared for these coin offerings, just as is required for bonds or equities.

Tax authorities would require similar information as they would for capital market instruments – although capital gains tax might be more difficult to calculate, as payments made in M$, no matter how small, could be considered the equivalent of disposals of an asset. A number of jurisdictions, such as the US, already recognise that regulation should come under the auspices of whichever type of authority the instrument departs – so despite being called a currency, if it looks and acts like a capital market instrument, it should be regulated as such.
A lot can happen in five years. In 2015, people were handed greater control over their defined contribution pensions. Rather than purchase an annuity, many have opted to explore a wider range of products that better suit their circumstances. The market has reacted, and a variety of pension vehicles are now promoted to current and soon-to-be retirees.

These changes do not exist in a vacuum. The preceding defined benefit (DB) pension model has responded accordingly. Flexible retirement options are earning the attention of both sponsoring employers and pension scheme trustees; income drawdown, cash and bridging pensions are being recognised as viable alternatives to the standard annuity.

Pension increase exchange can provide new retirees with higher initial pensions – at the cost of removing future protection against inflation – and has been a popular option for many.

In recent years, more and more members have been transferring out of their DB pension schemes in order to make the most of ‘freedom and choice’. Members have more options than ever before when it comes to how they can use their pension. However, pensions are complicated. For most, a pension should rank alongside a house as their most valuable financial asset – and any future decisions require great care and expertise.

Ultimately, taking control of your pension involves reclaiming the risk. You need to choose how to use the money. You need to select how to invest it. You need to decide how and when to take it.

You might make the right choice and select a pensions vehicle that provides you with greater value than if you had stayed put. Alternatively, a poor investment choice or inept financial planning could mean pensioners who have lived longer than they expected run out of pension income altogether. Then what?

Remaining in a DB pension scheme keeps the onus on its sponsor to ensure benefits are provided to the member. Transferring out relieves the sponsor of this responsibility.

Many pension schemes and their appointed actuarial advisers have noted the trends and are taking action to provide members with pensions education, so that all decisions can be informed decisions.

Those who are unmarried or in worse-than-average health may be the most obvious candidates who would be drawn to the prospect of transferring out.

Offering a partial transfer option is also a rising trend – although bulk exercises can be hindered by the inherent benefit design and administration complexities and, as such, many members may not even be aware of the possibility.

Technology is playing a vital role in the information campaign. Many independent, unbiased online tools containing personalised figures have been designed for people to use when best suits them – allowing pension scheme members to consider the wide range of available retirement scenarios and the ramifications of any decision they make.

Some DB pension schemes are also providing paid-for, independent financial advice from qualified experts to their members, to ensure that they can be sure when it comes to making the decision to stay put or transfer out.

Many will be thinking: “Why would my employer pay for and provide all of this? Surely it isn’t cheap?”

An intriguing question. Provision of this assistance is certainly not cheap – but neither are the provisions that are required to be made with respect to inflation and longevity risk. Nor are the ongoing running costs of a large DB pension scheme – provisions that can be repurposed when an individual elects to transfer.

While many would be better off by choosing to stay, some will end up in a more valuable position if they decide to transfer out. And these mechanisms can serve to inform where an individual lies on this overarching scale – a win-win situation.
On the tiles
Mensa puzzle 765
Which one is different from the others?

A

B

C

D

Hidden figure
Mensa puzzle 766
What number should replace the question mark?

<table>
<thead>
<tr>
<th>7</th>
<th>3</th>
<th>8</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>6</td>
<td>4</td>
<td>3</td>
<td>5</td>
</tr>
<tr>
<td>6</td>
<td>4</td>
<td>7</td>
<td>7</td>
<td>6</td>
</tr>
<tr>
<td>2</td>
<td>9</td>
<td>1</td>
<td>6</td>
<td>2</td>
</tr>
<tr>
<td>8</td>
<td>2</td>
<td>9</td>
<td>5</td>
<td>?</td>
</tr>
</tbody>
</table>

Do a number
Mensa puzzle 768
What number should replace the question mark?

52 - - - 262
73 - - - 514
19 - - - 28
45 - - - 185
28 - - - ?

Mystery movies
Mensa puzzle 767
Decipher the code to reveal the titles of four classic films. What are they?

HOMEGIOHES
DATA CMAODA
HAOE II
OMIWES

www.mensa.org.uk

www.theactuary.com
At the back
Society news

SOCIETY OF ACTUARIES IN IRELAND

Getting some perspective

BY BRIAN DONNELLAN

On Friday 11 October, the Society of Actuaries in Ireland (SAI) held its Risk Management Perspectives Conference in the Aviva Stadium, Dublin. Interactive sessions were delivered throughout the day, with more than 200 delegates in attendance.

Group chief economist at the Bank of Ireland, Dr Lorretta O’Sullivan, presented her strong economic growth forecast for the Irish macroeconomic environment, despite an uncertain landscape (Brexit; US and China trade policy disputes). It was seen that net migration and a mismatch in housing supply versus higher demand is contributing to continued pressure in the local housing market. The volatility in the Euro-GBP exchange rate is also being monitored closely. The current low interest rate environment, while welcome for some, also presents its own challenges for banks, insurance companies and pensions.

Paul Harwood, CFO of Holloway Friendly, then shared his insights on defining and managing culture. He presented a useful framework for assessing the culture of an organisation: reward; management; items ignored; powerful person, and qualms of qualms of conscience.

Lukas Ziewar, group chief risk officer at Athora, gave an example of the role of consolidator businesses and the positive role that a CRO has to play in helping to ensure success, while the director of government affairs with Insurance Ireland, Dr Declan Jackson, spoke on how Insurance Ireland, working on behalf of its members, has advocated to ensure emergent risks can be managed and their impact lessened.

Ruairí O’Flynn INED delivered a thought-provoking and engaging discussion on the roles and interdependent activities of actuaries, INEDs and regulators. In his address he confirmed the need for trust in senior management in order for INEDs to exercise their fiduciary duties with any degree of confidence. The use of a metaphor of a ‘walled garden’ for the actuarial profession and other professions was memorable. Ruairí also recommended that actuaries should study individual and organisational behaviour in the professional examinations, in light of behaving being a business (operational) risk.

Chief executive and co-founder of Skytek, Dr Sarah Bourke, presented a facilitating talk (in partnership with AON) to offer the insurance and reinsurance industry space (‘NASA’) adapted software systems that could better manage marine, port cargo and offshore asset risk. Success for Skytek was largely attributed to keeping technical solutions simple and easy to use.

