MAY 2018
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TheActuary™

The magazine of the Institute and Faculty of Actuaries

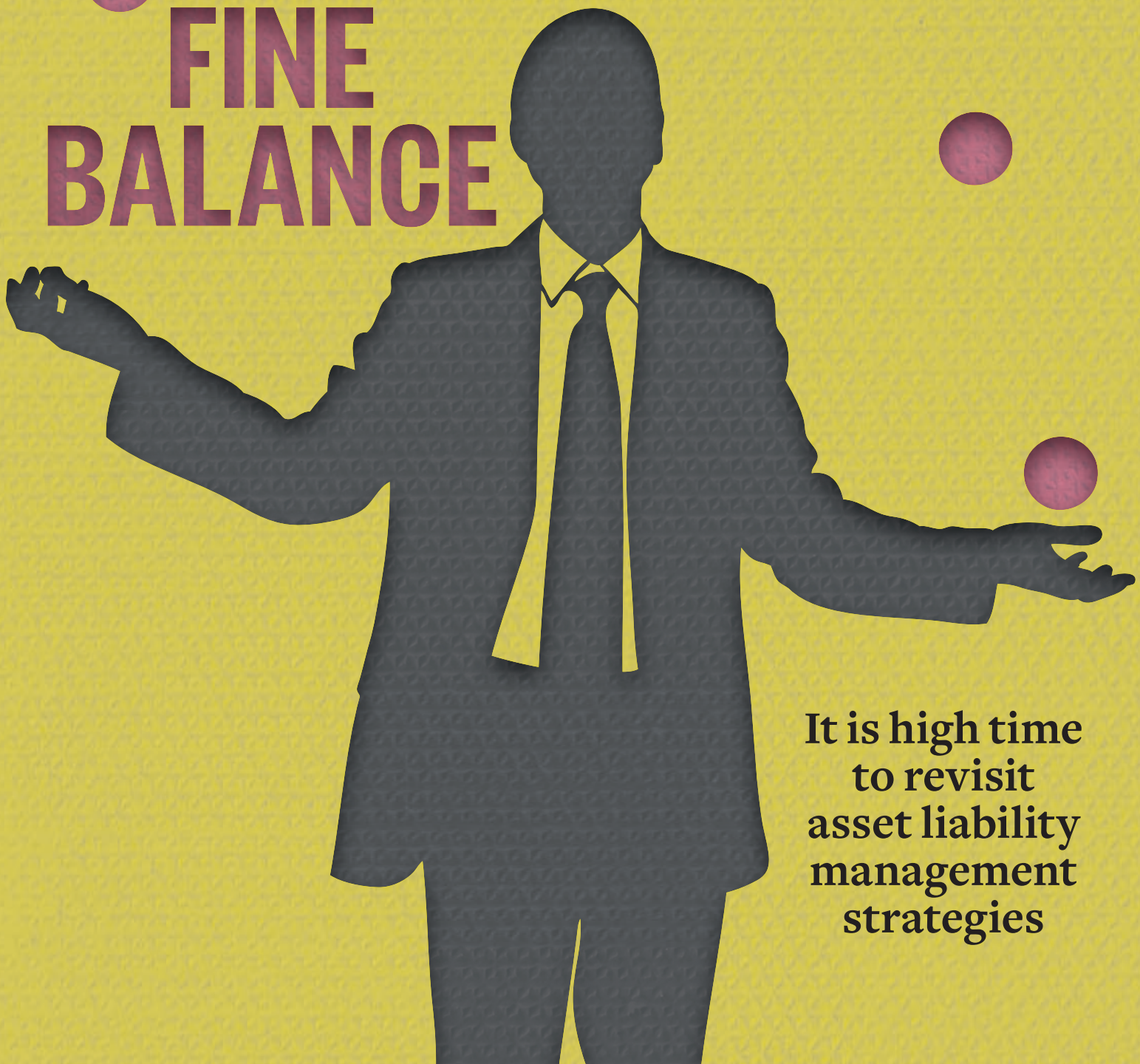
▶ **Interview**
Mark Azzopardi
How asset managers advise insurers on investments

▶ **Pensions**
The merits of consolidating defined benefit pension plans

▶ **Risk**
Known and emerging risks from the Joint Forum on Actuarial Regulation

▶ **Career**
Why everyone should engage with lifelong learning

A FINE BALANCE



It is high time to revisit asset liability management strategies

TheActuary

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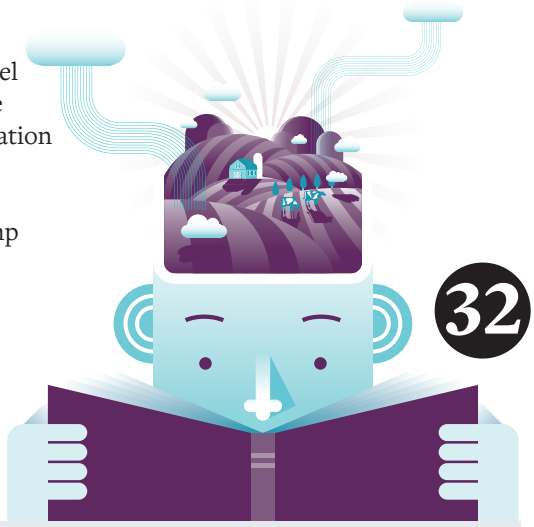

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FRANCISCO SEBASTIAN

Lessons defined

Recently, I returned to my *alma mater*, Columbia University, for the graduation anniversary. We celebrated the occasion with a discussion between two prominent residents: professors Joseph Stiglitz, 2001 Nobel Laureate; and Bruce Greenwald, a legend in value investing. Under the broad subject of globalisation, the social scientists debated about the past and the future. Regarding the past, the discussion focused on the (lack of) opportunities to revive the manufacturing sector in developed economies. On the future, the crucial role of new technologies and automation in all industries increases the need for continuing education and research, and the innovation that these bring. The debate was very engaging, and albeit macroeconomic in nature, it was of actuarial relevance.

The origins and expansion of defined benefit (DB) pensions are directly linked to the growth of manufacturing in the inter-war and post-Second World War periods. Inevitably, as the manufacturing workforce later shrank and services-orientated corporations expanded, the DB sector reached its zenith. Hence, arguably, long-term sustainability of DB pensions requires research and innovation.

In this issue, *The Actuary* addresses innovation in DB: John Herbert discusses the merits of scheme consolidation, as a potential source of cost efficiency in such mature business (*p18*); and Costas Yiasoumi and John McAleer present a framework to manage run-off schemes (*p23*).

Another sector of actuarial importance enhancing its management techniques is insurance. In this month's interview, Mark Azzopardi discusses the evolving role of insurance investment solutions, technology and opportunities for actuaries in this field (*p14*). And Richard Schneider discusses an original framework for asset liability management (*p20*). Continuing with innovation, in the context of lifelong learning (*p32-33*), Jeremy Affolter's story of retraining illustrates how actuaries can expand their knowledge beyond the traditional boundaries.

Enjoy the read!

F Sebastian

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A Upfront

MARJORIE NGWENYA

Striving for sustainability

Previously, I have written about the importance of the sustainable development goals (SDGs) and the ways in which our profession engages with the aims of the SDGs. I asked for your help in answering the question: "How are actuaries relevant to the sustainable development goals and how can we contribute to the goals being met?"

We have already received input from many countries, including submissions from China, India and Kenya on issues such as plant-based diets, road safety, water pollution, divesting from tobacco and climate change. We are looking forward to hearing from more of you throughout 2018 as you continue to send submissions and run your own workshops (to find out more, go to **bit.ly/2CWe8GO**).

The IFoA has also made public its support of initiatives that are championing responsible investment. Last year, we became Network Supporters of the Principles for Responsible Investment, and, just recently, became supporters of the Task Force on Climate-related Financial Disclosure (TCFD).

To take action that demonstrates our support, and to help our members to think about these important societal issues, in 2017 we issued the Climate Change Risk Alert to bring climate-related issues and how they represent a material risk to future economic stability to our attention. In the alert, we referenced the TCFD and its work, which aims to provide the financial services sector with a consistent and reliable means of assessing, pricing and managing climate-related risks. Its recommendations will enable investors to make better-informed decisions, and lenders, insurers, and underwriters to evaluate their risk over the short, medium and long-term.

Our support of the TCFD has encouraged us to hold events such as a webinar, briefing session and a dinner where we were able to discuss the tools and guidance actuaries need in order to prepare climate-related financial assessments and disclosures (find out more here: **bit.ly/2IJWcxz**)

> **"We have a lot to offer in relation to the global drive towards responsible investment"**

Our members have also started to produce a series of practical guides to raise awareness of this topic, encourage discussion, catalyse further research and help actuaries to think about how to develop their advice. You can download the most recent report for those working with defined contribution pensions on our website (**bit.ly/2qzpbhd**).

As chair of the TCFD, Michael Bloomberg is quoted as saying: "Increasing transparency makes markets more efficient and economies more stable and resilient."

One of the key skills of actuaries is being able to tackle complex issues involving uncertainty and create transparent and easy-to-digest information that helps others to make financial sense of the future.

We would appear to have a lot to offer in relation to the global drive towards responsible and sustainable investment. I look forward to hearing from more of you about the great work that you're already doing and your ideas about how we can continue to contribute to this global ambition.

MARJORIE NGWENYA
is the president of the Institute and Faculty of Actuaries

DEREK CRIBB

Giving good council

The IFoA's annual general meeting, to be held at Staple Inn on 28 June, will not only see the inauguration of Jules Constantinou as our new president but also the IFoA Council election results.

The Council is the sovereign body of the IFoA, responsible for ensuring we meet our Charter objectives as a public interest professional body. As such, Council is at the forefront of the exciting changes we have seen since the IFoA's formation in 2010, not only by setting and guiding the delivery of the IFoA strategy but also via taskforce groups directly working on shaping the outcomes. A lot of initiatives are starting to come to fruition following the 2016 strategy, and the level of effort is not tailing off any time soon.

The new education framework and curriculum 2019 are being introduced to make sure the foundations of the qualification stay relevant to employers. The launch of the new Markets Development Board is aimed at securing the future of the profession's growth and development through a professionalised approach to existing and potential markets. And with so much more to come, we continue to rely on the expertise of Council members to help guide the IFoA through the ever-changing environment that actuaries are working in, bringing insights from their own experiences as members to help navigate the complex challenges ahead of us.

If you think you may have the skills that could contribute to all this, I encourage you to stand for election. Please think about how your background and experience might create a unique insight that would benefit the future of your profession and the IFoA, and use this to promote your candidacy widely among your network.

Chaired by the IFoA president, Council members dedicate 10-15 days a year to their Council responsibilities. This includes a week in one of our strategic priority regions, meeting members and stakeholders, alongside the Council meeting itself. Previous visits have taken Council to Beijing, Singapore, Hong Kong, Mumbai and Delhi. The IFoA Council is keen to connect with its members wherever they are based, and the next meeting is being held alongside the Protection, Health and Care Conference. I will be in attendance, and look forward to seeing some of you there in Brighton on 22-23 May.

"The IFoA has seen the benefit of an increasingly diverse membership on Council, but there is no time for resting on laurels"

In recent years, the IFoA has seen the benefit of an increasingly diverse membership on Council, but there is no time for resting on laurels. There is still a disconnect between the profile of IFoA membership and that of Council, and the only people who can ensure balanced representation are you, the members, either by standing as candidates or by using your vote. In previous years there has been a reduction in voting turnout, and some feedback has suggested that the increased number of candidates has meant that casting your vote effectively has become a more challenging task. But please, I encourage you to use your vote, think about the perspectives that Council might benefit from and seek out the candidates that can deliver the experience that you believe Council needs.

For details on the Health Care & Protection Conference: **bit.ly/2EpGy8g**
How to stand for Council: **www.ersvotes.com/ifoanominations18**

DEREK CRIBB is the chief executive of the Institute and Faculty of Actuaries

PRESIDENTIAL TEAM

IFoA confirms next president-elect

The next president-elect at the Institute and Faculty of Actuaries (IFoA) has been confirmed as John Taylor. He will take up his new position in June 2018, with Jules Constantinou becoming the new president, taking over from Marjorie Ngwenya. John will then take on the role of president in June 2019.

John is a partner at Hymans Robertson and currently the head of guided outcomes. He has spent most of his career in executive-level roles with a variety of product providers, most recently as managing director at NEST.

After gaining a BSc and PhD in pure mathematics from The University of Glasgow, John started his career as a trainee actuary at Standard Life in 1994. He qualified as a Fellow in 1997, and his actuarial career has focused on marketing and distribution for a variety of markets, including pensions, savings and insurance.

Marjorie Ngwenya, IFoA president, said:
"We are delighted to have John join us on the presidential team. His experience and insight will be invaluable as we continue to further the role of actuarial science and build the profession globally."

John Taylor said:
"I'm honoured to have been elected to this role at the IFoA. It's an exciting time to be representing this organisation and I'm looking forward to playing my part in promoting the fantastic and valuable work that we do."

ACCREDITATION

Quality Assurance Scheme goes from strength to strength

The Quality Assurance Scheme (QAS) is for organisations wishing to demonstrate their commitment to applying and maintaining high-quality policies and procedures to their actuarial work. All organisations receiving QAS accreditation have to pass a rigorous, independent assessment of their working environment, culture and processes.

Censeo Actuaries and Consultants Ltd was accredited last month, bringing the total number of accredited organisations in the UK up to 34.

Following a successful trial in Malaysia, Hong Kong and Singapore, the IFoA's Regulation Board has approved the extension of the QAS. It is expected that the first organisations based outside the UK will be accredited in May at the Asia Conference in Bangkok.

Gail Higgin, chief executive of Censeo Actuaries and Consultants Ltd, said: "Censeo Actuaries and Consultants is delighted to have been accredited under the QAS; it just goes to show that size is not important when it comes to quality. We recognise, however, that this is a step in a journey, not a final destination, and look forward to demonstrating our process of continuous improvement."

IFOA AWARDS DINNER

Savouring the taste of academic success

The annual IFoA awards dinner took place at Staple Inn Hall, London, on 22 March. Hosted by IFoA president Marjorie Ngwenya, the dinner celebrated success and excellence in academic achievement and research. The after-dinner speaker for the evening was IFoA Honorary Fellow Professor Martin Weale CBE, professor of economics at King's College London.

The IFoA's prizes have been established through bequests or support from within the actuarial community, including sponsorship from the International Underwriting Association of London, Willis Towers Watson and the Worshipful Company of Actuaries. Members of each of the sponsoring organisations took part in the awards presentations.

Pictured above with some of the prize winners are Marjorie Ngwenya and sponsor Nick Dumbreck, Master of the Worshipful Company of Actuaries. The Peter Clark Prize for best paper was awarded on the evening to Ersatz Model Tests.

A full list of award winners can be found on the IFoA website.

Nominations sought for outstanding research paper

The IFoA currently has two best paper prizes that cover all practice areas:

- The Peter Clark Prize: awarded for the best paper written by members of the profession and presented or published for an actuarial audience.
- The Geoffrey Heywood Prize: awarded to an outstanding paper or journal article that demonstrates excellent levels of communication and engagement with a general actuarial audience.

Nominations are now open for the 2018 best paper prizes. For further information on our prizes or to submit a nomination, please see the IFoA's website: **bit.ly/2Ju7I1i**

CACT

You spoke, we listened

Following the close of the Chartered Actuary (CAct) consultation in March, Council spent time reviewing the feedback that you sent in to us and as a result they have since agreed a modified qualification framework.

If you would like to read more about this, please visit our website at **bit.ly/2GDoCc7**

PROFESSIONAL SKILLS

Actuarial interaction and challenge

Professional skills

It's now just two months until the end of the continuing professional development (CPD) year, so, if you still need to do your professional skills CPD, this may be of interest. We are hosting two professional skills webinars (each with different content) on Thursday 7 June from 08.30-09.30 and 16.30-17.30 (BST). Look out for details on the website, and, if you would like to participate, please book via the online events calendar.

Also look out for one-hour plenaries at IFoA conferences. Alternatively, access the IFoA's professional skills content online at **bit.ly/2IvDNV9**

REPORTING DEADLINE

2017/2018 CPD year ends 30 June 2018

A reminder to all members in categories 2-6 that the continuing professional development (CPD) reporting year will end 30 June 2018. Any CPD activity for 2017/2018 must be completed by 30 June 2018. You will, of course, have until 31 July 2018 to record your activity.

The IFoA's CPD Scheme is the framework we use to support our members' continued learning and helps to inspire public confidence in the work of our members.