Solvency II, a panel discussion chaired by Joanne Ryan (Acorn Life) with Tony O’Riordan (New Ireland), Jason Wiebe (RGA), Andrew Candland (CBI), reviewed how Solvency II has been working since its introduction. There was consensus that Solvency II has created a much greater awareness of risk at board level. Opportunities to allow for more harmonisation and a refinement in disclosure requirements was also explored by the panel.

The CRO of Davy Group, Grellan O’Kelly, gave an interesting talk on ‘Risk management – an investment firm perspective’. He highlighted the value of actuaries (dealing with the same “risk fundamentals”). The importance of de-risking an organisation accordingly was also explored in this session.

Carol Storey, sustainability and climate change actuary at PwC, delivered a presentation titled: ‘Climate Change: Are You Ready?’. Carol chairs the IFoA Climate Change Working Party, which published an introductory guide to climate change earlier this year. She focused on the importance of transition risks in moving to a low-carbon economy, given that transition risks are not often considered but are really important for organisations. Increased coastal erosion and flooding risks were also highlighted.

Carol confirmed she did her part by taking a seven-hour ‘sail and rail’ journey from London to Dublin; this reduced her carbon emissions by 73% (as compared to someone travelling by plane).
Visiting Affiliate praises tradition

The Worshipful Company of Actuaries welcomes Tan Suee Chieh, president-elect of the IFoA, as its first Visiting Affiliate member. This is a new category of affiliate membership created to enable actuaries who are not based in the UK, but who are regular visitors to the UK or are temporarily seconded to the country, to participate in the social and philanthropic events of the Worshipful Company when they are in London.

Tan Suee Chieh, pictured here with the Master Fiona Morrison and senior warden Julie Griffiths, commented on LinkedIn that in a world of rapid change, it is important that professional bodies and institutions learn how to keep and nourish their rituals and traditions as they seek to reinvent themselves, as such rituals help us in keeping our soul and maintaining a sense of history and continuity.

Any actuary interested in becoming a Visiting Affiliate of the Company is invited to contact the Clerk, Lyndon Jones, at clerk@actuariescompany.co.uk

OBITUARY

Alan Ford

Alan Ford, who played a pivotal role in the sound development of unit-linked business, died in July aged 85.

After attending Brighton Grammar, Alan joined the Prudential and started work on the actuarial examinations. Before completing them, however, he and his new wife Doreen moved to the US, where he became a Fellow of the Society of Actuaries in 1963. They then decided to return to the UK with their two children and he completed his fellowship examinations in 1965.

Alan became finance director and actuary at Abbey Life before moving with the top management team to start Hambro Life, laying solid foundations for the company’s rapid progress to listing and membership of the FT Index.

The late 1960s and 1970s was a period of rapid regulatory change following a number of insolvencies and, of course, the UK’s membership of the European Community. Throughout the period, Alan was very active within both the industry and institute, helping to develop sound practices for product design, unit pricing, valuation, DTI returns and financial management generally.

He was the author of a paper, Students’ Society on the subject of Assurances Linked to Unit Trusts (1969), which included an explanation of actuarial funding. As a member of Institute working parties, he then wrote Life Office Returns to the Department of Trade and Industry (1973) and was co-author of Valuation of Individual Investment-Linked Policies (1978). Importantly, he was also co-author of the Report of the Maturity Guarantees Working Party (1980), which he chaired.

Alan was a very practical person and even though he much preferred traditional computational methods for his own work, he had the foresight to sponsor the development of a comprehensive, computer-based model of Hambro Life in the early 1970s and an interactive profit tester. As well as being a good businessman and a very clear thinker, Alan was particularly good at developing people, as those who were lucky enough to work with him will testify.

Alan retired in 1980 to travel, start a helicopter business with his son, play golf and to spend more time with his devoted family.

BIRTHS

Adam Freeman (Admiral) and his wife Sarah are pleased to announce the birth of their daughter Alice on 30 April. She is little sister to Ava and Ben.

DEATHS

Mr Brian Barton, based in the UK, became an associate in 1955. Died aged 93

Mr Paolo Albini, based in the UK, became a student in 2011. Died aged 39

Mr Francis Robertson, based in New Zealand, gained fellowship in 1967. Died aged 78

Mr Michael Tyrell, based in the UK, gained fellowship in 1962. Died aged 86

Mr John Maitland ‘Joe’ Macharg FFA MA, based in Edinburgh, was president of the Faculty from 1985 to 1986 and gained fellowship in 2001. Died aged 91.

Alan Ford, who played a pivotal role in the sound development of unit-linked business, died in July aged 85.

After attending Brighton Grammar, Alan joined the Prudential and started work on the actuarial examinations. Before completing them, however, he and his new wife Doreen moved to the US, where he became a Fellow of the Society of Actuaries in 1963. They then decided to return to the UK with their two children and he completed his fellowship examinations in 1965.

Alan became finance director and actuary at Abbey Life before moving with the top management team to start Hambro Life, laying solid foundations for the company’s rapid progress to listing and membership of the FT Index.

The late 1960s and 1970s was a period of rapid regulatory change following a number of insolvencies and, of course, the UK’s membership of the European Community. Throughout the period, Alan was very active within both the industry and institute, helping to develop sound practices for product design, unit pricing, valuation, DTI returns and financial management generally.

He was the author of a paper, Students’ Society on the subject of Assurances Linked to Unit Trusts (1969), which included an explanation of actuarial funding. As a member of Institute working parties, he then wrote Life Office Returns to the Department of Trade and Industry (1973) and was co-author of Valuation of Individual Investment-Linked Policies (1978). Importantly, he was also co-author of the Report of the Maturity Guarantees Working Party (1980), which he chaired.

Alan was a very practical person and even though he much preferred traditional computational methods for his own work, he had the foresight to sponsor the development of a comprehensive, computer-based model of Hambro Life in the early 1970s and an interactive profit tester. As well as being a good businessman and a very clear thinker, Alan was particularly good at developing people, as those who were lucky enough to work with him will testify.

Alan retired in 1980 to travel, start a helicopter business with his son, play golf and to spend more time with his devoted family.
Where are you based?
Glasgow.

What volunteer role(s) do you do for the IFoA?
Deputy chair of the IFoA Life Board.

How long have you been volunteering?
Since 2012. My first role was on the IFoA Life Conference organising committee.

What’s involved in your role(s)?
We have five board meetings per year where we discuss activities that sit under its responsibilities. The agenda includes technical topics and how we can support members’ needs. I also take on roles such as peer reviewing working party reports.

What motivates you to volunteer for the IFoA?
It’s a great profession that I love being part of. Volunteering has given me a lot of insight into the workings of the IFoA.

What have you/do you hope to achieve in your volunteer role?
I am keen to ensure that the Life Board represents the interests of consumers.

What new skills or knowledge do you think you have developed?
I have gained a much more rounded actuarial perspective.

Has this assisted your lifelong learning?
Absolutely, I often get new ideas for research from my fellow board members.

Do you think volunteering has helped you in your day job?
Yes, I find it really valuable to meet people from different organisations and backgrounds. There is a big overlap with my day job as a consultant and it helps me to understand what is going on in the market.

Have there been any memorable moments?
As part of the Life Conference organising committee, I was sitting at the top table when we were treated to an energetic performance from the Red Hot Chilli Pipers.

How do you balance your day job and your volunteer role?
My employer is supportive of my IFoA work, so this helps me balance things.

If you were locked in a famous building for one night... which would it be and why?
My favourite art gallery is Musée D’Orsay – it would be great to visit while it wasn’t busy. It has a lovely café, so I could enjoy a midnight feast of cheese and pinot noir.

How do you relax away from the office?
I enjoy watching football and I have a season ticket at Celtic Park. This isn’t always relaxing!

What would you say to others considering a volunteer role?
I would encourage it and recommend finding a role that you are genuinely interested in.

Who is your role model – in life or in business?
I’m not sure if this counts, but I read a great book called Quiet by Susan Cain which I found very helpful in developing my career.

What word best describes you?
Resilient.

Do you prefer a staycation or holiday abroad?
Abroad (and as often as possible).

What would you consider to be the most brilliant moment of your career to date?
Watching the growth of the life consulting team in which I work – it has been fantastic to be part of a team that has developed from one or two consultants to now a team of almost 40.

To share your volunteer involvement or find out about volunteering for the IFoA, contact: debbie.atkins@ actuaries.org.uk

KAREN BROLLY
Life consultant at Hymans Robertson LLP

At the back
Volunteer

Inside story

Images: Alamy / iStock
HFG's consultants specialise in matching you to the right role at the right company. Call us today to have a chat about your requirements and to find out what opportunities are available.

Please see a snapshot of our actuarial vacancies below.

Reserving Contractor
A Lloyd’s syndicate is looking for a Reserving Contractor for 9 months. Working with the Head of Reserving on a special project this is an exciting opportunity to make a difference to the business. Previous reserving experience is required. Please get in touch for further information.

£750 - £1000 per day, London
William Gallimore

Life Actuarial Consultant - Risk & Capital Expert
This is a fantastic opportunity for a qualified actuary to lead and get involved in a variety of high profile projects across the Life Insurance industry. This position would suit a dynamic and ambitious individual with a strong understanding of regulatory risk within Life Insurance. Responsibilities range from technical input to business development and no day will be the same!

Up to £120k, Flexible location
Katherine Farr

Underwriting Risk Actuary
A large London market insurer is seeking an Underwriting Risk Actuary. The key requirement for this vacancy is a strong understanding of GLM’s as you will be liaising with various senior Underwriters and Heads of Pricing. GLM expertise and communication skills are an essential requirement and training is available within the role.

Circa £80k, London
Ross Bennington

Hedging Manager
The client, a global brand within insurance, is searching for a Hedging Manager to assist in the structuring of their Group and business unit hedging programmes. The Investment Manager sits within the Group ALM team and will play a key part in the development and implementation of investment strategies.

This is a specialized and technical role that requires appropriate business experience and knowledge of capital markets.

Up to £75k + package, London
Nanika Ahluwalia

Chief Actuary
A specialist client is looking for a Non-Life Chief Actuary for a year. Working closely with the finance team and underwriters this role requires someone who has the gravitas to work closely with the board. Previous experience in pricing and reserving is essential.

Flexible day rate , London
William Gallimore

Changes to IR35:
Is there still a market for contractors?
With the impending changes to IR35 coming into effect from April 2020, employers are considering their resourcing models and their approach to using contractors going forward. The impact is far greater than the Actuarial market with large insurers using hundreds of contractors across different job families, consequently this will have a huge impact on the industry.

Or will it? The legislation is designed to ensure that regular workers are on payroll but it isn’t going to stop specialists completing project work, there is a clear argument for the majority of Actuarial contractors that the work they are delivering is not BAU and therefore is outside the scope of IR35. The key will be the interpretation of the legislation and approach to determination, which is where HFG are working with a number of clients to help them understand the impending changes.

Many contractors find it difficult to return to permanent roles from a career of contracting, with employers taking different views of the breadth of experience on the cv and the regular movement and change. If you would like some advice on how to prepare for the process or to discuss the likely changes to the contract market then HFG would be very happy to talk through our experience and explain various client positions.

For an independent view and background to the IR35 changes please see: https://www.apsco.org/ir35.aspx
Mark Dainty: HFG Director & Chair, Financial Services Sector - Apso.
mark.dainty@hfg.co.uk 0207 337 8816

Making moves in insurance recruitment
Permanent and Contract Opportunities at APR

Permanent roles for entry-level (school leavers and graduates), mid / senior students and qualified actuaries

Positions based in London and Edinburgh, with the option for locating to Dublin
Contracting opportunities across UK for actuarial professionals at all levels of experience

Join our growing team - opportunities for a range of placement and consulting projects

Drawing on the high quality of the solutions we are providing to clients, whether individuals on placement or delivering project-based services, our business is continuing to grow. Our permanent actuarial staff gain exposure to a wide range of clients and projects, while benefiting from our highly-regarded training and support. Those who contract through APR enjoy our professional, focused approach to finding suitable roles and supporting our contractors on placement.

- **Graduate Actuarial Associate**
  - Our well-established graduate training programme is based on comprehensive initial training and exposure to project roles selected with your development in mind.
  - Our exam pass rate far above the UK average gives you maximum chance to qualify quickly as you launch a successful and varied actuarial career.

- **Actuarial Analyst (CAA)**
  - Drawing on our experience and strength in training actuarial students, we have now been recruiting Actuarial Analysts for three years.
  - As well as giving you experience across a range of client projects we support our analysts to take the CAA qualification, hopefully as a first step towards full FIA qualification.

- **Actuarial Contractor Roles**
  - We are suppliers to most of the UK’s largest insurance firms, giving you access to a wide range of contracting opportunities. Our actuarial expertise and targeted approach to filling roles maximises your chances of securing contracts that suit your skills and preferences.
  - We continue to support contractors to meet the challenges presented by the upcoming IR35 changes.

- **Actuarial Associate / Senior Actuarial Associate**
  - We are looking out for high-quality actuarial students and qualified actuaries to supplement our team.
  - Those attracted to an associate role at APR are often looking for a broader range of actuarial experience or an increased level of responsibility through working for a smaller firm.