CPD is defined by the IFoA as any learning activity:

- Which is relevant to your work or role, and
- Which addresses a personal development need.

We encourage our members to think broadly about learning opportunities. Although traditional methods such as attending a conference or contributing to a research group are most readily identified with gaining CPD, any opportunity to learn something new or consolidate your learning on a topic that is relevant to your work or role can count towards your annual requirements.

It is not so much the content of the activity that is important as what you gain from that opportunity. For example, recording four hours of CPD for a conference that offered you no learning benefit would certainly not be in line with the CPD Scheme's requirements. The scheme is not prescriptive: it is for you to determine what your learning requirements are and to select activities that will help to develop your skills and knowledge in that area.

If you have any questions about your obligation under the 2017/2018 CPD Scheme, please contact the membership team at **cpd_feedback@actuaries.org.uk**

EVENTS AND CONFERENCES

17/05/18

Current Issues in General Insurance (CIGI) 2018

ROOMS ON REGENTS PARK, LONDON

bit.ly/CIGI18

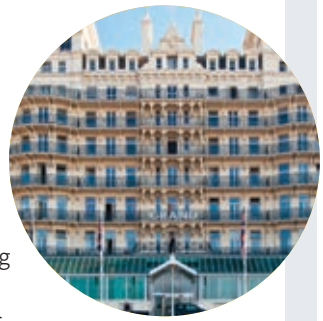
CIGI will provide an excellent and diverse line-up of speakers, each providing their insight and knowledge on a range of topics. The programme will be broad in nature, so will be of most value to those with some experience in the industry.

21–23/05/18

Protection, Health and Care 2018 Conference

THE GRAND HOTEL, BRIGHTON

bit.ly/ProtectionHealthCare18



Sir Steve Webb, former pensions minister, and Matt Singleton, Swiss Re, will reveal exciting opportunities following extensive ageing consumer research and offer expert insight into what it means for insurance and wider UK policy as part of a compelling conference programme that will also address innovations abroad, antibiotic resistance, protection, critical illness, the future of protection health and care, and new research from IFoA working groups.

As part of the event, we also invite you to join us for on board the British Airways i360, the world's tallest moving observation tower, conceived and designed by the creators of the London Eye.

24/05/18

Good Ethics and Good Business – The Challenge for Actuary NEDS

STAPLE INN HALL, LONDON

bit.ly/IFoAEthicsSeminar

A number of factors have combined to undermine confidence in corporate governance, ranging from a failure to address growing pay inequality, poor treatment of workers within the gig economy and the failure by multinational organisations to respect their obligations to society by, for example, paying appropriate amounts of tax.

The financial sectors in which many actuarial non-executive directors (NEDs) operate are not unique in having to consider ethical behaviour. You will hear from the leading thinkers on both business ethics and practices in other sectors.

04–05/06/18

Pensions Conference 2018 – SAVE THE DATE

HOLIDAY INN, BIRMINGHAM AIRPORT

bit.ly/IFoAPensionsConference

Covering current topics and industry trends, including changes to the Actuaries' Code , climate risk, CDC pension schemes, mortality risk pooling, pensions law updates and much more, this conference also includes a pre-conference evening dinner (4 May), giving you ample opportunity to grow your network.

We are delighted to announce our after-dinner speaker, Professor Sarah Harper, professor of gerontology at the University of Oxford .

05/06/18

Pricing Seminar

INMARSAT, LONDON

bit.ly/IFoApricingseminar

The annual Pricing Seminar continues to be the premier gathering of UK GI pricing actuaries. The event will again see leading practitioners presenting on thought-provoking new ideas and techniques, addressing the key challenges facing pricing actuaries today.

19/06/18

Mortality and Longevity Seminar 2018

ROYAL COLLEGE OF PHYSICIANS, 11 ST ANDREWS PLACE, LONDON NW1 4LE

bit.ly/MortalityLongevity

This seminar will provide topical and practical updates and discussion on the latest thinking and innovations in mortality and longevity.

27–28/06/18

Risk and Investment Conference 2018

THE GRAND HOTEL, BRIGHTON

bit.ly/IFoARiskInvestmentConf

Whether UK-based or international, this conference is open to anyone with an interest in the risk and investment sectors. It offers an ideal forum to meet and exchange ideas with a broad range of professionals. Additionally, you will have an excellent opportunity to network at our pre-conference evening dinner on 27 June.

23–26/10/18

GIRO Conference 2018

ICC, BIRMINGHAM

bit.ly/GIRO2018

GIRO is attended annually by over 800 delegates and speakers, who are keen to discuss key topics such as pricing, reserving, modelling and the future of the insurance industry. GIRO 2017 was a huge success, so we have opened bookings early for what we trust will be another topical and successful conference with significant networking opportunities.

21–23/11/18

LIFE Conference 2018

ACC, LIVERPOOL

bit.ly/LifeConf2018

This is the premier event for professionals interested in life insurance and also for anyone with an interest in the life sector, providing a broad range of workshops and sessions on current and future trends in life insurance.

View our full conference and events calendar

Conferences • Networking events • Professional skills training • Seminars • Speaker opportunities • Sponsorship

bit.ly/IFoAEventCalendar

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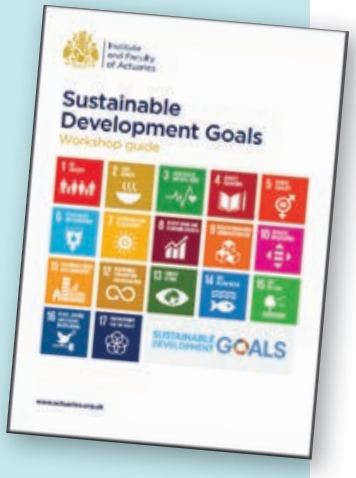
SUSTAINABLE DEVELOPMENT GOALS CAMPAIGN

Workshop hosting guide available



We've created a made-easy workshop guide (**bit.ly/SDGguide**) so our members across the globe can lead discussions on how actuaries can use their skills to contribute to the achievement of the UN's 17 sustainable development goals.

This step-by-step guide will enable you to host stimulating discussions and inform our 2018 thought leadership campaign. The IFoA's policy team will use the evidence you produce to engage with external audiences, including policymakers and employers of actuaries, to raise awareness of the goals and to promote the role of actuaries in meeting them.

Achieving the goals will require international collaboration, so we need the support of all our members. We're already seeing how relevant actuaries can be to the sustainable development goals, with evidence submitted from China, India and Kenya to name a few, so please check out our guide and email your evidence and pictures of your session to **policy@actuaries.org.uk** to support this global effort.

CURRICULUM 2019

Module lead and chief examiner opportunities

The IFoA's Engagement and Learning Directorate is seeking applicants who would like to be considered for various volunteer roles for the new curriculum. In particular, we are looking for module leads and chief examiners.

These are senior appointments, and we are looking for individuals who would like to be involved in shaping the new curriculum.

Applicants must be able to show an understanding of and interest in education at postgraduate level.

Visit the volunteer vacancies page on the IFoA website at **bit.ly/2GESipf** to view these and all other currently available positions.

MISCONDUCT

Adjudication panel determination

On 24 January 2018, the adjudication panel considered an allegation of misconduct against Mr Jose Carlos Rodrigues, FFA (the respondent).

Specifically, it was alleged that the respondent failed to comply with continuing professional development (CPD) requirements during the 2015/2016 reporting year. It was alleged that his actions in so doing were in breach of the integrity and compliance principles of the Actuaries' Code.

It was further alleged that the respondent failed to engage with or respond to communications from the membership department of the Institute and Faculty of Actuaries (IFoA) on the matter of CPD during the 2015/2016 reporting year. In so doing, it was alleged that his actions were in breach of the integrity, compliance and communication principles of the Actuaries' Code.

The respondent is based in South Africa and is a Fellow of the Actuarial Society of South Africa (ASSA). The respondent had been partially regulated by the IFoA from 1 July 2014 to 30 June 2015, as a category 3 member under the CPD Scheme 2014/15, having submitted a certificate of eligibility application to the IFoA.

He did not reapply for partial regulation under the CPD Scheme 2015/16 and was therefore fully regulated, as a category 2 member and subject to the CPD requirements as set down in the IFoA CPD Scheme 2015/16.

The panel determined that the respondent's actions in failing to comply with CPD requirements during the 2015/2016 reporting year did not breach the integrity principle of the Actuaries' Code, but they did breach the compliance principle.

In relation to the respondent's failure to engage with or respond to communications from the IFoA's membership department, the panel determined that the respondent's actions were in breach of the compliance and communication principles of the Actuaries' Code, but that they did not breach the integrity principle.

The panel determined that there was a *prima facie* case of misconduct and it imposed the following sanctions:

- A reprimand; and
- A £1,000 fine.

In considering sanctions, the panel bore in mind the relevant guidance notes issued by the IFoA. It noted that the respondent did eventually engage with the case manager in 2017, and there was evidence that he had complied fully with the CPD requirements of his primary regulator – the ASSA. The level of fine imposed reflected some mitigation for these matters.

A copy of the panel's full determination, including reasons for its decision, can be found on the IFoA's website at **bit.ly/2GZm7nR**

SPOTLIGHT

Changes to data protection law

The biggest change to data protection law in 20 years is imminent. After six years of debate, the General Data Protection Regulation (GDPR) will finally become law on 25 May 2018.

As your membership body, we need to ensure that the information we hold on you is accurate and up to date. We are asking all members to check their details in the members' section of the website and amend them where necessary. This is a straightforward process and should only take a couple of minutes at: **www.actuaries.org.uk/user**

Newsletters and preferences

You may also wish to take this opportunity to review any newsletters or updates to which you subscribe, to ensure you are receiving information that is relevant to you. You can do this by visiting the contact preferences page in the members' area.

Changes to newsletters

In the coming months we will be rolling out improvements to our newsletters to offer more personalised content tailored to your interests. We'll base this on your preferences in the members' area.

If you'd rather not hear from us in this way you can easily update your preferences online at any time.

Further information

You can read about how the IFoA is preparing for the GDPR here:
bit.ly/2J8fcWN
If you have any queries, please contact:
data.protection@actuaries.org.uk

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Features

INSIDE

Interview: Mark Azzopardi
The managing director and head of insurance client strategy at BlackRock talks to Stephen Hyams about how asset managers advise insurance companies in a rapidly changing world

The case for consolidation
John Herbert discusses the merits of consolidating defined benefit pension plans using a sectionalised master trust approach

The great juggling act
The current pace of change in regulatory and accounting standards means firms should revisit their asset liability management strategies, argues Richard Schneider

The challenge of maturity
Costas Yiasoumi and John McAleer discuss the challenges faced by mature defined benefit pension schemes

A watching brief
Stephen Haddrill speaks to Hazel Beveridge about the work of the Joint Forum on Actuarial Regulation

No ivory tower
IFoA Regulation Board chairman Desmond Hudson and the IFoA's general counsel, Ben Kemp, outline the profession's regulatory landscape

INVESTING IN CHA

Mark Azzopardi talks with Stephen Hyams about how asset managers advise insurance companies in a rapidly changing world

Mark Azzopardi, managing director and head of insurance client strategy at BlackRock, has had a varied career in investments, pension consulting, general insurance and banking.

Of his current role, he says: "My team's job is to ensure our investment ideas are suitable for insurance companies, and if not, to either tailor them or build suitable investment strategies that are fit for purpose. Many of the larger insurers do business around the world, so for efficiency our team operates on a global basis."

More broadly, on the relationship between insurance clients and asset managers, he adds: "Generally, because of insurers' sophistication with investments, it tends to be more of a partnership than an outsourcing approach. In some cases, insurers are simply looking for the implementation of an investment strategy they themselves have designed. They know what they want and may even be able to implement and manage it themselves, but we may be able to do it cheaper by delivering scale and cost efficiency."

He explains: "In other cases, we may have better access to a particular investment, such as social housing or infrastructure bonds." These are two examples of asset classes that insurers are increasingly investing in, as the low-interest-rate environment drives them to search for better yield. As Azzopardi describes: "Increasingly, insurers are looking for our knowledge of the non-core asset classes, an ability to explain the sources of risk and return, to help build the governance process which allows them to demonstrate to the regulator that the risk is under control, and in some cases to help build quantification of that risk into their own internal models."

A bespoke approach

On the diversity of insurance companies, Azzopardi says: "Pretty much every insurer is in some way different from any other, so it's difficult to build products and services that are standardised. Hence it's hard to achieve scale."

One example is the extent to which an insurer prefers income over total return in its investment mandate. Azzopardi explains an income preference can stem from the nature of their liabilities, such as continental European with-profits or UK annuity business, or from a desire to stabilise reported profits under local accounting rules when these are book (or redemption) yield-based.

"Such mandates have become increasingly common with insurers over the past few years," he says. "Another trend has been the move to lower turnover mandates since the financial crisis. Part of the reason is that fixed income market liquidity has deteriorated,

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increasing the cost of trading. So you need to have more conviction in your trade ideas in order to justify the cost."

Insurers also vary in how they measure the performance of their asset managers. "Measuring returns against a benchmark is always a metric insurers will look at, but there will be a whole series of other metrics, some particularly tuned to book yield investors such as management of credit downgrades and defaults, or what the value add has been from trades undertaken," Azzopardi explains.

He adds that softer things also come into the evaluation mix: "Many insurers recognise that their portfolios are sometimes so constrained that it's hard to make significant excess returns. These insurers also tend to look at the way in which the asset manager reports, the access it gives insurers to market information and the speed and quality of client service. All these things quite often appear on what we call a balanced scorecard."

Challenges for insurers

We turn to the challenges faced by insurers. Azzopardi says: "Their biggest concern globally has been the low-rate environment. It has challenged many business models on the unit-linked side, especially where investment guarantees are offered. Insurers have also needed to adapt their investments to continue to support the back book of liabilities, whether that's annuities or with-profits." He adds: "Insurers have largely kept faith with the types of risk they know best – interest rate, credit and illiquidity risk – but have broadened the ways they access these risks."

In Europe, diversification away from domestic government bonds has occurred for varying reasons. For example, in Germany it is because they currently yield very little, whereas in Italy it is because insurers were holding too many owing to the high yields they previously enjoyed. A further issue for non-life insurers is that premium rates are lower than in the past, especially in the property business. Azzopardi elaborates: "Non-life insurers have realised the need to rely more heavily on their investments in order to be profitable. In addition, especially since the implementation of Solvency II, many have increased duration to be better matched to their liabilities."

He observes that the introduction of Solvency II has had a relatively smaller impact in the UK than elsewhere in Europe, since the prior UK regime was broadly similar. On the other hand, many other countries have been significantly affected as they did not previously have risk-based capital requirements. This has led them to substantially reduce their duration gaps as well as to diversify into new asset classes.

On the importance of technology in asset management, Azzopardi believes it provides the ability to deliver products and services at scale, and to create information that provides insights into how to improve an investment process. For example, BlackRock uses technology to analyse the huge amounts of information embedded in broker reports and a variety of market statistics in order to gauge market sentiment. Azzopardi says: "As investors, insurers are probably more focused on risk than many others, not least because they have to put capital up against the risk. We have embraced technology to deliver pertinent risk information efficiently, not just to our own portfolio managers but also to our clients. We sell our risk, trading and compliance platform to third parties: we've turned risk management into a profit centre rather tolerating it as a cost."

"Technology is a great thing, but it's important to remember it is a means to the end rather than the end. With the continuing and significant improvements in computer processing power there is a temptation to produce information just because you can, rather than because you ought to." He adds: "It is important to be able to guide the design process, so you're getting useful information out of technology rather than just noise. In other words, quality rather than quantity. I think that actuaries tend to have the right skill set for this kind of thing."

An uncertain world

Azzopardi also sees technology as one of the drivers for change in an uncertain world: "Technology impacts everything, from manufacturing processes to the jobs we do as investors." He adds: "We need to be cognisant that the world is changing around us quite quickly. You need to have a plan, but also be ready to update it when the facts change."

He cites rising interest rates and the gradual withdrawal of liquidity as potential challenges for investors; in addition: "The balance of world economic and political power is changing. Many of the institutions that govern the way politics and markets work were designed under the old order; who knows how they'll survive in the new order?"

> **"You need to guide the design process, to get useful information out of the technology rather than just noise. Actuaries have the right skill set for this kind of thing"**

An actuary's career

Azzopardi has certainly embraced change in his career. He started work in 1988 and qualified as a pension actuary in 1991. In 1994, he was part of the first phase of actuaries moving into the Lloyd's of London market at a critical time. "The market was desperate for capital and there was a need for people who could analyse the information supporting capital raising at Lloyd's syndicates. Insurance has stayed at the core of what I do ever since, but I've moved into jobs which give me a different and broader perspective. I decided on a plan; I knew I wanted to go into banking, to see insurance through a banking lens, and I was able to achieve this by setting up an insurance securitisation business at BNP Paribas." His next step was to see insurance from an asset management lens, spending two years at AllianceBernstein before moving to BlackRock about eight years ago.

On working in wider fields, Azzopardi comments: "An actuarial training provides a useful toolkit for working in a variety of environments and opens many possibilities. My job doesn't need an actuary to do it; I think that's a good thing because it shows that actuarial skills are transferable to wider fields."

When it comes to planning a career, Azzopardi advises: "Follow your heart. Work can be tough if you don't enjoy it, especially in today's high-pressure environment. So be passionate about what you do and always do it to the best of your ability. This approach hopefully makes it much more likely that someone will be willing to employ you to benefit from the skill set you have!"

The case for consolidation

John Herbert discusses the merits of consolidating defined benefit pension plans using a sectionalised master trust approach

The relationship between many defined benefit pension plans and their sponsors has changed significantly over the past 10 years. Very few current employees in the private sector continue to benefit from these arrangements, and they are now largely viewed as a financial legacy rather than part of current remuneration policy.

Existing structures and solutions appear to be under significant stress, with sponsors paying in substantial amounts of cash, yet, in some cases, members are still not getting their full benefits. Consequently, changes over the next 10 years may be even more significant as challenges emerge to deliver better solutions for both members and sponsors.

The consensus view is that a process of 'consolidation', such that the number of defined benefit plans reduces significantly, may provide a suitable solution. However, there are diverging views on how this should be done and the timescale over which it can be achieved.

A number of solutions have been proposed as summarised in the table below. Most aim to reduce both operational costs and financial risk.

Full services providers	Combining all services with one single provider
Plan mergers (associated companies)	Merging plans that have been adopted through business acquisition
Collective investment solutions	Investing through mutual funds or fiduciary solutions together with other plans
Sectionalised master trust	Managed alongside other plans but assets and liabilities are ringfenced
Non-sectionalised master trust	Managed alongside other plans but assets and liabilities are combined
Insurance buyout	All responsibilities and liabilities transferred to insurer
Superfunds	Pooling assets and liabilities with other pension funds and exchanging the employer covenant for an immediate settlement cash sum (below full buyout)

With the exception of superfunds, many of these solutions are already available, so why are they not being used more extensively? The main reasons are probably a reluctance to change, owing to either inertia, uncertainty or, possibly, the upfront transition costs.

In addition, the scale of the risks, both financial and reputational, are yet to fully emerge. Recent high-profile corporate failures have highlighted pension issues and the likely reduction to member benefits. Further ahead, the human resources required to continue to provide these services is likely to come under severe strain.

Once the risks of maintaining the status quo and taking no action become clearer, these products and solutions are likely to become widely adopted by many pension plans. So the question is when rather than if, and whether one single option will prevail or whether there will be a range of solutions to choose from.

Smaller plans

Typically, smaller plans have higher operational and management costs (compared to their asset size) and are likely to see the greatest savings from 'consolidation'. Increased scale may also lead to stronger governance and better risk management.

Smaller plans also face other issues, such as access to insurance buyout solutions at a competitive price and possibly access to some specialist skills around investments. For very small plans, the issue of adequate service provision at an affordable price may already be starting to emerge.

Sectionalised master trust

The master trust solution has been widely adopted for defined contribution plans, providing economies of scale, access to a wider range of investments and stronger governance. These benefits can also be provided to defined benefit plans.

The defined benefit master trust is a medium/long-term consolidation solution that reduces both governance risks and operational cost for the sponsor. There are some upfront costs involved, but operational costs (both direct and indirect) should be greatly reduced. In most cases, the break-even point should be relatively short.

ILLUSTRATION: SHUTTERSTOCK

The sectionalised master trust ringfences assets and liabilities for each employer, so that there are no cross-subsidies and no risk that one employer may need to contribute towards the liabilities of any other employers. Each section has its own funding plan and investment strategy, so the employer retains overall strategic control of the pension plan.

Unlike the non-sectionalised master trust, it remains very straightforward to move all the assets and liabilities to another consolidation solution without incurring significant exit penalties.

It should be viewed as a change of management (or governance) structure rather than a transfer of risk. In nearly all cases, these master trusts are run by professional independent trustees, who take on the responsibility for compliance, governance and management and use their expertise to find the most efficient solution for the participating employers.

In summary, the sectionalised defined benefit master trust offers the following features:

Governance	Operational activities and oversight are delegated to experienced professionals to meet all compliance and governance requirements
Operational costs	Adviser and investment costs will be significantly reduced owing to more efficient management and using the economies of scale available
Sponsor role	The sponsor role becomes purely strategic in relation to investment strategy, pace of funding and risk management
No cross-subsidies	No risk that one employer will need to contribute towards the liabilities of any other employers
Improved risk management	Risks can be managed more efficiently and economies of scale will apply for risks that are similar to those of other employers
Modest exit costs	Exit can be achieved at modest cost, eg to settle the liabilities in full, transfer them to another plan, or for any other reason

Member perspective

While the benefits to sponsors are clear, what will be the likely impact on the members of a plan choosing to join a defined benefit master trust?

Overall, this should be very limited. There may be a new service provider and possibly some new contact details, but the member should not see too many changes. Potentially, service will improve as a result of being part of a larger pension plan with stronger governance and controls.

Financial security will remain unaffected, with the same sponsor and covenant, while the funding level will also be unchanged because all the assets and liabilities will be transferred across. Lastly, the Pension Protection Fund (PPF) remains in place as a backstop if needed.

Over the medium term, security for members would be expected to improve more quickly as a result of lower operational costs, so more of the contributions can be used to improve the funding level. Furthermore, economies of scale mean that the investments are likely to provide better risk-adjusted returns.

Experience in other countries

The UK has seen the number of defined benefit pension plans fall by around 20% over the past 20 years through mergers, insurance buyouts and entry into the PPF. This is fairly typical where there has been a passive approach and no positive action on consolidation.

In some countries, such as the Netherlands and Australia, where positive consolidation steps have been taken, the number of defined benefit pension plans has reduced by 70% or more. This has been achieved through master trusts, industry-wide schemes and buyout solutions, but changes to legislation and simplification of benefits have also played a significant role in the process.

Why now?

The focus has moved very quickly on to the costs of managing legacy defined benefit pension plans and the additional financial burden this places on UK companies. For many sponsors, the cost of an insurance buyout is simply too high or does not represent efficient use of capital.

Other solutions, such as full-service providers, are unlikely to make enough difference to costs to have a real impact. The superfunds approach will require fundamental changes to legislation and take significant time to deliver.

The master trust can deliver the level of cost savings needed and really only needs confidence from employers (and trustees) to overcome the current inertia in the decision-making process. It still provides flexibility to take advantage of any simplification or harmonisation that may be available at a later date and may also accelerate the path towards a full settlement through an insurance buyout.

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The great Juggling Act

The current pace of change in regulatory and accounting standards makes now a better time than ever for firms to revisit their asset liability management strategies, argues **Richard Schneider**

Fifteen years ago, *The Actuary* asked its readers who was the greatest British actuary of all time, and the answer they gave was Frank Redington, most famous for development of his immunisation theory in 1952. This theory enables holders of long-term liabilities to protect the value of their portfolios against small and 'well-behaved' movements in the interest rate term structure. Since then, asset liability management (ALM) has grown into a multi-faceted operation, with specific risk appetite, operational processes and organisational structures being developed to accommodate it. The growth in this field has been driven by a number of factors, including:

- Volatility – immunisation theory was developed after a long period of relatively stable interest rates in the UK, and before the massive swings of the 1970s and 80s
- Regulatory requirements, including the introduction of market-consistent and risk-based capital regimes that otherwise would exhibit unwanted balance-sheet volatility, and, more

recently, specific cashflow matching requirements for matching adjustment portfolios
- Increasing risk governance, also driven in part by regulation
- Improvements in modelling capability, to support the hedging programme, and the use of more exotic asset types to achieve it
- Increasing asset-side expertise within the life insurance actuarial community, and the increasing influence of the methods of mathematical finance on actuarial practice.

Easy to define, hard to specify

ALM can be defined quite simply as the management of risks that arise because of mismatches between assets and liabilities, as opposed to the pure management of asset-side risk. Pretty straightforward, isn't it? Maybe not. Satisfying all of an organisation's stakeholders simultaneously involves a careful juggling act, whereby different risk exposure measures, or 'target metrics', need to be considered together as part of a holistic ALM optimisation strategy. Each flavour of risk will have its own exposure limit – whether explicitly defined to date or not – and will rely on ALM to stay within limits. With the plethora of regulatory, accounting and internal performance measures, trade-offs must exist, and, with the introduction of new solvency and accounting regimes, there is additional complication around potential step-changes in ALM strategy and the timing thereof. Clarity of strategy, as always, is key.

Example 'candidate metrics' for optimisation of the ALM strategy include, among other things: solvency surplus (or ratio), economic value, accounting surplus and liquidity buffer (short-term and long-term). This is not to suggest that regulatory arbitrage is a good thing, but, naturally, the chosen hedging metric will depend on the organisation's 'biting constraint'. A firm that has a healthy regulatory solvency ratio and is awash with cash may adopt a policy of stabilising its economic or accounting profit. However, if the solvency or cash position deteriorated over time, the focus would shift towards improving, or at least stabilising, those metrics, with some level of volatility in economic or accounting profit being accepted.

Dynamic ALM strategies

While most long-term providers are averse to ALM risk, not all metrics can be hedged simultaneously, hence the real issue is the priority ordering of these metrics and how these might change over time. Firms are likely to alter their priorities over time, as circumstances change, hence a dynamic strategy exists whether or not it is hard-coded into formal policies.

Suppose, instead of a static strategy (such as 'Stabilise metric X subject to minimum value of metric Y'), we considered multiple metrics together. Regular ALM interest rate reports might look something like those in *Figure 1* below. This reveals the durations at which hedging gaps exist, for all metrics of interest. Now how does the firm know at what point to change its focus from one metric to another? Would a change occur once some trigger level was hit, or would the transition be managed in an orderly way as triggers were approached? It doesn't hurt to consider these types of issues upfront. Clearly, it won't at present be possible to produce accurate solvency-related PV01 metrics at the required frequency, particularly where Monte Carlo capital models are concerned. In these cases, approximations would be required, and various techniques are available for this purpose.

Without trying to 'algorithmise' away actuarial judgment, consider a thought experiment in which we derive and hedge an 'average exposure' vector:

$\mathbf{c} = \mathbf{A.b}$, where

- $\mathbf{c}$ is a vector containing weighted averages of the PV01s across the different metrics, for each duration bucket
- $\mathbf{A}$ is the matrix of PV01s, of which the table below is one example
- $\mathbf{b} = \mathbf{f}\,[\,\mathbf{d}(1), \mathbf{d}(2), \ldots, \mathbf{d}(\mathbf{n})\,]$ is a dynamic weighting function, with $\mathbf{d}(\mathbf{j})$ being the value of metric $\mathbf{j}$

Such an approach could be calibrated to give smooth ALM outcomes.

The difference a year (of management actions) can make

One of the 'conflicts' highlighted above is that between solvency and economic value – but why does 'economic' hedging not protect the firm's solvency position? This seems counter-intuitive. We consider a hypothetical case study to provide some insight into this conundrum.

Let us suppose that a company, GuarCo, sells insurance products with embedded investment guarantees. It has no appetite for market risk on this line of business; however, it wants to reach a reasonable balance between hedging cost and benefit. GuarCo has a very satisfactory regulatory solvency position, and has ample cash buffers in place. Its ALM strategy is to protect economic value, subject to a

FIGURE 1: Example multi-metric ALM report

(*Increase in value for 1bp increase in interest rates)

YIELD CURVE DURATION BUCKET	NET PV01* (SOLVENCY SURPLUS)	NET PV01 (ECONOMIC VALUE)	NET PV01 (ACCOUNTING SURPLUS)	NET PV01 (LIQUIDITY BUFFER S/T)	NET PV01 (LIQUIDITY BUFFER L/T)
Short	a(1,1)	a(1,2)	a(1,3)	a(1,4)	a(1,5)
Short-medium	a(2,1)	a(2,2)	a(2,3)	a(2,4)	a(2,5)
Medium	a(3,1)	a(3,2)	a(3,3)	a(3,4)	a(3,5)
Medium-long	a(4,1)	a(4,2)	a(4,3)	a(4,4)	a(4,5)
Long	a(5,1)	a(5,2)	a(5,3)	a(5,4)	a(5,5)

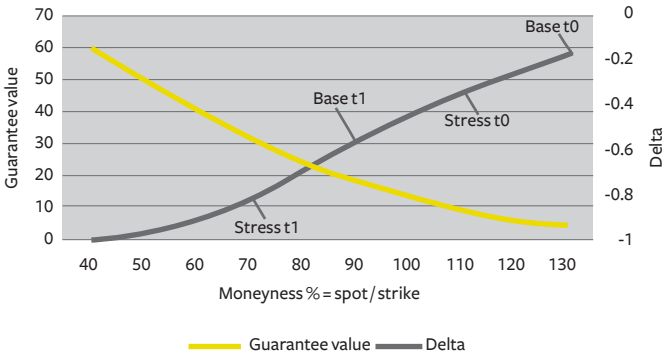
minimum regulatory solvency surplus, and it implements a daily delta hedging programme, involving execution of the following steps:

- Calculate the delta of the economic liabilities (the change in the value of the investment guarantee for a unit increase in the value of the underlying assets on which the guarantee is based)
- Calculate the delta of the assets backing these guarantees
- Remediate any delta mismatch if outside tolerance (normally via trading in the underlying assets or relevant derivatives).

GuarCo accepts any residual market risks (intra-day gaps, vega, gamma, derivative basis, and others).

Figure 2 below illustrates the convexity of the liabilities (for an assumed liability profile) and, in particular, the behaviour of delta along the moneyness spectrum. To carry out its stated ALM strategy, GuarCo hedges its base delta. All is well initially; however, in the second year of the programme, there is a steady fall in asset values, and GuarCo finds that its regulatory solvency surplus is in steady decline. The delta hedging programme is investigated, and it is found that this has in fact performed as expected, with the economic value surplus of GuarCo being relatively unaffected by the fall.

FIGURE 2: Convexity of liabilities



So what has gone wrong? It seems the issue is that the delta of the stressed liabilities, which underlie the solvency calculation, is lower than that of the base, hence market movements have had a disproportional impact on the solvency position. This has been exacerbated over the period of the fall, as this delta 'basis difference' has grown, owing to the inflection point in the delta curve.

As the regulatory surplus has now reached a trigger point in terms of the ALM policy, GuarCo moves to an approach of hedging its regulatory solvency surplus. It increases its (absolute) asset delta significantly, in order to ensure that it is the 'stressed balance sheet' that is now being hedged.

All is then well for the next year; however, GuarCo notices that, although its regulatory solvency is relatively stable, its economic value is volatile. The finance director is concerned that the company is not in a position to benefit from a market recovery in the way that its competitors are – quite the opposite, in fact. Now the firm is in a real quandary – while focusing its ALM efforts on restoring its solvency position, it could well be leaking economic value. The finance director proposes a capital raising initiative in order to restore its solvency position and enable it to move back to economic hedging.

While most long-term providers are averse to ALM risk, not all metrics can be hedged simultaneously

This situation, although a little contrived, illustrates the challenges of trying to hedge numerous metrics simultaneously.

Many would leave the argument there, but we take it one step further. What is the real reason that hedging economic value leaves the solvency position unhedged? Is it to do with convexity of the liabilities? Does it depend on the internal model calibrations? Yes, partly, to both. However, there is a more fundamental issue, relating to a modelling limitation – the capital model approximates a one-year value at risk calculation by applying an instantaneous stress to the balance sheet. This is not unusual – most Solvency II internal models have been built in this way – not to mention the standard formula. And getting the models past the post in the run-up to Solvency II precluded the possibility of adding extra complexity to the modelling framework. The implication of this common model limitation is that no credit is obtained for dynamic hedging – hedges are effectively treated as static over the one-year time horizon. If the modelled stress scenarios emerged over the time horizon, rather than instantaneously, and were coupled with the modelling of ongoing hedge rebalancing, the 'value versus capital' issue would be significantly mitigated.