For further information see:
- [https://aprllp.com/working-for-apr/](https://aprllp.com/working-for-apr/)
- [https://aprllp.com/actuarial-contracting-with-apr/](https://aprllp.com/actuarial-contracting-with-apr/)

Or contact: [recruitment@aprllp.com](mailto:recruitment@aprllp.com)
www.aprllp.com
UK Chief Actuary
£140,000 – £170,000 per annum + Benefits – City of London
This role is with the UK Company of a large International Insurance Group and will entail leading a small team responsible for Reserving, Pricing and Capital, ensuring all Regulatory requirements are met. You will need to be an experienced FIA qualified General Insurance Actuary with a breadth of expertise across Reserving, Capital and Pricing and as well as the ability to effectively lead a team. You will also need a Practising Certificate and previous SIMF20 would be beneficial.
Contact: Jeremy.Cross@ipsgroup.co.uk 020 7481 8111 Ref: TA140466JCC

Senior Reserving Actuary (12 month Contract)
To £105,000 per annum + Benefits – City of London
This is a senior actuarial position with a large and well respected carrier in the international insurance and reinsurance market. As well as Reserving you will be involved in additional analysis work, stakeholder support, supporting timely regulatory returns and assisting with recruitment into the team. You will need experience in advanced actuarial reserving techniques involved in non-life insurance, preferably including the requirements of Solvency II and IFRS17. In addition you will need experience in leading project work to completion and knowledge of reserving tools including ResQ or similar.
Contact: Jeremy.Cross@ipsgroup.co.uk 020 7481 8111 Ref: TA140599JCC

Pricing Actuary – HNW
Up to £95,000 Base Salary + Bonus – City of London
A Global Insurance company are in the process of building out their HNW Pricing team and are searching for their next key hire to help grow the European book of this. This is an excellent role for a Personal Lines pricing individual who feels they have learnt all that they can from the world of Personal Lines pricing and it will allow you to build on any of the experience you currently have. They will need you to be a qualified actuary who has had at least 5 years’ worth of pricing experience within a Personal Lines insurer.
Contact: Gary.Ahern@ipsgroup.co.uk 020 7481 8111 Ref: TA140690GA

Reserving Actuary - Reinsurance
Up to £90,000 Base Salary + Bonus – City of London
An exciting opportunity has arisen at a well-known name in the Reinsurance Market for a Reserving Actuary to join a division which is currently in the process of expanding their Reserving team. This is a newly created role where you will be working closely with the Head of Reserving to help grow and develop the Reserving team. The position is going to be required to collaborate with Pricing and Capital and you be able to get involved with both Pricing and Capital, due to the small size of the team.
Contact: Gary.Ahern@ipsgroup.co.uk 020 7481 8111 Ref: TA139685GA

Reserving Manager
£90,000 – £120,000 per annum + Benefits – City of London
This position is with a substantial and ambitious global insurance and reinsurance group which has Company and Lloyd’s platforms, and you will contribute to the growth, development and sustained profitability through high-level contribution to the performance of the Actuarial function via cost effective, leading edge policies, practices and procedures. Duties will include; Quarterly reserve reviews, input into Business Planning, ensuring systems practices, data, services and technical standards are maintained, developed and implemented, and maintaining a positive internal and external business profile. You will need to be a qualified Actuary with experience of reinsurance reserving.
Contact: Jeremy.Cross@ipsgroup.co.uk 020 7481 8111 Ref: TA139753JCC

Senior Pricing Analyst
Up to £75,000 Base Salary + Bonus – City of London
A prestigious Lloyd’s Syndicate are currently searching for a Pricing Actuary to join their growing Pricing function. The role will be working closely with the Head of Pricing and a wide variety of senior stakeholders within the business. You will be a key individual of a team who is heavily involved in the growth and development of the company, so this is an important role and great for someone looking to take a step up. You will need to have at least 3 years of General Insurance Actuarial experience and be an advanced user of Excel and VBA.
Contact: Gary.Ahern@ipsgroup.co.uk 020 7481 8111 Ref: TA140533GA

Pricing Actuary
Up to £90,000 Base Salary + Bonus – City of London
One of the World’s Largest P&C Insurers are currently looking for an experienced Actuary to join their Financial Lines Pricing team. This is the largest book of business at the Insurer and you will be the sole Pricing Actuary for a large territory. This client is open to the background of the individual and are happy to look at individuals with no Pricing experience, so is a fantastic opportunity for any Reserving or Capital Modelling Actuaries looking to make that move. You will need to have at least 3 years of GI experience and made good progress with your exams.
Contact: Gary.Ahern@ipsgroup.co.uk 020 7481 8111 Ref: TA139970GA

Senior Reserving Analyst – 12 month FTC
Up to £70,000 Base Salary + Bonus – City of London
A Global Lloyd’s Syndicate are currently looking to hire an experienced Reserving Actuary. You will be a key member within this team, where you will be expected to run with the reserving process and suggest how this can be developed and improved. You will have responsibility for Reserving across all lines of business and you will also have the opportunity to work across Pricing and Capital Modelling. This position is a fantastic opportunity for an individual who is looking to take the next big step in their career.
Contact: Gary.Ahern@ipsgroup.co.uk 020 7481 8111 Ref: TA140298GA
The best from The Actuary Jobs

To view all of these vacancies and many more please go to www.theactuaryjobs.com

Royal London

Newly Qualified Actuary
Wilmslow, Cheshire
Competitive Salary

Government Actuary’s Department

Actuary Bands 1-3
Chancery Lane, London
£54,758 - £82,820 per annum
(see job description for full pay bands)

Lloyd’s

Senior Actuarial Analyst
London
Salary Negotiable

Graduate Actuarial Associate
Opportunities in London, Edinburgh and Dublin
Top quartile basic plus bonus and profit share

Just.

Actuarial Analyst
Heron Tower, London
Competitive Salary

Investment Consultant
Bromsgrove
Competitive Salary

Barnett Waddingham


WHERE COULD THIS ROLE LEAD YOU?

**Actuary – M&A/Transactions**
Up to £150,000 + benefits
London

**Senior Longevity Actuary**
Up to £110,000 + benefits
London

**Director – Consulting - Life**
Up to £170,000 + benefits
London

**Risk Manager - Life**
Up to £115,000 + benefits
London

@sBSDSearch
in/company/bwd-search-and-selection

“Strength lies in differences, not in similarities.”
- Stephen R Covey

...are you recruiting for diversity?

ORANGE MALONE LTD
ACTUARIAL SEARCH & SELECTION
sophie@orangemalone.com  www.orangemalone.com
0771 363 7998 / 01932 782 119
Our team work on both permanent and contract opportunities across life and non-life insurance and the pensions and investment markets. If you are looking for your next career move or to discuss other opportunities we may have got touch with a member of our team today for a confidential discussion. Alternatively, please visit our website for more information on the opportunities our consultants are working on.