Modelling the dynamism would require an assumption about market movements over the period – that is, an economic scenario generator (ESG)/ stochastic time series approach replacing a pure statistical distribution of returns. Such an ESG could be calibrated to preserve – to the extent possible - the one-year statistical distributions of the capital model. The focus of model validation would then shift to the reasonableness of the underlying stochastic processes, whether they contain sufficient jumps in economic variables, whether demographic assumption changes can be anticipated gradually over the period, and so on. The benefit, however, is that a 'sensible' hedging strategy, and one that broadly hedges both economic value and the regulatory balance sheet, can be adopted.

This same logic, sadly, cannot be extended to all potential target metrics of interest, hence does not solve the general problem of multi-metric optimisation.

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The challenge of maturity

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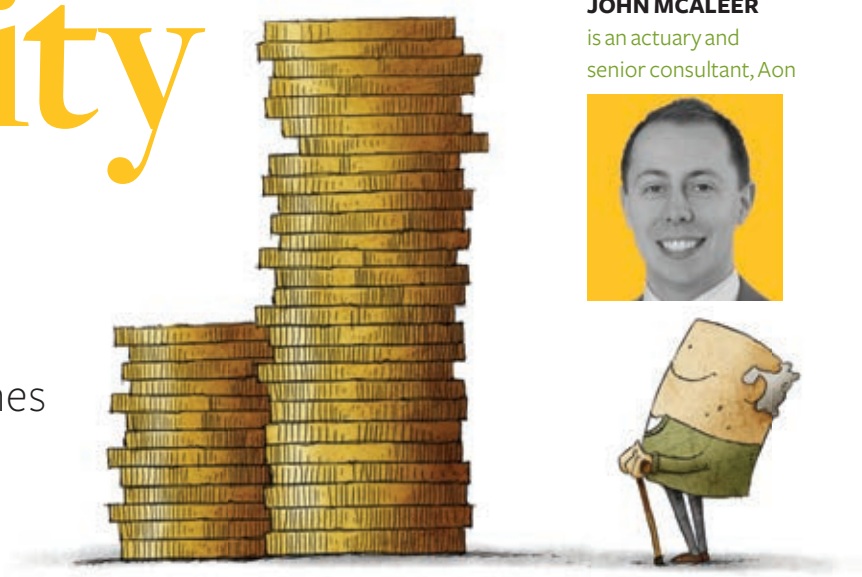
Costas Yiasoumi and **John McAleer** discuss the challenges faced by mature defined benefit pension schemes and present a framework for managing their run-off



The growth and now run-off of UK defined benefit (DB) pension schemes touches many of us, whether we work in pensions, investments or insurance. How mature DB schemes are run-off will affect the retirement incomes of millions of people. Given the huge assets and liabilities involved, there is also a significant impact on employers and the wider economy.

There is plenty of material covering various aspects associated with running off mature schemes, but no work that covers the topic as a whole. The Running Off Mature Schemes Working Party therefore decided to pull together various strands of existing analysis and research, where appropriate, reinterpreting it in the context of mature schemes and then presenting it in a coherent way with observations and recommendations in a paper.

To make our work even more topical, the Department for Work & Pensions (DWP) published its long-awaited white paper *Protecting Defined Benefit Pension Schemes* on 19 March 2018. There is current debate within the industry on how accrued pension promises should be delivered and the white paper is perhaps a natural consequence of the challenges faced by the large number of rapidly maturing schemes. It proposes various changes, many of which touch on the findings of the working party.

The good news is that actuaries are perfectly placed to help schemes run-off effectively.

Setting the scene

Depending on how you assess your half-glass, there are only (or as many as) 5,588 DB schemes in the UK (*see Figure 1*). It is uncommon for new DB schemes to be set up; this is a species in long-term decline, with the number decreasing steadily each year; albeit extinction is still some time away.

FIGURE 1: DB schemes in the UK

NUMBER OF MEMBERS	NUMBER OF SCHEMES	AVERAGE LIABILITIES £M	TOTAL LIABILITIES £BN
Less than 100	1,994	10.8	21.6
100 to 999	2,458	81.9	201.4
1,000 to 4,999	759	515.0	390.9
5,000 to 9,999	180	1,594.4	287.0
Over 10,000	197	6,987.3	1,376.5
Total	5,588	N/A	2,277.3

Source: Pension Protection Fund (PPF) Purple Book 2017. Liabilities shown are based on the cost of securing all accrued liabilities with bulk annuities. Working party analysis, charts and figures exclude public-sector schemes.

ILLUSTRATIONS: ISTOCK

Each scheme is in effect a mini insurer, but they were never intended to be run like insurance companies. They do not hold direct risk capital and the regulatory environment in which they operate is entirely different. Other than the largest schemes, the vast majority rely on outsourced services, whether that is member administration, actuarial or investment services. The schemes are run by trustees and, while there are knowledge requirements for trustees, expertise can vary considerably.

The huge number of smaller schemes is of note. For example, the 4,452 schemes with less than 1,000 members represent some 80% of the total by number but only about 10% by liability. One challenge is how these smaller schemes can be run-off effectively and efficiently.

Mature schemes are becoming the norm

The proportion of schemes still open to new members, as represented by the gold part of each bar in *Figure 2*, has diminished rapidly to 12%, for reasons covered in our paper. At 31 March 2017, of the 10.5 million members of DB pension schemes, only 1.3 million were active members earning benefits, the remainder being pensioners or deferred pensioners.

FIGURE 2: UK DB schemes by status

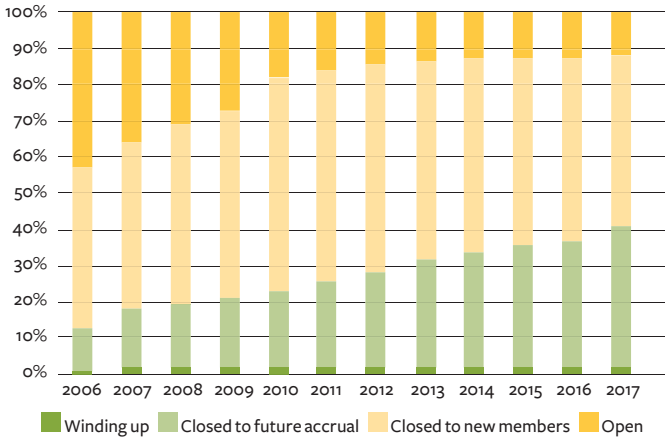


Chart source: PPF Purple Book 2017

Why does it matter that a scheme is mature?

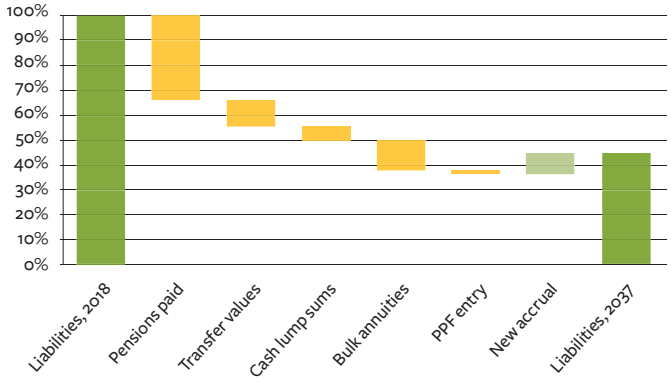
Mature schemes can face very different issues to immature schemes. They tend to be cashflow negative, making cashflow matching far more important in order to avoid the risk of having to sell in depressed market conditions to meet benefit outgoings.

At some point the scheme becomes a 'legacy arrangement' in the sponsor's eyes; a balance sheet liability to be managed away.

From the trustees' perspective, the mindset can change as the scheme becomes increasingly mature. They might take the view that they are the trustee board to lock down the risks and then steer the scheme to its long-term target, which for many schemes will be securing benefits with an insurer. Getting there won't happen overnight, but it may be a realistic prospect over a 15-year period, say.

The landscape will change significantly over the next 20 years. We project that the size of the DB scheme market will more than halve over the next 20 years, from £1,800bn* to £800bn in 2018 value terms; these are huge numbers (see *Figure 3*).

FIGURE 3: Projection of what happens to the same £1,800 billion of pension liabilities in 2018 over 2018-2037 (all amounts presented valued to start 2018)



Projections produced by the working party, using simplified assumptions. *£1,800bn figure is a proxy for best estimate and hence lower than bulk annuity cost shown in figure 1. Percentages based on projected monetary amounts in 2018 value terms.

A large part of that will be down to pension payments (£600bn) and retirement lump sums (£100bn), which will be recycled through the economy by pensioners. We projected £200bn of transfer values to individuals and £200bn of bulk annuity purchases. The projected £200bn of new pension accrual for active members won't do much to dent the massive outflow and maturing effect.

The white paper proposes commercial consolidation vehicles under which a corporate sponsor is no longer linked to the scheme and hence ceases being responsible for funding it. Commercial consolidation vehicles are not factored into the above projection – if they became a significant reality they might easily absorb a large proportion of scheme exposures.

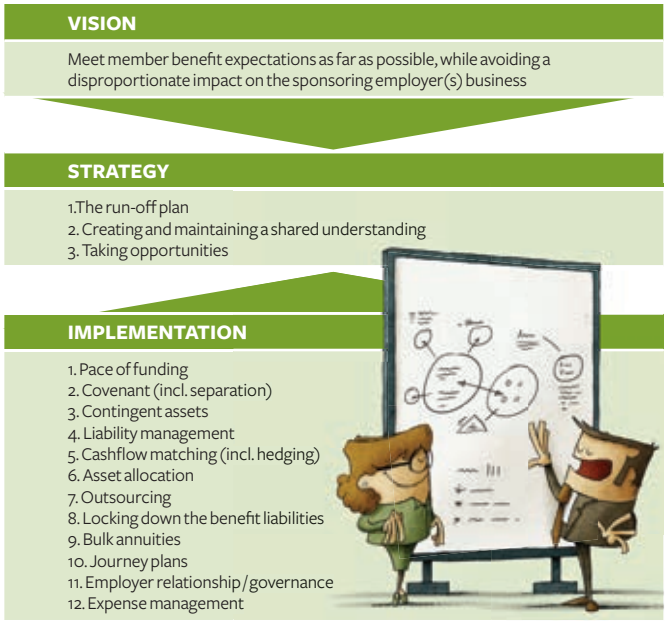
There are great opportunities for organisations to offer advice and solutions to service the change. Some of those solutions exist today, but there will be scope for new ones to meet the evolving needs of schemes and their members.

A framework for mature scheme run-offs

The white paper emphasises the importance of having a clear long-term strategy for scheme run-off. As a working party we went further and recommended that all mature schemes would benefit from a detailed run-off plan and we hope that, as the industry absorbs the white paper, our recommendation is taken up. We've developed a suggested framework (see *Figure 4*):

- Be very clear about the vision.
- Then create a strategy which is based on three components:
  1. The detailed run-off plan.
  2. Ensuring that the employer, trustees, advisers, service providers and members have a common understanding of the objectives and the plan. Identify and manage conflicts and tensions.
  3. Be ready to take opportunities as they arise, so that the scheme can accelerate progress along the plan. This points towards having the right governance and management information in place.
- Detailed implementation of the strategy can then be formulated along the lines of the 12 key areas that the working party explored in its paper (see list in bottom box of *Figure 4*).

FIGURE 4: Framework for mature scheme run-offs

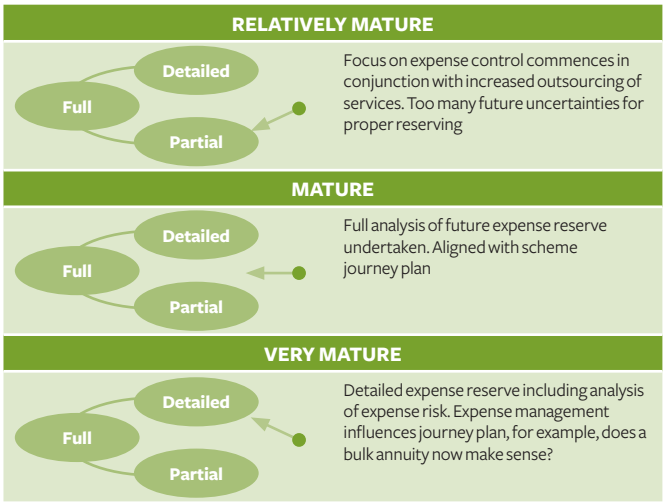


This differs from integrated risk management, which focuses on getting asset and funding strategies right in light of the sponsor covenant. We propose that schemes go further and also consider other areas like operations and governance.

The formulation of a full plan means that pension schemes become a lot more deliberate in how they run-off and access products and solutions.

A scheme can rate itself against each of the twelve key areas and action accordingly. For example, in relation to expense management, our assessment of expected practice by maturity is illustrated in *Figure 5*.

FIGURE 5: Expected practice by maturity



If a scheme was very mature but its expense management approach aligned with that of a less mature scheme, the trustees could schedule suitable action to bring the scheme in line with what we would expect for that maturity. Or, alternatively, they could make a conscious decision as to why it is not appropriate. The white paper highlights that the DWP will work with The Pensions Regulator so as to enhance trustee and corporate sponsor awareness of their consolidation options – quantifying expected and potential development of scheme expenses is one piece of that analysis of options.

Recommendations

This is a huge topic and so we restricted ourselves to a small number of core recommendations and it is reassuring that a number coincide with the white paper:

WORKING PARTY	WHITE PAPER
Schemes should develop comprehensive run-off plans, mapping out their intended journey.	Focuses on schemes having a clear long-term strategy for running-off.
It would be advantageous for there to be a clear regulatory framework for separation of a scheme from a corporate sponsor, where the covenant is unlikely to support full benefit delivery. There are varying estimates of up to 1,000 schemes being in such a position.	The DWP will work closely with The Pensions Regulator, the Pension Protection Fund and industry to make improvements to the existing Regulated Apportionment Arrangements process. The DWP will consult on consolidation arrangements which allow corporate sponsors to break their link to a scheme.
Professional trustees should become the norm for mature schemes.	Schemes should have an earmarked chair of trustees who'll have some specified responsibilities. This doesn't go as far as the working party.
Schemes in run-off should start to consider reserving for expenses. This would ensure that thought is given to the steps (and associated costs) of running off and aide future trustee decision-making.	The existing Funding Code of Practice should be refined to set out how trustees should set funding objectives in the context of the long term. We would hope the expense reserving point is covered here.
There should be further analysis to support informed decisions on consolidation and scheme run-off strategies. Some of the stated advantages of the most complete forms of consolidation (e.g. superfunds) would diminish if the recommendations and other practices we highlight were adopted.	The DWP is developing proposals for a framework to enable consolidation in which an employer no longer sponsors a scheme. This will be put out for consultation.
Development of industry standard data and benefit structure formats. This would allow the vast majority of scheme benefits to be codified and would help with areas like benefit audits and bulk annuity purchases.	This was not picked up by the white paper. However, it discounted allowing wholesale simplification of benefit structures. Hence, given we now know historic benefit structures remain for the long haul, industry can take the initiative to develop standard data and benefit structure formats. This will also help support scheme consolidation initiatives (see above).

The assets held by both today's mature DB schemes, as well as the mature schemes of the future, are enormous. We hope our work focuses attention on the issues these schemes face and help result in improved outcomes.

The working party's paper, "Mature Pension Schemes – Onwards And Forwards", is close to completion and will be published on the IFoA website shortly. Our members comprise: Costas Yiasoumi (chair, Legal & General Assurance Society), Graham Wardle (Legal & General Investment Management), John McAleer (Aon), Mike Walsh (Legal & General Reinsurance), Nick Sparks (BMO Global Asset Management), Nigel Jones (2020 Trustees and Broadstone Corporate Benefits).

A watching brief...

Stephen Haddrill speaks to **Hazel Beveridge** about the work of the Joint Forum on Actuarial Regulation and its recently published *Risk Perspective: 2017 Update* report

The Joint Forum on Actuarial Regulation (JFAR) recently published its latest Risk Perspective report – *Risk Perspective: 2017 Risk Update*. The forum was established in 2013 by the Financial Reporting Council (FRC), the IFoA, the Financial Conduct Authority (FCA), the Pensions Regulator (tPR) and the Prudential Regulation Authority (PRA). Through the report, JFAR reviews and reports on known and emerging risks that are relevant to the public interest where actuarial work is central.

HB: What is the value of JFAR?

SH: I believe its key strength is that it allows the members to debate topical issues that impact actuarial work and respond in a collective and efficient manner. Although each regulator has its own focus, the forum enables us to identify commonalities and share analysis of public interest risks to which actuarial work is relevant.

Over the years, we have researched and produced reports on issues ranging from the dangers of group-think to the level of pension transfer activity in a report entitled *Review Of Transfers From Defined Benefit To Defined Contribution Schemes Following Pension Freedoms*.

I find that the expert speaker sessions at each JFAR meeting are informative and thought provoking and help us identify and articulate Risk Perspective hotspots. Our speakers have covered big data, climate-related risk and financial security, among other issues.

Why is the Risk Perspective important for actuaries and users?

The Risk Perspective sets out the collective view of the regulators on risks to high-quality actuarial work. This year, it includes descriptions of nine hotspots where there is a perceived increase in risk to the public interest. Our aim is to raise awareness of the risks and potential mitigations and to generate debate on the hotspots. I hope that actuaries will find the Risk Perspective and our research helpful and that it will support actuaries, their employers and users of actuarial work to consider current and emerging risks in their activities.

What are the factors impacting actuarial work at the current time?

Actuarial work is wide-ranging, with a spread of influences: from large political and economic impacts such as Brexit, to the effects of new technology, and social changes, such as mortality and intergenerational fairness.

In this rapidly changing environment, actuaries need to keep up to date with developments, identify risks to established practices and assumptions, and adapt their actuarial work appropriately.

How did JFAR go about identifying the hotspots?

This year, the group developed the actuarial risk identification architecture (ARIA) to identify hotspots. This is used to identify macro-environmental drivers, risks inherent in actuarial work and market characteristics that may lead to an increase in risk. It also recognises that the ongoing activities of JFAR members influence the risk to public interest of actuarial work.

ARIA highlights interactions in the factors – for example, take big data: the availability and proliferation of big data is the result of a technological macro-environmental driver; it can affect the work of actuaries using machine learning in modelling; change the characteristics of the market (for example, through on-demand insurance); and the risk could be influenced by the regulators, through provision of education materials. The interaction of these factors may have positive or negative effects on the public interest related to the availability or price of suitable insurance products.

ILLUSTRATION: ISTOCK

JFAR has identified nine hotspots in the 2017 update – could you outline the hotspots and how they affect actuarial work? How are they reflected in JFAR's work and in regulatory projects?

The effect of the nine hotspots on individual actuaries will vary. JFAR has not prioritised one hotspot over another. I can only touch on a few of them here, and I strongly encourage actuaries to read the full report and to consider the impact of the hotspots across their roles.

I would like to talk briefly about regulatory change, technological change, defined benefit pension scheme management and climate-related risk. I think these hotspots are illustrative of the breadth of the topics discussed at JFAR and the ways in which we can collaborate in the public interest.

As a group of regulators, we are aware that regulatory change could affect the quality of actuarial work. This hotspot recognises that recent changes to regulation impacting actuarial work, including those to PRA's implementation of Solvency II, may not yet be fully embedded.

PRA has published several consultation papers seeking to simplify some aspects of Solvency II and has recently issued feedback on the Actuarial Function Reports in general insurance. Actuaries and users of actuarial work can use information sources such as these to help mitigate the risk that the quality of actuarial work is adversely affected by the level of regulatory change.

JFAR has considered how technological change could impact consumers and actuarial work. Our research identified the emergence of big data and analytics as a key trend and area of investment, especially in the insurance sector. We noted that actuaries may face challenges in interpreting and communicating insights from big data and its effects on consumers, operations and business strategy.

Actuarial work can utilise big data to help expand access to products and tailor them to customer needs, but there is also a risk that data is used inappropriately, leading to some customers being excluded.

FCA presented the findings from its report *Call For Inputs On Big Data In Retail General Insurance* to JFAR. While, to date, no significant problems have been identified, JFAR encourages actuaries and users of actuarial work to challenge themselves regarding the ethical treatment of consumers.

FRC is responsible for setting technical actuarial standards (TASs). It is interested in how these technological changes will change the nature of technical actuarial work to ensure that the TASs remain fit for purpose. FRC has established an internal working group to maintain a watching brief on developments in the use of technology. I have shared with my JFAR colleagues the knowledge gained from this group and the broader work of FRC, such as the increased use of technology in audit work.

The current economic conditions and the ongoing low interest rate environment continue to present challenges for defined benefit pension scheme management. tPR shares its expertise in this area with JFAR.

tPR has emphasised for some time the vital role actuaries play in helping their clients to manage the key risks in pension schemes in an integrated way, because it is often the inter-relationships that get overlooked. It has published guidance for trustees and worked with the IFoA to deliver tools for actuaries. tPR has also worked with PRA to understand the commonalities between insurance companies and pension schemes for risk management in a prolonged low interest rate environment. Over the past year, tPR has been working with the Department for Work & Pensions to find better ways to help trustees and sponsoring employers manage their pension risk and improve their scheme funding.

The Risk Perspective includes a hotspot on climate-related risk. Governments and businesses are starting to manage the impacts of climate-related issues, and actuaries are well placed to help them understand the risks and uncertainties related to this hotspot.

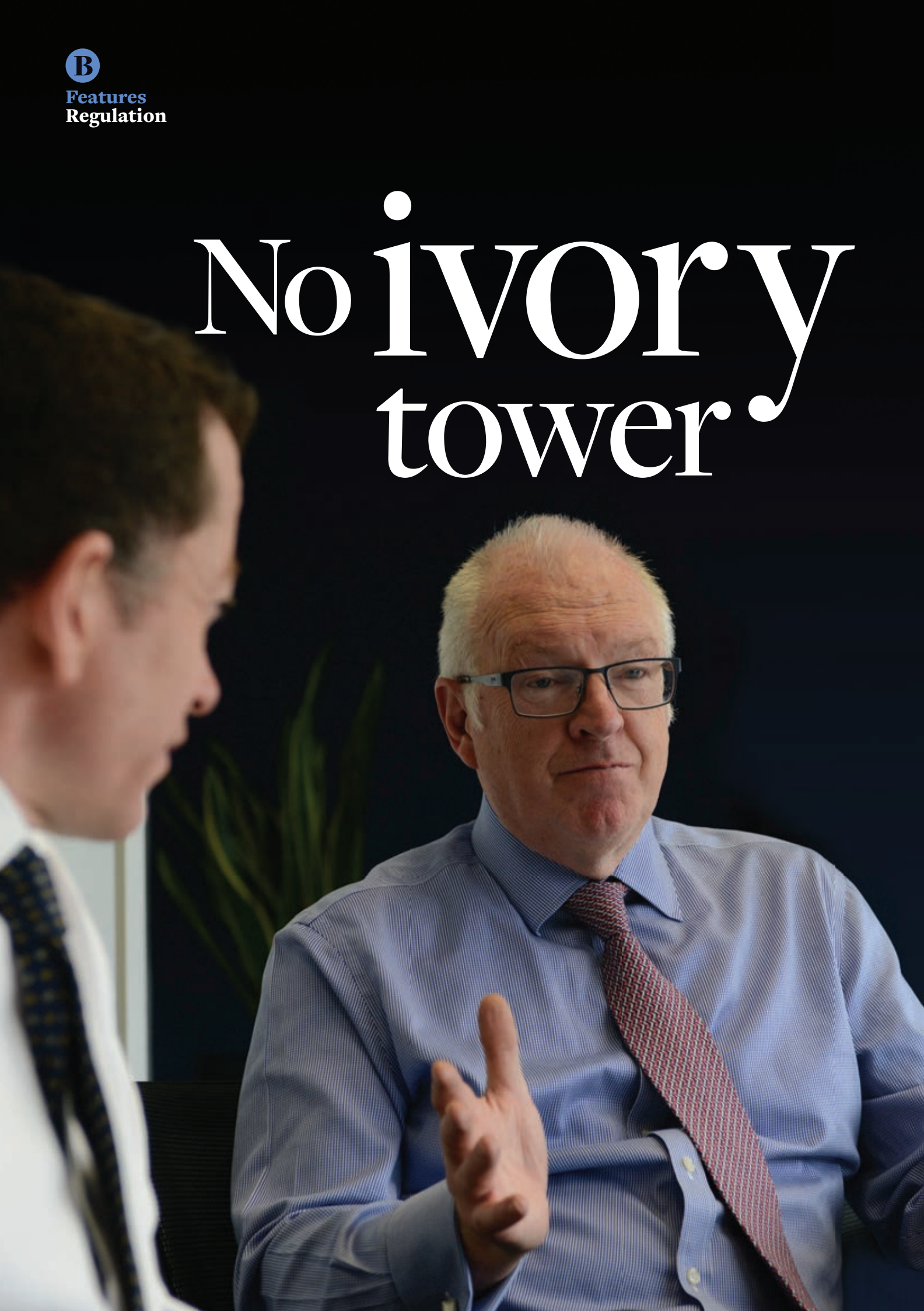
The IFoA is actively engaged in public debate on this issue and has established a Resource and Environment Board, which is dedicated to raising awareness of environmental issues that affect actuarial work. The chair of this board presented to JFAR in 2017, covering issues including the recently issued *Risk Alert: Climate-Related Risks* and the *Practical Guide for Pensions Actuaries*. It is currently working on a similar guide for investments and defined contribution pension schemes.

We recognise that our work could be limited by blind spots, assumptions that are taken for granted or group-think and bias. Therefore, JFAR welcomes feedback from actuaries and users of actuarial work on the Risk Perspective and the hotspots identified. The full report can be accessed at **www.frc.org.uk/jfar** *The forum is planning outreach events during 2018 to seek the input and views of actuaries and users of actuarial work. We look forward to hearing from you.*

HAZEL BEVERIDGE
is JFAR secretary

STEPHEN HADDRILL
is JFAR chair

No ivory tower



IFoA Regulation Board chairman **Desmond Hudson** and the IFoA's general counsel, **Ben Kemp**, talk to Chris Seekings about the profession's evolving regulatory landscape

Tell me about the IFoA's regulatory structure and how it works in practice?

BK We are a self-regulatory body, but we aim to regulate in a way that is accountable and transparent. We are subject to independent oversight by the Financial Reporting Council. We have a Royal Charter regulatory responsibility delegated by the IFoA Council to the Regulation Board. We regard the idea of 'regulation by assent' as very important. We are not sitting in an ivory tower identifying regulation and passing it down. A huge part of it is bottom-up, drawing on the practitioner community to identify issues and concerns through our practice boards, seminars and conferences. We also draw on our collaboration with regulators and other actuarial associations around the world, as well as what we learn through our disciplinary scheme.

DH It is a very rare, and I think a very important, privilege for the actuarial profession here in a UK context that we are a profession-led regulator; the idea of self-regulation has disappeared for many professions. It allows us to harness the power and wisdom of the entire profession in dealing with a problem in order to find a way to resolve it. That is one of the hallmarks and benefits, both for actuaries and the wider public, of profession-led regulation, and we try to make the process very open and transparent to everybody.

Once you have identified an issue that needs addressing, how long does it take before you introduce regulation?

DH That's difficult to answer, but it is important to know that we do not simply reach for our regulation pen when we encounter a problem or an issue. We ask ourselves whether there is a better way of dealing with a problem, perhaps through education or guidance. Deliberately pausing, thinking carefully about the issue , and talking to the profession is a key feature of what we do. So the gestation period for new regulation can sometimes seem lengthy, but we don't shirk that because there are advantages to being considered and cautious before introducing regulation. But when we need to move quickly, we do – we can be both nimble and proactive because above all else, we focus on the public interest.

BK One of a number of advantages to this approach is that, because of the extent of the consultation before we introduce a new standard, we have a reasonable prospect of bringing people with us when we actually launch something. We consult widely, obtaining extensive practitioner input. There is a well-known line that 'the problem with regulators is that they regulate', and sometimes you need to resist the urge and think about the broader outcome that you are trying to achieve, and whether introducing new rules is the most useful way of doing that. When we do introduce regulation, it must be well thought-out, sensible and proportionate.

How do you ensure that regulation accommodates the IFoA's growing international membership?

DH By way of example, we are consulting on the current review of our Actuaries' Code, and are engaging particularly with our members overseas to ask if we have lapsed into a way of thinking that is not going to work for our global membership. We want to hear from our international members about how we can frame and write revisions to the code that work for actuaries outside the UK. We have also changed the makeup of our board to seek involvement from individuals beyond the shores of the UK. We are focused on the need to ensure that this is genuinely a global membership working across borders, and our regulation and code have to work in the real world for all of our members today.

BK We have also developed an extensive suite of professional skills training materials that we deliver at events all over the world and that are also available digitally, allowing access to our members worldwide. Another example is the Quality Assurance Scheme (QAS), which is a voluntary accreditation promoting standards and professional culture. We have just launched the scheme overseas and we expect our first Asian accreditees to be announced in May at our Bangkok conference. We are also working with members, regulators and associations in different parts of Africa to try to ensure we offer regulation and professional support that is useful for our members in that part of the world.

Is regulation designed for the UK often inappropriate for international members?

DH We want to be an institution that is a good partner with associations and actuarial bodies around the world. We know that if you are working in a particular jurisdiction, it will have its own laws, regulation and guidance. If an international member is in breach of the Actuaries' Code, for example, rare though that may be, then it may be that the local association or actuarial body will be the primary one dealing with a disciplinary matter. We are looking to make sure our regulation works in harmony, is aligned with, and respects the codes of other jurisdictions.

IMAGE: AKIN FALOPE

BK At the same time, we recognise that there are markets around the world where our members are operating in less developed regulatory environments. Our aim is to support those members in terms of standards, professionalism and education, and again, do that in collaboration with local bodies and regulators.

Tell me more about the QAS. How many accredited employers are there in the UK and what are your international ambitions?

BK The scheme has been going in Britain for just over two years, and, in that relatively short space of time, we now have around 35 accredited employers, reflecting more than 25% of our UK membership. QAS is a really positive vehicle to promote quality, consistency and professionalism by working with our members and their employers, without actually imposing disproportionate regulation. We have now removed the geographic restriction and will consider applications from employers of our members wherever they are based. We had a very successful pilot in Singapore, Malaysia and Hong Kong last year, including our first insurer, and anticipate the first non-UK accreditations will be announced shortly.

DH One of the things that drove the regulation board to wholeheartedly support the launch of QAS, and the expansion beyond the UK, is that we took the view that it could be a good way of regulating more efficiently, voluntary though it is. We are, for example, launching a pilot to see if we can better manage the annual logging and reporting of continuing professional development (CPD) requirements differently through QAS. If that allows us to be more outcome-focused in our approach to individual regulation, this could be good for members, employers and the IFoA, as well as the public.

Is there a possibility that employers will think you are just passing the regulatory burden on to them by measuring CPD through QAS?

BK That is not what we are doing. What we are trying to do is create a cultural shift around our approach to CPD. CPD is all about maintaining professional competence, which is critical. Employers will naturally know how their people are developing much better than we do, and we are asking them to share with us something that they are already doing and committed to do through QAS, in terms of the commitment to professional training and development. It should be more efficient for us and for them, and reduce some of the compliance burden for individual members.

We have talked about how regulation accommodates international members, but does it restrict actuaries working in new areas like banking and technological development?

BK Naturally, we hear from members concerned that regulation might stifle their ability to expand into new and emerging areas. It is a legitimate challenge, and one that we are acutely aware of, but we do not believe that maintaining standards and professionalism is incompatible with innovation and entrepreneurialism. Actuaries have always traded on the quality they offer and it would be a mistake to disregard that. On the contrary, we would see it as something that is essential to maintain if actuaries are going to continue to differentiate themselves as high-quality professional people.

DH A number of people are making the point that recent changes to Technical Actuarial Standards (TAS) make it cheaper to employ a non-actuary who doesn't have to comply with those standards. But as a non-executive director of a company, would I be happy to allegedly save money by hiring an individual who doesn't have to abide by these standards? What would shareholders think about that? I don't think that the way to compete is by bringing standards down, and I believe most people want very important work done by professionals who follow appropriately high standards.

> "I believe most people want very important work done by professionals that follow appropriately high standards"

So what are the IFoA's regulatory priorities for the next 24 months?

BK We are engaged with some big projects that we have spoken about, but we have no plans for any new standards – we are envisaging, to some extent, a period of consolidation. We are, however, looking at the need for some form of monitoring. We are working on proposals for consultation that are practical and proportional. This is the opportunity for our members to help shape those proposals so that monitoring, if introduced, is both workable and effective.

DH There is a potential gap in our regulatory arrangements, such that we might need a sensible, proportionate way of monitoring, that builds upon the work other regulators do when looking at the work of actuaries. I work for a small charity specialising in care for children. When care assistants undertake sessions with children, someone checks the quality of their work. If it is appropriate to have a complementary monitoring system there, it is difficult to argue against having that for actuaries.