**REINSURANCE RESERVING MANAGER**
London, £120k + bonus + benefits
A well-established London Market reinsurer is currently looking to bolster their Actuarial Team with the addition of qualified Reserving Actuary. This role will sit within the Reserving Reserving team, and will be reporting to the Head of Reserving. It will require interaction with senior management so great communication skills are essential. The ideal candidate will have 6+ years experience in the London/London Market with a strong background in GI Reserving. Please get in touch for more information.

Contact: anthony.sanderson@eamesconsulting.com | 0207 092 3239

**PRICING ACTUARY**
London, £110k + bonus + benefits
A top-tier Lloyd's insurer is looking to hire a qualified actuary into their growing pricing function. The role will include account pricing, model development/development and building relationships with underwriters. The role reports into the Head of Pricing. The ideal candidate will be qualified with extensive Lloyd's pricing experience. This will involve heavy interaction with underwriters, so an excellent level of communication is also vital. Mentoring/managing experience would also be advantageous.

Contact: james.rydon@eamesconsulting.com | 0207 092 3239

**VALIDATION ACTUARY - CAPITAL OPERATIONS**
London, up to £80k + bonus + benefits
A leading Lloyd’s entity is looking to hire a qualified actuary into their validation function. The role will report into the CRO and involve provision of input to first line validation testing on model appropriateness and completeness. The ideal candidate will be newly/earily qualified having made demonstrable progress through their actuarial exams. Capital or risk experience is essential to the role, with a strong preference towards Lloyd's/London Market. This will involve heavy interaction with underwriters, so an excellent level of communication is also vital.

Contact: anthony.sanderson@eamesconsulting.com | 0207 092 3239

**CAPITAL MODELLING MANAGER**
London, £110k + bonus + benefits
A leading Lloyd’s insurer is looking to bring on a Capital Manager to their team. The role will involve providing leadership and guidance on their internal capital model. You will also have the opportunity to interact with a range of senior stakeholders. This is a vital role in one of the best-renowned Lloyd’s insurers and would offer a huge advantage to someone’s career. The team below you is extremely talented and provides a great opportunity to help them grow and act as a mentor. Capital modelling experience is essential and there is a slight preference for previous Lloyd’s exposure.

Contact: james.rydon@eamesconsulting.com | 0207 092 3239

**IFRS17 MANAGER**
Ipswich, up to £72k + bonus + benefits
A global insurer is looking to bolster their IFRS17 team with the addition of an experienced manager. This role will involve supporting the design and implementation of the business’ IFRS17 change program and ensuring that the appropriate outputs are met. This is a substantial project for the business and would provide wide exposure across the business as you’ll be liaising with Reserving, Finance, Capital Modelling and a range of other stakeholders. An ability to communicate effectively with stakeholders at all levels, including those without technical knowledge is essential. The ideal candidate will be a qualified Actuary however non-Artuaries with the appropriate experience will be considered. You should have previous experience of project delivery within an actuarial setting and a solid background in GI Reserving.

Contact: anthony.sanderson@eamesconsulting.com | 0207 092 3239

**COMMERCIAL PRICING MANAGER**
Guildford, up to £80k + car allowance
A leading insurer is currently seeking to identify an experienced Pricing Manager to join their Commercial Pricing team. This role will be highly technical and involve both hands on delivery as well as offering oversight and guidance to junior members of the team. The team cover a wide range of commercial products including motor fleet and P&C amongst others. You’ll be leading on projects and contributing to the wider pricing/underwriting strategy and as such this really is a key role for the business and will provide the successful candidate with the opportunity to deliver a significant impact.

Contact: anthony.sanderson@eamesconsulting.com | 0207 092 3230

**PRICING LEAD**
Sussex, up to £75k + bonus + benefits
A highly successful insurer is looking to make a key hire into their West Sussex based Pricing team. The position will involve leading pricing activity for a niche product and managing relationships with a range of internal and external stakeholders. The successful candidate will have a strong background in insurance pricing and evidence a strong analytical and technical skill set. Effective communication skills and a good standard of commercial awareness will also be key. This is an excellent opportunity for an experienced analyst to move into a more strategic and responsible role whilst also remaining hands on from a delivery perspective. There is the potential for line management exposure over the short to mid-term.

Contact: anthony.sanderson@eamesconsulting.com | 0207 092 3230

**RESERVING MANAGER**
London, up to £80k + bonus + benefits
A highly successful and rapidly developing London based insurance company is looking to add an experienced Reserving Analyst/Actuary to their team. This role will be a key hire for the business and has come around as a result of business growth and you will be setting up and leading a new reserving function. Whilst there is no initial line management responsibility there is staff resource available and the view over the short to mid-term will be to build a team. You will have a background in motor reserving and ideally be newly/very nearly qualified. Through applications are encouraged from non-Artuaries assuming they have the correct prior experience. A good grasp of coding languages and programs such as SAS, SQL R and ResQ is desirable as well as a strong sense of commercial awareness and communication.

Contact: anthony.sanderson@eamesconsulting.com | 0207 092 3230

Our team work on both permanent and contract opportunities across life and non-life insurance and the pensions and investment markets. If you are looking for your next career move or to discuss other opportunities we may have, we can set up a confidential discussion. Alternatively, please visit our website for more information on the opportunities our consultants are working on.
SENIOR MANAGER - LIFE ACTUARIAL & PENSIONS  
London, £competitive salary & company package  
We have partnered with a regulating body based in London who are looking for a senior figurehead to lead their Life Actuarial function. You will be tasked with the leadership and accountability for various projects related to numerous Life Insurance companies across the UK and you will be given the opportunity to influence firms based on their current conduct. It will give you the insight to how various Life businesses are set up and how they can potentially be improved. You will need to be a qualified actuary with significant experience and the proven ability of leading team of actuaries.  
Contact: sami.alkarim@eamesconsulting.com | 0207 092 3295  

REPORTING ACTUARY  
London, up to £60k + wider package/bonus  
A brand new role at a highly regarded Life Insurer based in London. Our client is looking to hire a nearly / newly qualified actuary who has previous reporting experience for their well established team. The reporting team reports direct into the CFO which would give the successful candidate a very good platform to learn from industry leaders. Previous experience working with Excel and SQL is highly advantageous and study support will be provided for actuaries who are not yet qualified.  
Contact: sami.alkarim@eamesconsulting.com | 0207 092 3295  

SENIOR MANAGER, London, £110k + wider package/bonus  
This role will be leading Internal Model Reviews and the coordination of model review projects. As part of this leadership team, the successful candidate will be the main point of contact for the internal model review teams for insurance and pensions. Vast amount of experience within internal modelling is highly necessary as you will be in charge of junior development within the team. Good communication skills is also vital and the ability to explain complex modelling issues to senior stakeholders across various business areas within Risk & Finance. Strong understanding of Solvency II and ideally IFRS 17 is highly attractive to our client.  
Contact: sami.alkarim@eamesconsulting.com | 0207 092 3295  