I also think this engagement point is very important. There are a number of consultations under way or that will be, which will continue to evolve. We have also very consciously embarked upon a process of trying to do all we reasonably can to help members comply with regulation. We have no doubt that 99.9% of actuaries want to do the right thing, and we want to continue giving guidance, case studies and assistance, responding to concerns and challenges for members.

And how can members get in touch about their regulatory concerns?

BK We have the Senior Quality Assurance Representatives Forum (**bit.ly/2HXfY9R**) that provides a useful opportunity for QAS accredited organisations to air relevant issues. We also have a Professional Support Service (**bit.ly/2Ff1z5G**) where all members can get expert advice through practitioner and executive resource pools. We recognise the word 'regulation' may have connotations that people might not necessarily welcome, but if you have views about what we are doing, talk to us and tell us what is concerning you. We might not know, unless you tell us, and we are always open to a conversation.

Are you interested in writing for The Actuary?

AUGUST

Longevity/Mortality
Health and care
Life insurance

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Ad booking deadline: 20 July 18

SEPTEMBER

GI/Reinsurance
Environment
Modelling

Published: 06 Sep 2018
Contributor deadline: 16 Jul 18
Ad booking deadline: 16 Aug 18

OCTOBER

Life Insurance
Mortality/Longevity
Health and care

Published: 11 Oct 2018
Contributor deadline: 13 Aug 18
Ad booking deadline: 25 Sep 18

NOVEMBER

Regulation/Solvency II/IFRS
Pensions
Banking/Finance

Published: 08 Nov 2018
Contributor deadline: 17 Sep 18
Ad booking deadline: 23 Oct 18

C

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Patrina Effer describes lifelong learning and shows how the IFoA is supporting actuaries

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The latest brain teasers for your coffee break

Advent of change
Jason Whalley on giving students a voice

People and society news
A round-up of actuarial and social news

Inside story
Ellen Yang on volunteering for the profession

Lifelong learning: why should you get involved?

Patrina Effer describes lifelong learning and shows how the IFoA is supporting actuaries throughout their careers

Lifelong learning is about individuals taking responsibility for their own personal development. We live and work in a continually changing and challenging world; technology is moving at an unprecedented pace, and as professionals we must adapt and change to meet the needs of this new world of work.

As the professional body supporting actuaries, we are committed to ensuring our members have access to resources that will support their career journey, and we have a dedicated team committed to identifying lifelong learning opportunities and promoting these as widely as possible.

Lifelong learning involves collaboration with other providers. Employers provide a significant contribution and we want to complement their offering. We are also investigating partnerships with other associations and education providers. We have already seen success with both CAA Global and CERA Global Association. Other initiatives may follow as we explore wider fields for actuaries, including the key topic of data science.

How will the IFoA support its members?

We will be developing partnerships with organisations and other associations in order that our members can access learning activities that are relevant and current. We have developed a new area on the website, the information will signpost to courses, events, and offer practical suggestions for ways in which to engage with lifelong learning:

- **Data science:** Experts in this field can add tremendous value to businesses, and the IFoA is working closely with other associations on a stand-alone certificate to give our members a recognised professional qualification. The Modelling, Analytics and Insights from Data (MAID) working party has identified an online course on this subject offered by Coursera and we plan to provide further recommendations as they develop.
- **Career support:** The IFoA has linked with Career Farm, a company working with executives to help them manage their careers, as part of a pilot scheme to explore an online tool on career management. We are offering a limited number of places to members to participate in this scheme. If you are interested, please email **EP&LLL@actuaries.org.uk**
- **General business and management skills:** We have reviewed the Masterclass videos, and provided links to these short presentations covering a variety of subjects, from unconscious bias to how to deliver a presentation.
- **CERA and risk management:** On this page we have provided details of how to attain the CERA Global qualification.
- **Thought leadership:** This page is a quick reference guide, which looks at the groundbreaking research being undertaken and highlights current events promoting the research.
- **Events:** In May, there are approximately 15 events being run by the IFoA, in accessible formats enabling us to engage with our members wherever they are in the world.

Why should members engage with lifelong learning?

Chris Bristow, head of education partnerships and lifelong learning, explains: "We each need to take responsibility for our own careers, because if we don't, no one else will. In this volatile, fast-moving, complex and

ILLUSTRATION: ISTOCK

global business environment, doing just that becomes even more important. The actuarial landscape is no different to any other business activity."

Lifelong learning is not just about developing your existing area of expertise, or switching to another actuarial specialism. It is about acquiring the skills and knowledge required to work in a changing world. It is about enhancing your current skillset and empowering you to take steps into new, perhaps non-traditional sectors, or to develop your own business idea. Research shows that many of us change roles after four to five years. Lifelong learning helps us to build the portfolio careers we need to adapt to a changing environment.

Isn't lifelong learning another name for CPD?

Clifford Friend, director of engagement and learning, explains why CPD and lifelong learning are different: "Continuing professional development (CPD), is understandably regulatory-focused and fairly short-term. Lifelong learning is more about individuals making decisions and taking ownership over what they learn." CPD is very much set in the present, focusing on an individual's requirements to undertake their current role effectively. Lifelong learning, on the other hand, is a forward-looking concept, which allows individuals to choose what they want to study, to meet their own objectives or a learning need that they themselves have identified.

How might I identify my learning objectives?

The steps below will help:

- **Reflect:** Check the competencies against your current role and future ambitions
- **Plan:** Identify what skills and knowledge you need and how best to acquire them
- **Do:** Take courses, read articles, find a mentor, look online, volunteer
- **Record:** Write down everything you do, how far it met your objectives, the impact on your work.

THIS IS JEREMY'S STORY:

Follow one member with a particular interest in data science and his lifelong learning journey: Jeremy Affolter, an actuary at Charles Taylor

I retrained from working in mechanical engineering by undertaking two masters courses back-to-back, in IT then actuarial mathematics. This variety of work experience, courses, subjects, and people met along the way all enlightened me and I became more comfortable learning.

As a general insurance actuary, I have worked across the typical activities of reserves and technical provisions, pricing and capital modelling. At the heart of all these is processing data and I enjoy doing these activities with greater speed and insight using a programmatic, coding approach. Having started to use R (programming language) some years ago, I have found I approach my work in new and better ways, for both existing processes and exploring new analysis methods, which has encouraged learning in my day-to-day work. On many occasions, there is a choice between doing something in a known way or taking a new road, where there are unknowns and learning. I often choose the new road so I can work smarter – it means a little more time initially but usually the return is gained on the second time a piece of work is carried out.

I think there are great opportunities for actuaries to develop their productivity and insights from data by gaining coding skills and this is the area I have most interest in.

Actuaries could make great data scientists because they combine insurance industry knowledge, data processing, statistical analysis, end-to-end sight of data collection to financial reporting as well as communication skills and working to professional standards. However, I think for actuaries to be productive and insightful data scientists, competitively, a fast pace of work is important and from my experience, a coding, programmatic approach is the key to a quick turn-round.

For actuaries considering moving away from insurance, I think the combination of coding, statistics and communication skills would probably equip them well to enter a new sector.

Volunteering for the profession provides insights into the motives of the IFoA, which I have found to be progressive in maintaining the skills and relevance of actuaries. Also, I enjoy meeting actuaries from different roles and hearing their views on the direction of the profession.

Lifelong learning is broadly defined as:

"Learning pursued throughout life; learning that is flexible, diverse and available at different times and in different places. Lifelong learning crosses sectors, promoting learning beyond traditional schooling and throughout adulthood"

What the future holds

We will continue to develop the lifelong learning agenda and will seek your feedback to ensure it includes the resources and support for your career development in the changing workplace. The webpages can be accessed at: **www.actuaries.org.uk/learn-and-develop/lifelong-learning**

If you would like to tell us about your lifelong learning journey or share your views or ideas in this area, please contact Patrina Effer, the IFoA's senior lifelong learning executive: ***patrina.effer@actuaries.org.uk***

iQ

Mensa
The High IQ Society

Digit dilemma
Mensa puzzle 713

What number should replace the question mark?

24 - - - 52

39 - - - 126

71 - - - 498

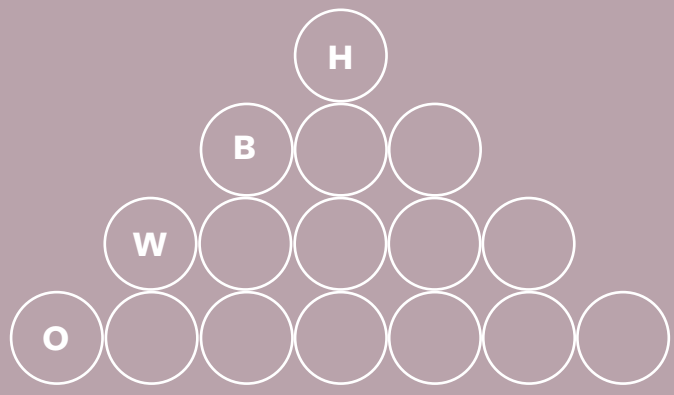
55 - - - 280

96 - - - ?

Stack stumper
Mensa puzzle 714

Use the letters given to complete the pyramid so that one seven-letter word, one five-letter word, one four-letter word and three words of three letters can be read.

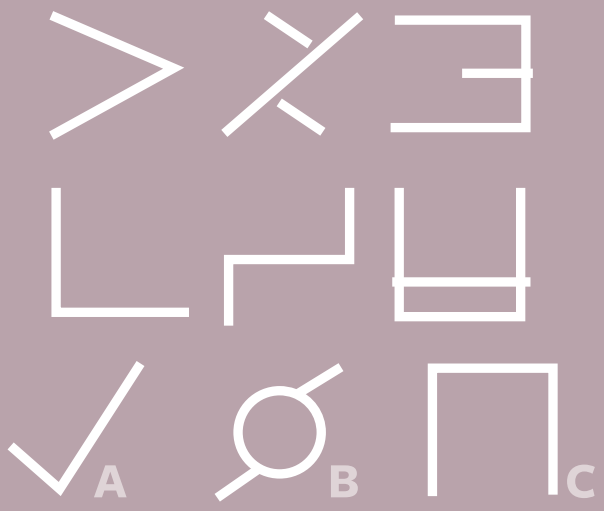
What are the words?



A I K N O O R S T U V

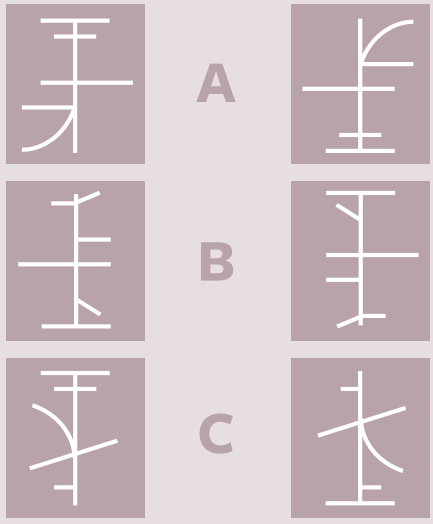
Shapes and japes
Mensa puzzle 715

Should shape A, B or C continue this sequence?



Deciphering the signs
Mensa puzzle 716

Which is the odd one out?



Answers 713: 870. Multiply each number on the left by its first digit and add its second digit to give the number on the right. **714:** Ovation, works, hurt, boa, bus and ski. **715:** A **716:** C

Student

Advent of change

Jason Whalley believes change is inevitable, uncompromising, and generally for the good

The IFoA is making changes to the Associate and Fellowship qualification process.

With effect from 2019, the first half of the exam structure is set to be changed, as the Core Technical examinations are grouped together and statistical packages implemented in order to bring the syllabus closer to real-world actuarial work. This will primarily affect the actuarial students who have joined the IFoA within the past few years, as most of the specialist assessments are staying true to their topics and format.

Work-based skills are gradually being phased out of the requirement for qualification as a Fellow; replaced with personal and professional development.

Clearly, the actuarial governing body is striving to update the syllabus to be more in line with the skill set of the modern actuary. Although, ultimately, the task of amending the path to qualification will remain a never-ending job.

The IFoA provides the opportunity for students to speak out about change at the student consultative forum, where student representatives can raise issues as requested and push for resolution.

But what changes would current students like to see in 2018 and afterwards? More opportunities to sit examinations each year? A more objective – and less subjective – mark scheme for the later assessments?

It was not so long ago that exact marks were hidden from students. Unbeknown to some, breakdowns of marks are actually available upon request. Perhaps the IFoA could go one further, if demand was high enough, and provide marked scripts for students – to allow students to identify where they went wrong.

After all, "the greatest teacher, failure is," according to one wise old swamp-dwelling hermit.

CA2 spreadsheets and papers can be submitted online, negating the requirement for an assessment centre. Although an issue with publishing pass lists back in December highlighted the governing body's next area to target for improvement, other technological changes may be just around the corner, if enough people were to call for it. The option to perform examinations using computers – rather than pen and paper – represents a viable alternative for those who can type faster than write.

Examination centres experience frequent complaints, and such problems could potentially be solved by sitting assessments online – albeit this could introduce complications for those without a stable internet connection.

In recent times there have been calls for clarity on the operations of the IFoA, especially concerning the communications policy. The back-and-forth over CT9 could undoubtedly have been handled more appropriately – and is certainly not the only example of unclear communication that left students in the dark over prevalent qualification issues.

The student consultative forum was recently notified of a request for greater transparency surrounding the marking procedure, of which some students are still not fully aware, and also of the reasons that would cause an additional script reviewer to be involved.

The papers are marked by two separate examiners and the average mark taken to be the final grade, unless a third reviewer is required – perhaps owing to a high disparity between the two grades.

However, there have been situations where the same individual scripts were judged to have a difference of up to 24 marks between two different assessors, which calls into question the attentiveness of those involved in marking for the IFoA.

Furthermore, it should cause concern that a pass or fail could, ultimately, depend on who is allocated to review each script.

The Student Consultative Forum takes place biannually, and the representatives act to provide a voice to each and every student member of the IFoA. Representatives liaise with the actuarial governing body about certain topics and make sure issues are properly discussed, receiving necessary attention.

Joseph Mills and I are happy to raise any issues at the student consultative forum; please feel free to share your thoughts by contacting us at **student@theactuary.com**

JASON WHALLEY is joint student editor

ILLUSTRATION: SIMON SCARSBROOK

SCOR

2017 UK Actuarial Awards

Each year, global reinsurance company SCOR rewards the best academic work in the field of actuarial science with prizes in several countries around the world. These prizes, some of which are financed by the SCOR Foundation for Science, are designed to promote actuarial science, to develop and encourage research in this field, and to contribute to the improvement of risk knowledge and management. They are recognised in the insurance and reinsurance industries as a mark of excellence.

From October to December 2017, the SCOR Actuarial Awards were held in five countries: France, Germany, Italy, Sweden and the UK. The juries are composed of internationally recognised researchers and insurance, reinsurance and finance professionals. The winners are selected for their command of actuarial concepts, the quality of their analytical methods, and the originality of their research in terms of scientific advances and potential practical applications to the world of risk management.

The winner of the UK Actuarial Award was Pengziwei Luo of Cass Business School, City University of London, for her dissertation on 'Credibility Balanced Bias vs. Instability Trade-Off Within Double Chain Ladder'.

To view all the award-winning dissertations, please visit **bit.ly/1b57pYN**

Professionalism in Nigeria

BY ANDREW SLATER, SUNDEEP RAICHURA AND RICHARD GALBRAITH

In December, the International Actuarial Association (IAA) Africa Subcommittee organised a two-day professionalism session in Nigeria. This session had key support from the IAA, the IFoA and the principle sponsor, Leadway Assurance.

Held in Leadway's training facility, the event attracted a full room of around 60 attendees, including IFoA members, a few from the Society of Actuaries (SOA), and a large contingent of actuarial students.

Their enthusiasm was contagious. Our favourite session was a discussion of the development of the Nigerian Actuarial Society (NAS) and how to become a full member of the IAA. There was no shortage of volunteers to speak, and their passion was obvious. Nominees from each team discussed issues facing Nigeria and Africa, how they could be avoided, and the promotion of actuaries to key stakeholder positions. Even if a few of these ideas are embedded, the Nigerian profession will flourish. Event organisers Miller Kingsley and Yeside Kazeem also ran elections for the Nigerian association. We are pleased to announce Yeside Kazeem as president; she will be a strong leader to represent Nigerian actuaries on the international stage.

Sundeep, Andrew and myself were honoured by the warm Nigerian reception, and overwhelmed by their passion. We cannot wait to return.

Full article at www.theactuary.com

Call for your news...