PENSIONS CONSULTANTS - BULK ANNUITIES  
London, Salaries vary depending on experience  
We are working closely with a large consultant in London who are looking to grow a new bulk annuities consultancy team. The business does currently offer advice in this space but are looking to develop this area into a leading practice. We are looking for consultants across various actuarial levels who have bulk annuities experience and would like to be a part of something new and to be involved in its growth.  
Contact: sami.alkarim@eamesconsulting.com | 0207 092 3295  

IN-HOUSE PENSIONS ACTUARY  
London/Edinburgh, £competitive salary + bonus + benefits  
An international life insurer is seeking a nearly/newly qualified pensions actuary. The role will sit within their pensions consulting team. Responsibilities include: working with corporate/trustee clients, pensions risk scheme oversight, calculating pensions liabilities, developing client solutions and providing advice to clients. The ideal candidate will have strong analytical, numerical, critical thinking and communication skills and at least 4 years UK pensions experience.  
Contact: celine.golding@eamesconsulting.com | 0207 092 3250  

LIFE ACTUARIAL MANAGER  
London, £competitive salary + bonus + benefits  
A Big 4 Consultancy is looking for a qualified actuary to join their Life Consulting team. You will be involved in a variety of projects and a range of actuarial work. The role has a strong focus of IFRS, M&A, Capital Management and Transactions projects. The ideal candidate will have good project management and communication skills and will be around 5 years post qualification.  
Contact: celine.golding@eamesconsulting.com | 0207 092 3250  

JUNIOR CAPITAL REPORTING ACTUARY  
London, £competitive salary + bonus + benefits  
A leading Life insurer is looking for a Junior Capital Reporting Actuarial Analyst. The role will sit within the capital reporting team and provide the opportunity to get involved in a range of projects. The ideal candidate will be part qualified (making good progress with their actuarial exams) and have strong knowledge/experience of capital optimisation. ALM, IFRS 17, Solvency II is also a bonus. Candidates may come for a Life, Pensions or Reinsurance background.  
Contact: celine.golding@eamesconsulting.com | 0207 092 3250  

SENIOR BULK ANNUITIES MANAGER  
London, £competitive salary + bonus + benefits  
An international life insurer is looking for a Bulk Annuities Manager to join their Bulk Annuity Pricing team. Responsibilities include: running the pricing model, assumptions settings, ensuring quotations and priced corrections and assisting bulk buy-in and buy-out transactions. Good knowledge of Prophet, bulk annuities and defined benefit is required. The ideal candidate must have at least 5 years’ experience in a Life/ Pensions role.  
Contact: celine.golding@eamesconsulting.com | 0207 092 3250  

Eames Consulting Group
PAVE A NEW PATH

theactuaryjobs.com is the official job board for the Institute and Faculty of Actuaries.

To register for our Jobs by email service simply go to theactuaryjobs.com
Do you want to gain IFRS17 experience? Here’s a role for you

Our international life insurance client has a vacancy for an IFRS17 Project Actuary. The company is expanding rapidly and through its shared services with another Group company, they have created an Irish hub here in Dublin.

The IFRS17 Actuary will be involved with:
- Developing methodologies to generate IFRS17 actuarial metrics
- Assisting in actuarial model development required to facilitate IFRS17 reporting
- Design solutions to operationalise the generation of actuarial metrics for the IFRS17 Balance Sheet and P&L
- Become an expert on technical IFRS17 standards
- Understanding all components of the Irish Hub’s business

To succeed in this role, you should be a qualified actuary with a few years post-qualification experience in the life industry. The successful candidate will have reporting experience and ideally you should have worked on Solvency II and IFRS.

This is an excellent opportunity to work with a high achieving group of individuals in an environment that encourages learning.

Senior Pricing Non-Life Pricing Talent Required in Dublin

We are looking for non-life pricing individuals for a variety of exciting opportunities in Dublin. Our clients vary from International organisations looking to expand their teams as well as local insurance companies. Roles include Commercial Pricing roles, Retail Pricing, Reinsurance pricing and Pricing management roles.

If you are a qualified actuary or a part qualified actuary and have two years non-life pricing experience or more then there are opportunities for you in Dublin. Individuals looking to move to Ireland are welcome here.

For further information on these and other opportunities in Ireland please contact us at jobs@raretac.ie
If you are a company looking for permanent or contract actuarial resources then call us on +35315311400

We look forward to hearing from you www.raretac.ie
STAR ACTUARIAL FUTURES

LIFE

STRATEGIC LIFE LEADER
Qualified Major Global Consultancy
LIFE LONDON / EDINBURGH

Seeking a recognised industry leader with strategic business acumen, to use their expert risk knowledge to support a variety of diverse assignments. You will have extensive experience of supporting high-profile projects.

ASSOCIATE DIRECTOR
Qualified Major Consultancy
LIFE LONDON

A key role, allowing you to develop, launch and exploit new initiatives and service lines to diversify the business. You will be a role model for colleagues, providing them with appropriate learning and development opportunities.

ACTUARIAL MANAGING IN THE MEDI
Qualified Major Global Consultancy
LIFE NON-LIFE MEDITERRANEAN LOCATION

Take up a fantastic role, using your life or non-life (re)insurance background to support reserving, financial reporting (e.g. IFRS17) and audit activities. You will utilise modelling and statistical techniques to assess business risk.

SENIOR LIFE ACTUARIAL MANAGER
Qualified Major Global Consultancy
LIFE MANCHESTER

Play a leading role, building strong client relationships and becoming a trusted advisor. You will network both internally and externally, and play a significant part in new business proposals and presentations.

LIFE ACTUARIAL MANAGER
Qualified Major Global Consultancy
LIFE LONDON

Use your excellent stakeholder management skills to work within a multi-disciplinary team, engaging with clients on a variety of workstreams, including Solvency II, mergers and acquisitions, reserving and IFRS.

ACTUARIAL MANAGER
Qualified Major Financial Institution
LIFE BRISTOL

Harness your innovative and experimental mindset to change how we work. You will solve problems, improve efficiency and drive insight by examining new techniques and granular data sources.

RISK ANALYSIS & DEVELOPMENT ACTUARY
Qualified Global Insurer
LIFE RISK ZURICH

Support diverse risk capital workstreams and internal model development, whilst also reviewing, maintaining and developing existing methodology and related tools.

WIDER FIELDS ANALYSIS
Qualified Market leader
WIDER FIELDS LONDON

Embrace new technologies and techniques, and be part of innovation and change. You will have managerial responsibility and lead analysis across a portfolio of projects. Actuaries from any discipline will be considered.

IFRS17 REPORTING
Qualified Leading Insurer
LIFE LONDON

A highly-visible and responsible role, leading the technical development and implementation of the IFRS17 reporting capability. Knowledge of bulk and individual annuity products and of the assets backing annuity products is required.

REPORTING ACTUARIES
Part-Qualified / Qualified Major (Re)Insurer
LIFE FLEXIBLE LOCATION

Multiple roles in with-profits reporting! Produce financial reports across all the relevant bases, and capital calculations and aggregate balance sheets for with-profit funds, whilst also performing stress and scenario testing.

MODELLING WITH THE BEST
Part-Qualified / Qualified Global Player

Use your experience building models with MoSes, Prophet, RAFM, or other similar platforms within a high-calibre team. The role has a specific financial modelling focus, and is part of a wider finance transformation team.

LONGEVITY RISK ACTUARIAL ANALYST
Part-Qualified Major Insurer
LIFE PENSIONS LONDON

Assist in the development and communication of longevity assumptions, and support the evolution, maintenance and review of the predictive model describing the mortality experience of the business.

ACTUARIAL CONSULTANT
Part-Qualified Market-Leader
LIFE BRISTOL

An excellent opportunity to hone your consulting, project management and modelling skills. You will support a wide variety of assignments, and be involved in diverse workstreams, building your profile with extensive client contact.

PRICING ANALYST
Part-Qualified Global Leader
LIFE LONDON

An excellent, varied role, offering experience in pricing new deals, assisting in the negotiation of commercial terms both internally and with clients, and supporting basis development work across product lines.

PLEASE CONTACT US AT ANY TIME TO DISCUSS YOUR RECRUITMENT NEEDS
+44 20 7868 1900 | staractuarial.com

Is your next role one of the 62 LIFE VACANCIES on our website?

VACANCIES

ACTUARIAL CONSULTANT
Part-Qualified Market-Leader
LIFE BRISTOL

An excellent opportunity to hone your consulting, project management and modelling skills. You will support a wide variety of assignments, and be involved in diverse workstreams, building your profile with extensive client contact.

PRICING ANALYST
Part-Qualified Global Leader
LIFE LONDON

An excellent, varied role, offering experience in pricing new deals, assisting in the negotiation of commercial terms both internally and with clients, and supporting basis development work across product lines.

January 2020
An incredible opportunity for senior actuaries with market presence, credibility and gravitas to take their next career step. Successful candidates will demonstrate a flair for business development and innovative thinking.

Take up this key role, managing the independent reserve review, and overseeing the development of the tools and methods utilised to ensure the process is efficient, robust and up-to-date with the latest actuarial practices.

We have several roles offering flexible and enthusiastic candidates exposure to multiple lines of business. Ideally, you will have ResQ experience, alongside strong analytical and communication skills.

Build and develop pricing models, undertake price optimisation and implement price changes to drive profitability and growth. You will also assess model performance on a continuous basis and highlight changes that need to be made.

Our client has an exciting opportunity for a qualified non-life actuary with specialist lines pricing experience to lead its commercial lines and personal lines pricing function, developing tools and processes.

We have exciting opportunities for you to join a market leader to develop a new household insurance product. Strong modelling skills are required, and optimisation experience is desirable.

Techniques, provide pricing support to the underwriting team, advise on risk selection, and support business reporting.

In these key roles, you will contribute to the production of transaction assessments for companies in our client’s group across multiple jurisdictions, and produce models and robust reserve analysis of potential transactions.

We have multiple opportunities within a pricing team, developing and maintaining product pricing for prospective new products and new business tenders. Applications from candidates with a life or pensions background will be considered.
The pensions market is currently extremely buoyant, with exciting opportunities across the UK at all levels. Now is a great time to contact us regarding the next move in your pensions career.

<table>
<thead>
<tr>
<th>SENIOR PENSIONS CONSULTING ACTUARY</th>
<th>SPECIALIST PENSIONS ACTUARY</th>
<th>ACTUARIAL MANAGER - PENSIONS PRICING</th>
</tr>
</thead>
<tbody>
<tr>
<td>Qualified</td>
<td>Market Leader</td>
<td>Qualified</td>
</tr>
<tr>
<td>PENSIONS LONDON</td>
<td></td>
<td>PENSIONS LIFE EDINBURGH</td>
</tr>
<tr>
<td>STAR5890</td>
<td></td>
<td>STAR5832</td>
</tr>
</tbody>
</table>

Utilise your extensive knowledge of UK pensions pensions within a great multi-disciplinary team. You will provide clients with leading-edge advice on funding, investment, risk transfer & covenant. 

A varied role offering great work-life balance, and the opportunity to provide a high-quality consultancy service to large pension schemes. There may also be the chance to branch out into different areas in the future. 

This role presents a fantastic opportunity to use your commercial awareness in taking investment decisions to develop the customer proposition and commercial decisions in customer pricing. 

<table>
<thead>
<tr>
<th>CLIENT LEADERSHIP</th>
<th>DB PENSIONS MANAGER</th>
<th>PROACTIVE PENSIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Qualified</td>
<td>Part-Qualified / Qualified</td>
<td>Part-Qualified / Qualified</td>
</tr>
<tr>
<td>Trustee Specialists</td>
<td>PENSIONS LONDON / READING / BRISTOL STAR5770</td>
<td>PENSIONS LONDON STAR5934</td>
</tr>
</tbody>
</table>

Seeking creative individuals looking to make a real difference. Take the lead on independent trustee services, and be responsible for managing a portfolio of clients whilst assisting the development of the firm. 

Take this chance to focus on the delivery of a range of technical actuarial services and advice to corporate sponsors of pension schemes, and support a number of diverse areas including pension scheme strategy and scheme funding. 

Take a proactive role in keeping a wide variety of clients up-to-date on technical developments and anticipating their needs. Working closely with the client partner, you will also advise on and draft member communications. 

<table>
<thead>
<tr>
<th>MAKE A MOVE IN PENSIONS CONSULTING</th>
<th>CONSULTANCY IN SCOTLAND</th>
<th>DIVERSE PENSIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Part-Qualified / Qualified</td>
<td>Part-Qualified / Qualified</td>
<td>Part-Qualified</td>
</tr>
<tr>
<td>International Firm</td>
<td>Large Consultancy</td>
<td>Leading Global Consultancy</td>
</tr>
<tr>
<td>PENSIONS SOUTH EAST / BIRMINGHAM</td>
<td>PENSIONS EDINBURGH</td>
<td>PENSIONS LONDON</td>
</tr>
<tr>
<td>STAR5741</td>
<td>STAR5941</td>
<td>STAR5860</td>
</tr>
</tbody>
</table>

Multiple opportunities with a leading client for actuaries with people and project management experience to work on innovative, market-leading analysis, including M&A, risk and liability management, plan design and more. 