We would be delighted to hear from you if you have any newsworthy items for these pages. Please contact Yvonne Wan at **social@theactuary.com**

CALL FOR PAPERS

Actuarial Risk Modelling and Extreme Values workshop

The Research School of Finance, Actuarial Studies and Statistics, Australian National University, is convening a two-day workshop on 6-7 September to bring together experts in finance, actuarial studies and statistics to present up-to-date reviews and overviews of their subjects. The workshop will be held in Canberra, and will provide a unique opportunity for students, academics and practitioners to meet and discuss actuarial problems and their solutions.

Registration is now open, and all participants are encouraged to contribute papers to be presented at the workshop.

To find out more about the event, register or contribute papers, please visit **bit.ly/2F2MmEM**

FASS

Scottish inspiration

The Faculty of Actuaries Students Society (FASS) is the local actuarial community covering the Edinburgh and wider central Scotland region. For over 25 years it has provided a platform for students, Associates and Fellows to expand and hone their actuarial knowledge and network.

FASS organises a range of events, from talks on issues facing our profession, to the social event of the year – the FASS ball. Whatever your actuarial interests or aspirations, FASS aims to inspire you – or simply give you a medium to de-stress among understanding ears.

Recent and upcoming events include the professional Christmas social evening with local young lawyers, surveyors and litigators; the Hot Topics conference and a friendly five-a-side tournament with Glasgow Actuarial Students' Society.

If you would like to know more about FASS, please visit **www.fass-online.co.uk**

TANC

Time for a new financial system?

BY DR IOANNIS KYRIAKOU

On 15 March, The Actuarial Network at Cass (TANC) had the pleasure of hearing visiting fellow Nick Silver speak on 'How to make finance great again'.

Nick talked about the current financial system being developed to serve Capitalism 1.0. However, it is no longer fit for purpose as this world is ceasing to exist – with companies not employing many people or paying decent wages, pensions becoming prohibitively expensive with increasing contribution rates (7% in 1991 compared with 39% in 2016), and the increasing pressure on the planet, which cannot support perpetual growth.

In his opinion, banks should become fully reserved marketplace lenders to business and poor areas. Asked whether we need a pension, Nick promoted the idea of a Swedish pension system, reinvented as a critical health insurance system. He also presented an example of climate finance challenge, focusing on green investment and the growing green bond market. The onus rests on finance professionals and actuaries to make financial sense of the future.

At TANC's next event on 6 June, Sir Steve Webb will present on the pensions and care policies needed to cope with an ageing population. For details, see **www.tanc-cass.co.uk**

WCA

2018 pancake race

BY LYNDON JONES

The 14th Inter-Livery Pancake Race took place in London on Shrove Tuesday. Thirty livery companies are invited to participate; the selection based on their performance in previous years.

Our team of Nick Salter, Will Chatsworth, Emma McWilliam and Kartina Thomson fought hard in their respective heats – and the rain – but Will was a true champion, winning Best Liveryman then the Victor Ludorum for the Actuaries team. He tossed the pancake 54 times in half a minute; 20 more than his nearest rival.

Well done to the team – we will now definitely be back in 2019.

CHINESE ACTUARIAL NETWORK UK

Sixth successful year

The Chinese Actuarial Network UK (CANUK) celebrated its sixth anniversary event at Staple Inn, after yet another successful year. President Steven Yu opened the event, reviewing the network's many achievements over the past year and setting targets for the year ahead.

Guest speaker John Towner, head of origination at Legal and General Pension Risk Transfer, delivered a speech on pension buy-ins and buyouts, followed by Marco Lo Giudice, local head of pricing at Tokio Millennium Re UK, who talked about catastrophe modelling, using examples of the hurricanes in 2017. Sarah Sim, IFoA director of markets development, offered the closing speech on the future of the IFoA, which was followed by a networking session.

We'd like to thank IFoA regions manager Tess Joyce, the London facilities desk, and sponsor LMA.

OBITUARY

Colin Macdonald Stewart CB FIA 1922-2017

Colin Stewart retired in 1984 after a long and distinguished career at the Government Actuary's Department (GAD), including 11 years as directing actuary (deputy government actuary).

Born in 1922, Colin was educated at Queen's Park Secondary School in Glasgow, and started work in 1939 as a clerical officer in the Rosyth Dockyard. After four years' war service in the Fleet Air Arm, he joined GAD in 1946 and qualified in 1953. At GAD, he was active in the development of insurance supervision. He was a member of the OECD Working Groups on solvency in the late 1960s, which eventually led to the EU solvency margin regime.

Colin became head of the insurance supervision directorate at GAD in 1974. From 1978 to 1984 he headed up the directorate responsible for advice on social security and pensions policy. Even following his retirement, he spent four years as head of actuarial research at Godwins, and presented papers to the Institute of Actuaries on methods of funding and regulating defined benefit pension schemes. Indeed, he published many papers during his long career, including several on population issues.

He served on the committee of the Institute of Actuaries Students' Society and SIAS from 1953 to 1960 and was on the Council of the Institute of Actuaries from 1968 to 1981. He was also on the Council of the International Actuarial Association from 1970 to 1983.

Full obituary at **www.theactuary.com**

DEATHS

It is with great regret that we announce the deaths of the following members. We offer our condolences to their families and colleagues.

Mr Christopher Robert Beaton Based in the UK, who became a student in 1954. Died aged 82.
Dr Johannes Henricus Christianus Jansen Based in The Netherlands, who became an affiliate in 1970. Died aged 94.
Mr Robert William Bryan Judson Based in the UK, who became an associate in 1965. Died aged 87.
Mr Dennis Michael Wright Based in the UK, who gained fellowship in 1987. Died aged 60.
Mr Stanley Johnson Based in the UK, who gained fellowship in 1955. Died aged 94.

Inside story

ELLEN YANG
is a Fellow, and director, insurance advisory, KPMG

Where are you based?
Beijing, China.

What volunteer role(s) do you do for the IFoA?
I am the head of the Beijing regional members group, a career ambassador, and a member of the Risk Management Board.
I started volunteering as a guinea pig for the ST2 exam, then I was an assistant marker from 2010 to 2012. I was elected to Council in 2015 and served for two years.

How long have you been volunteering?
Since 2009.

What motivates you to volunteer for the IFoA?
When I started being a volunteer, I just wanted to know the IFoA more. When I relocated to Beijing, I decided to provide my service to help the members based in Beijing.

What have you/do you hope to achieve in your volunteer role?
Well, this is a difficult question for me. I had the honour to serve on Council for two years as the youngest member. I do hope that I contribute to make the IFoA a more worldwide recognised brand.

What new skills or knowledge do you think you have developed?
I remember one of the past presidents told me just before my first Council meeting: "Changes do not happen overnight – as long as we are on the journey to the final goal, do not give up."

Has this assisted your lifelong learning?
I believe so.

Do you think volunteering has helped you in your day job?
I am a consultant, so networking is part of my day job and volunteering definitely helps.

Have there been any memorable moments?
The night I was elected as a Council member.

How do you balance your day job and your volunteer role?
It is difficult, especially with time differences, as most of the time the meetings are at off-work hours in my time zone.

How do you relax away from the office?
Travelling.

What would you say to others considering a volunteer role?
It is worth trying – you never know who will be the next president!

Who is your role model – in life or in business?
I do not have anyone in particular, but I learn from a lot of people by studying their strengths.

What was your earliest dream job?
You might not believe it, but I wanted to become an actuary when I was 12, so I guess this is my dream job.

Do you prefer a staycation or a holiday abroad?
Definitely a holiday abroad.

If you were locked in a famous building for one night... which would it be and why?
The Forbidden City – too much to see and you never get a good opportunity during the day as it is always crowded.

What would you consider to be the most brilliant moment of your career to date?
Relocating to Asia.

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

IMAGES: ISTOCK/ALAMY

Jobs

To advertise your vacancies in the magazine and online please contact:
Shamil Bhoyroo +44 (0) 20 7880 6234 or shamil.bhoyroo@redactive.co.uk

London : Chicago : Hong Kong : Singapore : Shanghai : Zurich

www.ipsgroup.co.uk

Actuarial

Mixed Actuarial Analyst

Up to £60, 000 base + benefits + bonus +study support - City of London

Established London Market Insurer are looking for an Actuarial Analyst to work across both Pricing and some Reserving. The role will report directly into the Chief Actuary and is part of a small growing team. The candidate will need at least 2 years' worth of GI Actuarial experience ideally from Lloyd's/ London market, but not essential. Looking for an individual who has passed at least half of their CT's. Great opportunity to move from a pure reserving or capital role.

Contact: Adam.Bellis@ipsgroup.co.uk Tel: 0207 481 8111

Lead pricing actuary- International Insurer

Up to £125, 000 base + Bonus + Base - City of London

This profitable Lloyd's/ International Insurer are looking to hire a lead Pricing Actuary to their growing and highly-analytical Actuarial team. Looking for an qualified Actuary with at least 5 years Lloyd's/London Market pricing experience to work in a role that will be heavily embedded with Underwriters and senior stake holders.

Contact: Adam.Bellis@ipsgroup.co.uk Tel: 0207 481 8111

ILS Opportunities

Competitive Salary + Package - London, Bermuda and Switzerland

Having just attended one of the first ILS Conferences to be held in London, I'm looking to speak or meet informally individuals who are interested in exploring/finding out more about Insurance Linked Securities and being kept updated with current/future relevant opportunities within London, Bermuda and Switzerland.

Contact: Adam.Bellis@ipsgroup.co.uk Tel: 0207 481 8111

Broker Actuary

Up to £80,000 Base Salary + Bonus and Benefits - City of London

An established Reinsurance Broker are currently looking for a Nearly/ Newly qualified Actuary who has had experience of working within both the UK and Emerging Markets. The role will be reporting directly into the Head of Analytics and the ideal candidate would have worked across either Pricing or Capital and have used VBA, SQL, Excel or R in their current role.

Contact: Adam.Bellis@ipsgroup.co.uk Tel: 0207 481 8111

Reserving Manager

Up to £85,000 Base Salary + Bonus - City of London

A Retail Insurer are currently looking for an experienced Reserving Actuary to join their Personal Lines team. You will need to be an experienced Reserving Actuary with at least 4 years' experience of Reserving and have experience of managing junior analysts. Strong communication skills and experience of using ResQ, SAS and/or Excel is vital.

Contact: Gary.Ahern@ipsgroup.co.uk Tel: 0207 481 8111

Portfolio Analyst

Up to £55,000 Base Salary + Bonus - City of London

A leading MGA are searching for an experienced Analyst who has had at least 18 months experience of working within an Analytical role at a Personal Lines Insurer. The role would suit an Actuary/ Pricing Analyst who is looking for a non-standard Actuarial position. You will need experience of using either SQL, SAS, VBA, Emblem or Radar.

Contact: Gary.Ahern@ipsgroup.co.uk Tel: 0207 481 8111

Capital Roles from Analyst to Newly Qualified

Up to £80,000 Base Salary + Bonus & Study Support - City of London

I am currently working with a number of General Insurers who are looking for Part Qualified to Newly Qualified Actuaries to join their Capital modelling teams. They would like you to have experience of either Igloo, Remetrica or Tyche and are keen to see candidates who have experience of also using Python or R.

Contact: Gary.Ahern@ipsgroup.co.uk Tel: 0207 481 8111

Actuarial Analyst

Up to £50,000 Base Salary + Bonus & Study Support - North West

I am currently looking for an Actuarial Analyst to join a Reserving team based in the North West to work across multiple lines of business and will be involved in the full Reserving process. You will need to have experience of using Excel or ResQ and have passed at least half yours CT's. They are open to seeing candidates from a Life Insurance of Pensions background.

Contact: Gary.Ahern@ipsgroup.co.uk Tel: 0207 481 8111

IPS Group, Bevis Marks House, 24 Bevis Marks, London EC3A 7JB
Telephone: 020 7481 8111 Email: enquires@ipsgroup.co.uk Web: www.ipsgroup.co.uk

PENSIONS & INVESTMENTS
NON-LIFE
LIFE & HEALTH

NON-LIFE

HEAD OF RESERVING
London, £140K - £160K + bonus + bens

A leading global specialty insurer are currently seeking a qualified actuary to lead their reserving function. The role will report directly into the Chief Actuary and will be responsible for leading all reserving activities across the group including those related to IFRS17 and SII. Candidates will need to a wealth of Lloyd's/London market reserving experience, and be used to managing teams of qualified actuaries.

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

[EXCLUSIVE] RESERVING/M&A ACTUARY
London, £competitive

A growing (re)insurer are currently seeking a nearly/newly qualified actuary to join their Reserving and M&A function. The role will focus on delivering robust reserving analyses across their global portfolios, whilst also being heavily involved in providing analytical expertise with regards to their M&A activity. Candidates will need to have a strong background in Lloyd's/London market reserving, either form an industry or consultancy background.

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

[CONTRACT] PRICING ACTUARY
London, £700-£1000 per day

Great contract role for someone to work within a sold pricing team alongside a qualified actuary, reporting in to the Head of Pricing. Work will involve daily business planning, model development, case pricing, product monitoring and reporting. If you have SQL or R this will be beneficial.

Contact: rupa.pithiya@eamesconsulting.com | 0207 092 3249

SENIOR PRICING ACTUARY, London, up to £150k+ bonus + bens

A leading broker is seeking an actuary with extensive pricing experience to join their practice. This will focus on both reinsurance and direct insurance pricing, leading presentations/tenders to clients and working closely with Senior Brokers. The ideal candidate will be qualified and an exceptional communicator. Pricing experience is essential to the role with a preference towards London Market and/or reinsurance LOB's. This is an excellent platform for a Senior Pricing Actuary to join one of the best performing entities on the market and build key relationships for the business.

Contact: curtis.browning@eamesconsulting.com | 0207 092 3242

HEAD OF CAT/EXPOSURES
London, up to £100K + bonus + bens

A leading general insurer is seeking to hire a senior Cat Modeller to their London based analytics function. This will involve building out a team and working with a wide range of teams including brokers, actuaries and IT.
The ideal candidate will have good experience in either Exposure Management or Catastrophe Modelling. Ideally you will have some experience of management/mentoring as this role will involve managing juniors.

Contact: curtis.browning@eamesconsulting.com | 0207 092 3242

RESERVING ACTUARY, London, up to £120k + bonus + bens

A top-tier Lloyd's syndicate is seeking a qualified actuary to join their analytics function and manage a team. This will cover multiple lines of business and reports directly into the Head of Reserving. The ideal candidate will have good experience of London Market and/or Commercial lines reserving. Line management is a big part of this role so previous exposure to this would be advantageous. This is an excellent platform for a qualified candidate to join one of the best-renowned syndicates in the market and take ownership of key business classes.

Contact: curtis.browning@eamesconsulting.com | 0207 092 3242

PENSIONS & INVESTMENTS

SENIOR INVESTMENT ANALYST
Birmingham, £competitive

A reputable actuarial consulting firm is looking for a Senior Investment Analyst to join their growing Investment Consulting team which provides tailored investment services to Institutional clients, including the likes of UK Pension Schemes and Charities. This opportunity offers brilliant prospects for career progression and will lead the successful candidate into a streamlined path to Investment Consulting

Contact: yusra.aljumaily@eamesconsulting.com | 0207 092 3238

SENIOR DB STRATEGIST
London, £competitive

A global consultancy is looking for a senior professional to join their Investment Solutions team to lead on the delivery of solutions for prospective clients, thus promoting new Business Development. The role will enable the successful candidate to work in conjunction with the likes of Portfolio Managers and Senior Retirement and Investment Consultants.

Contact: yusra.aljumaily@eamesconsulting.com | 0207 092 3238

SENIOR MANAGER - RESEARCHER
Birmingham, £competitive

One of the UK's largest consultancies seeks to grow their Manager Research team which acts as a source of knowledge and understanding regarding investment management firms and the funds they manage. The firm is looking for a collaborative individual with knowledge of Institutional client bases and investment management companies.

Contact: yusra.aljumaily@eamesconsulting.com | 0207 092 3238

ASSOCIATE ACTUARIAL CONSULTANT (PENSIONS)
London, up to £50k + bonus + bens

A dynamic and growing pensions team within a global consultancy is looking for a PQ Actuary to further enhance their actuarial services. The successful candidate will be working across an exciting combination of corporate and pension trustee clients. The suitable candidate would ideally have a minimum of 2 years' experience, making good progress in their actuarial exams and have a great academic record.