As well as performing actuarial calculations, in this role you will also formulate and deliver advice based on the implications of your results. Taking client management responsibility, you will identify ways to work more efficiently. 

Take up this chance to work on both trustee and corporate assignments, covering diverse workstreams such as integrated risk management, liability management and plan design, in the context of a broader total reward strategy. 

<table>
<thead>
<tr>
<th>SENIOR ASSOCIATE - MIDLANDS</th>
<th>PENSIONS IN MANCHESTER</th>
<th>IN-HOUSE INVESTMENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Part-Qualified</td>
<td>Part-Qualified / Qualified</td>
<td>Qualified</td>
</tr>
<tr>
<td>Pensions Consultancy</td>
<td>PENSIONS MANCHESTER</td>
<td>INVESTMENT LONDON</td>
</tr>
<tr>
<td>STAR5940</td>
<td>STAR5942</td>
<td>STAR5866</td>
</tr>
</tbody>
</table>

Turn your talent to taking an active role in client meetings, engaging on key issues and presenting actuarial conclusions. You will also support the development and presentation of our client’s market-leading modelling software. 

Join a large consultancy who work closely with trustees and plan sponsors to build bespoke funding plans for pension schemes for a wide range of clients. You will excel at explaining complex issues in simple terms. 

Seeking an investment actuary or CFA, with strong technical and communication skills and a proactive approach, to take up this new role, which can be shaped to the successful candidate. 

<table>
<thead>
<tr>
<th>INVESTMENT OPPORTUNITIES</th>
<th>A STAR OF EQUITY RESEARCH</th>
</tr>
</thead>
<tbody>
<tr>
<td>Part-Qualified / Qualified</td>
<td>Part-Qualified / CFA</td>
</tr>
<tr>
<td>Major Consultancy</td>
<td>Investments Bank</td>
</tr>
<tr>
<td>INVESTMENT LONDON / SOUTH COAST STAR5780 - 5784</td>
<td>INVESTMENT LONDON STAR5877</td>
</tr>
</tbody>
</table>

We have several opportunities for investment consultants to join a well-respected, growing team in London or near the South Coast. Candidates from a pensions background will be considered for certain positions. 

Become an Insurance Equity Research Analyst, building and maintaining financial models that evaluate historic data and produce forecasts. You will write research reports recommending trading strategies regarding listed insurance companies. 

Is your next role one of the 91 PENSIONS & INVESTMENT VACANCIES on our website? 

Irene Paterson FIA +44 7545 424 206 irene.paterson@staractuarial.com 

Peter Baker +44 7860 602 586 peter.baker@staractuarial.com 

Adam Goodwin +44 7739 345 946 adam.goodwin@staractuarial.com 

Antony Buxton FIA +44 7736 414 560 antony.buxton@staractuarial.com 

Louis Manson +44 7705 023 983 louis.manson@staractuarial.com 

Joanne O’Connor +44 7739 345 946 joanne.oconnor@staractuarial.com 

If you have a Suitable vacancy in your firm please contact us on +44 20 7868 1900 or staractuarial.com

Please contact us at any time to discuss your recruitment needs.
Next stop, Dublin!

Life Conference 2019 – will you be joining us?

We can’t wait for this year’s Life Conference. It’s always great to see familiar faces and to make new connections too – so don’t forget to come and say hello as you pass by our stand. As always, our experienced team of consultants will be more than happy to discuss every aspect of the actuarial market – be it candidate supply, demand for specific skills, salary trends or current opportunities for actuaries in the UK, Europe, US and Asia.

Following on from the success of our previous meet-ups, we’ll be hosting another event on Thursday 21st November as a thank you for your ongoing partnership with Oliver James Associates. It’s set to be a great evening and the perfect opportunity to network with your peers over a Guinness or two. We’ll look forward to seeing you there!

If you have any questions, please email: Richard.Howard@ojassociates.com

Thursday 21st November | House Dublin, 27 Lower Leeson Street | Dublin 2 | Ireland

FEATURED ROLES:

**Senior Pricing Actuary – Lloyd’s Market**
London | £100,000 - £120,000 + benefits
Robert Gormley
+44 (0) 203 861 9193
Robert.Gormley@ojassociates.com

**Senior DC Pensions Consultant**
London | £90,000 - £100,000 + package
Alex George
+44 (0) 203 861 9167
Alex.George@ojassociates.com

**ALM Manager**
London | £50,000 - £75,000
Damian Balozynski
+44 (0) 203 861 9208
Damian.Balozynski@ojassociates.com

**General Insurance Reserving Actuaries**
City of London | £700 - £800/day
Ani Pannell
+44 (0) 203 861 9163
Ani.Pannell@ojassociates.com

**Actuarial Pricing Analyst**
City of London | £70,000 + package
Jessica Harkin
+44 (0) 203 861 9259
Jessica.Harkin@ojassociates.com

**Life Systems Actuary**
City of London | Up to £700 (DOE)
Laura Sharkey
+44 (0) 203 861 9149
Laura.Sharkey@ojassociates.com

287
LIVE UK JOBS

714
LIVE GLOBAL JOBS

+44 (0) 203 861 9200
ojassociates.com/theactuary
CURRENT UK VACANCIES*

SCOTLAND
- PENSIONS: 9
- INVESTMENT: 3
- LIFE: 9
- NON-LIFE: 3

NORTH WEST
- PENSIONS: 7
- INVESTMENT: 1
- LIFE: 6
- NON-LIFE: 6

NORTH EAST & YORKSHIRE
- PENSIONS: 12
- INVESTMENT: 1
- LIFE: 2
- NON-LIFE: 1

SOUTH WEST & WALES
- PENSIONS: 12
- INVESTMENT: 2
- LIFE: 9
- NON-LIFE: 5

MIDLANDS
- PENSIONS: 4
- INVESTMENT: 2
- LIFE: 8
- NON-LIFE: 6

SOUTH COAST
- PENSIONS: 1
- INVESTMENT: 2
- LIFE: 4
- NON-LIFE: 5

EAST ANGLIA
- NON-LIFE: 1

LONDON
- PENSIONS: 37
- INVESTMENT: 18
- LIFE: 26
- NON-LIFE: 55

SOUTH EAST
- PENSIONS: 23
- LIFE: 6
- NON-LIFE: 19

*at time of writing

CONTACT STAR TODAY TO DISCUSS THESE ROLES

Antony Buxton FIA MANAGING DIRECTOR  +44 7766 414 560 | antony.buxton@staractuarial.com  | staractuarial.com