Contact: dylan.walters-bale@eamesconsulting.com | 0207 092 3227

LEAD ACTUARIAL CONSULTANT
Birmingham, up to £100k + bonus + bens

An award winning pensions consultancy are seeking a Scheme Actuary to join either their Birmingham office. As the Lead Actuarial Consultant you will be contributing to the efficient, high quality service to clients in the pensions space. To be considered for this role you must be an FIA chart holder, hold a Scheme Actuary certificate and have experience of leading with advice to clients on the trustee and corporate side.

Contact: dylan.walters-bale@eamesconsulting.com | 0207 092 3227

INVESTMENT CONSULTANT (BOUTIQUE FIRM)
London, c.£70k + bonus + bens

An award-winning, independent investment consultancy is looking to expand their investment consulting team. In this team you will be responsible for delivering investment advice to clients, offering exposure to varying sizes of investment portfolios. The suitable candidate will be expected to have an excellent academic record, great analytical and communication skills with a minimum of 4 years' experience in an investment consulting role.

Contact: dylan.walters-bale@eamesconsulting.com | 0207 092 3227

Eames Consulting Group

LIFE

RATES STRUCTURER, London, up to £120K + bonus + bens

A global investment bank is seeking an experienced Life actuary for a front line Structuring position within their highly regarded FICC team. The role will involve working across a portfolio of Insurance & Pensions clients spanning the UK, Nordics and Southern Europe. They are seeking a quantitative individual from an insurance background with an excellent understanding of Rates products/financial derivatives, and strong technical SII knowledge. Additional European languages would be highly advantageous.

Contact: joanne.gilbert@eamesconsulting.com | 0207 092 3244

PRODUCT DEVELOPMENT - LIFE & PROTECTION

London, up to £90k + bonus + bens

Reporting to the Head Product Development your primary focus will be to develop life insurance products for the UK and other European markets. You will be responsible for cross functional team coordination, guidance & project management of the development/launch of UK retail primary life insurance products. Suitable candidates will have: UK life protection experience, experience of developing and launching life insurance propositions to multiple distribution channels.

Contact: joanne.gilbert@eamesconsulting.com | 0207 092 3244

SENIOR MANAGER, London, up to £85k + bonus + bens

A leading global FS consultancy is seeking Senior Actuarial Manager to lead client engagement within their Actuarial and Insurance Risk team. The role will involve IFRS Implementation, Pricing Assurance, Mergers & Acquisitions and Capital Models & Capital Planning. The successful candidate will have strong project and people management skills and an ability to structure task allocations. A background in Life Insurance or Consulting experience with strong technical and communication skills is essential.

Contact: sharon.wong@eamesconsulting.com | 0207 092 3268

SENIOR MODELLER, London, up to £80k+ bonus + bens

A specialist reinsurer is seeking a Senior Actuarial modeller for their team which is responsible for providing group level modelling services to various business units around the globe. The team will work with the development of MoSes Pricing, Valuation and Corporate Modelling tools across all product lines. Coding experience in C++ or VBA is valued. You must also have had exposure to SII or other economic Capital Frameworks and experience of using Tyche, MoSes, RiskAgility FM or similar modelling platforms.

Contact: salma.binte-rabbani@eamesconsulting.com | 0207 092 3228

PRODUCT ACTUARY, Munich, up to £80K + bonus + bens

A global reinsurer are seeking a Product Actuary to support the CPO in leading the development and maintenance of Terms of Trades (TOT), costing tools/models and assessing and validating new deals across their L&H business. Suitable candidates will be qualified actuaries (FIA/FFA/FSA or equivalent, with solid L&H insurance industry expertise and market knowledge, and experience in Life & Health product development and pricing. Excellent knowledge of relevant statistical and actuarial models, as well as fluency in English / other European language would be advantageous.

Contact: joanne.gilbert@eamesconsulting.com | 0207 092 3244

LIFE & INVESTMENT CONSULTANT

London/Edinburgh/Glasgow, up to £75k + bonus + bens

An independent Consultancy is seeking to hire a newly qualified actuary to join the London team. Supporting the Partners & Directors, you will take on a diverse role within their Life & Financial Services practice covering: Product Pricing and Development, Insurance Investment, Longevity and M&A Transactions, Capital management, SII. You will have good knowledge of SII and experience in Life Insurance or Consulting with strong project and people skills.

Contact: sharon.wong@eamesconsulting.com | 0207 092 3268

ABOUT EAMES CONSULTING GROUP

Eames Consulting Group connects the financial and professional services sectors with the talent needed to succeed. Founded in 2002, we are a team of 130 with offices in London, Zurich, Singapore and Hong Kong.

Working with a range of international insurance firms, consultancies and investment management organisations, our specialist team of actuarial consultants focus exclusively on the mid-to-senior level, across life and non-life insurance and the pensions and investment markets.

Our team work on both permanent and contract opportunities. If you are looking for your next career move or to discuss other opportunities we may have, get in 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.

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To receive a copy please email: newsletter@eamesconsulting.com

IN FOCUS: A BURGEONING MIDDLE EAST MEDICAL INSURANCE MARKET

LMA
EXPERTS IN RECRUITMENT

VISION & PLANNING

Social and economic change is well underway in the Middle-East, and the insurance landscape is witnessing a paradigm shift. Some governments across the region have made it their priority to improve the lives of their residents, as well as to develop their infrastructure models to be amongst the best in the world. UAE's Vision 2021 and Saudi Arabia's Vision 2030 are excellent examples of the level of planning and investment committed to ensuring key policy objectives will be met, and an integral part of this impacts the health provider and payor space.

With low oil prices and changing economic winds, governments are increasingly looking to shift the burden of high healthcare expenditure from the public to the private sector. Many years of unlimited state-funded healthcare appear to be coming to an end, as governments realise that these spiraling costs are simply unaffordable in the future.

THE MARKET

Countries in the Middle East exhibit a wide wealth gap by GDP per capita, ranging from extreme wealth to relative poverty. As a result, we see a very different set of healthcare provider and payor systems across the region. In countries where compulsory medical insurance has not yet been mandated for a particular segment of the population, insurance penetration rates tend to be in the low single-digits.

Market participants comprise both public and private insurance carriers, as well as participation from domestic and foreign carriers. A distinct parallel (Re)Takaful market has also developed to offer (re)insurance solutions that comply with Islamic requirements.

Health insurance is one of the most significant lines of business in a number of markets, for example in Saudi Arabia, health represents approximately 50% of all insurance business. Strong growth is expected as mandatory roll-outs are implemented and individuals continue to be concerned about the increasing costs of medical treatment.

EXPAT POPULATION

A specific feature of the region is the presence of a relatively high expat population, with the UAE having the highest proportion of expats at just under 90%. The expat population has influenced the evolution of the market as well as product design features such as benefit cover and extending eligible treatment territories to an individual's home country.

EXPAT POPULATIONS IN THE MIDDLE-EAST

DATA SOURCE: UNITED NATIONS 2017 INTERNATIONAL MIGRATION REPORT

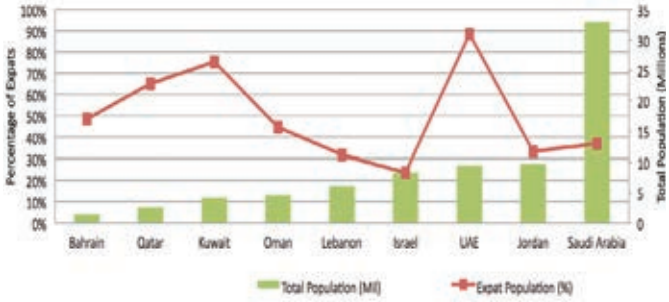

Exhibit: % expats of population for key MENA territories

MANDATORY HEALTH INSURANCE

Saudi Arabia was the first country to implement mandatory health insurance for expats but is now looking to introduce compulsory health insurance for Saudi nationals as well. This will result in a vast pool of Saudi citizens requiring coverage, a move eagerly awaited by insurers.

In UAE, Abu Dhabi was the first Emirate to introduce mandatory health insurance back in 2007, stipulating that employers must provide coverage for expats and their spouse and children.

Dubai followed with mandatory health insurance for all residents, implementing a three-stage roll-out that completed in April 2017. This stipulated that all registered employers must provide their employees with health insurance that conforms to a minimum prescribed set of benefits. The obligation also extends to dependents of sponsors including domestic workers.

Oman is set to be the next territory to introduce mandatory health insurance, with implementation expected during 2018. This will offer insurers an additional collective pool of approximately 4m lives, as currently it is estimated that about 10% of Omanis and expats in the private sector have health insurance.

Other neighbouring countries contemplating introducing mandatory health insurance include Qatar and Kuwait.

PRODUCTS & PRICING

The development of the medical insurance market in the region has come with challenges for some insurers. These include the lack of sufficient credible data to price products and having the required actuarial skill set to understand how medical inflation and claims utilization trend drives overall loss ratios. Reinsurers have a vital role to play in providing technical assistance to insurers and offering appropriate risk management solutions such as an excess of loss protection to reduce the volatility of the underlying portfolio.

Actuaries can add value by tapping into rich data sets and identifying key risk drivers that have perhaps been recorded, but not necessarily used for premium rating, e.g., nationality or type of industry for group risks. There is evidence of irrational pricing across the market, with much of this reflecting a lack of understanding of the underlying risk, rather than merely due to competitive pricing pressure.

Products are typically structured around the level of access to hospital networks, with more expensive products opening up access to the higher-cost flagship hospitals. Products tend to include cover for inpatient, outpatient and maternity care, with richer benefits often extending to optical, dental, hearing and psychiatric care. A unique feature of product design is the high utilization of outpatient care and the absence of sub-limits. The frequency of outpatient claims is significantly higher than for inpatient claims, albeit with much lower average claims costs. Most other medical insurance markets reflect a very different dynamic between inpatient and outpatient claims utilisation, with more limited outpatient benefit cover.

OUTLOOK

With increasing health care problems facing the region, such as the obesity and diabetes epidemic in the UAE and Saudi Arabia, there will be an opportunity for insurers to develop robust wellness and preventative solutions within medical insurance products. This will be a welcome development for all, as individual health needs will be better addressed by insurers and respective governments will come closer to meeting their key policy objectives.

InsurTech-related innovation also offers significant opportunities to improve product design, disrupt distribution and improve data analytics, thereby establishing a competitive advantage for insurers. Product innovation has historically been limited and in the pursuit to better meet the needs of insureds, it is anticipated that technology will be a key enabler supporting the delivery of much-needed preventative and wellness solutions.

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raretec recruitment

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Ireland's Premier Actuarial Recruitment Specialist

Pricing Actuary

A leading non life insurance company are looking for a pricing actuary. General insurance industry pricing experience is essential for this role. There are many opportunities for progression within the company and the role will particularly suit those who have an interest in the latest pricing innovations.

Operations Actuary - Reinsurance

An international reinsurer is seeking a nearly/newly qualified life actuary to join their growing actuarial team. Candidates will develop in-depth knowledge of the intricacies of a portfolio of reinsurance treaties. This is a cross-functional role, where excellent communication skills are essential.

Reporting Actuary - Life

Reporting Actuary required for a newly created team with a prominent European insurer. Reporting to a Head of Financial Reporting, this is an excellent opportunity for ambitious candidates who are working towards future HOAF positions. Strong presentation and reporting writing skills are required here.

Reserving Actuaries

Senior Reserving Actuary required by a dynamic growing insurance entity. This is exciting opportunity for an experienced senior actuary to influence the organisation's commercial strategy. The qualified non-life actuary will strengthen the reserving processes and methodology. The role requires an experienced non-life actuary with excellent reserving and communication skills.

Non-Life Consultant

Excellent opportunity for a non-life actuary to join an expanding services organisation. Working with a team of actuaries you will gain exposure to cutting edge actuarial work, strategic business planning and topical insurance projects.
The role will suit an ambitious actuary who can adapt to different environments and who enjoys a variety of work. The organisation will also consider nearly qualified applicants.

IFRS project Manager

A multinational life insurer is looking for a project manager to join their actuarial team to aid the implementation of IFRS17. This is an exciting opportunity for a individual to work in a topical management role with high levels of responsibility.The ideal candidate will have a strong project management background with a track record of regulatory implementation, systems integration and insurance reporting.

Actuarial Data Scientist

Our established general insurance client seeks a Data Scientist within their actuarial pricing team.
This is an excellent opportunity for actuaries interested in transferring to a data science role. You will use the most up to date technologies and join a growing team in Dublin.

Financial Risk Analyst

Exciting opportunity for a part qualified actuary to join a leading European life insurer. This role will assist all aspects of risk monitoring, modelling and analysis relating to both the company's hedging and investment strategies. Candidates must have at least 1-2 years' experience.

Non Life Pricing Manager

We have an exciting opportunity for a non life actuary to move into a pricing management role. This role is to join an existing expanding pricing team. You must have strong technical pricing skills for the pricing management role and enjoy leading and managing others as well as strong communication skills.

For further information on these and other opportunities in Ireland please contact us at **jobs@raretec.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.raretec.ie**

School of Mathematical Sciences, Queen Mary University of London

Lecturer/Senior Lecturer in Actuarial Science (Teaching & Scholarship)

Reference: QMUL14538

About us

Queen Mary is one of London and the UK's leading research-focused universities and a member of the Russell Group. With over 20,000 students, it is amongst the largest of the colleges of the University of London. Queen Mary's 4,000 staff teach and research across a wide range of subjects in Science and Engineering, the Humanities, Social Sciences and Laws, and Medicine and Dentistry.

The School has large and popular undergraduate and graduate programmes. In 2016/17 academic year, the School introduced a new BSc Mathematics with Actuarial Science programme. This is part of the School's strategy to further extend its expertise in actuarial and financial mathematics, and expand the portfolio of modules and taught programmes in this area.

About the role

Applications are invited for a Lecturer or Senior Lecturer in Actuarial Science to lead on the delivery and the ongoing development of the actuarial undergraduate and postgraduate programmes. The successful candidate will be a Fellow or Associate of the Institute and Faculty of Actuaries (IFoA) and have industrial and/or teaching experience relevant to actuarial science. They will be expected to develop links with industry to foster knowledge exchange between university and industry, including work experience opportunities for students as well as the role holder's own professional development. With the agreement of the Head of School, the role holder may undertake external consulting.

The successful candidate will have teaching experience appropriate to the level of appointment. At Senior Lecturer level they will be a Fellow of the IFoA, and have substantial experience of leading on the delivery and development of taught programmes as well as some relevant industrial experience. At Lecturer level they will have the knowledge and ability to teach across a range of topics in actuarial science, including core technical subjects (CT1-8).

Pay & Benefits

Benefits include 30 days annual leave, childcare vouchers scheme, defined benefit pension scheme and interest free season ticket loan.

Outside scheduled teaching contact hours and scheduled meetings the School operates a flexible working policy, including working from home. The School also has policies to support staff returning from long-term absence, for flexible arrangements for staff with parental responsibilities and for child-care support for the attendance of conferences.

We are committed to the equality of opportunities and to advancing women's careers within Mathematical Sciences. The School holds a departmental Bronze Athena SWAN Award and is a registered supporter of the LMS Good Practice scheme. Please visit **http://www.qmul.ac.uk/maths** for further information about the School and **https://www.qmul.ac.uk/maths/about-us/equality/** for our family friendly policies.

The post is full-time and permanent. For an appointment at Lecturer level, starting salary will be in the range of £40,865 - £50,881 inclusive of London Allowance. For an appointment at Senior Lecturer level, starting salary will be in the range of £53,777 - £60,109. An additional market supplement is negotiable. The successful candidate will be expected to start the post on September 1, 2018, or as soon as possible thereafter.

Further information

To apply, visit **www.jobs.qmul.ac.uk** and search for reference QMUL14538

Informal enquiries may be made to Professor Boris Khoruzhenko at: **b.khoruzhenko@qmul.ac.uk**

Please ensure you include with your application a curriculum vitae, a list of any publications and a teaching statement.

The closing date for applications is Thursday 31 May. Interviews are expected to be held shortly afterwards.

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LIFE

ACTUARIAL TRANSFORMATION – IN-HOUSE

Qualified — Major Insurer

LIFE LONDON — **STAR4804**

A fantastic opportunity to play a leading role in designing and implementing the actuarial technical workstreams of our client's financial transformation programme.

You will work with the financial and capital reporting teams to streamline as much of the methodology and approach as possible between IFRS and Solvency II, whilst identifying strategic opportunities for the business to strengthen the production environment, processes and systems.

The successful candidate will have hands-on experience of developing and building financial models using a number of software package e.g. VBA, R, Matlab.

Please contact **Jo Frankham** (**+44 7950 419 115, jo.frankham@staractuarial.com**) for more information.

REINSURANCE ANALYST

Part-Qualified — Global Broker

LIFE LONDON — **STAR4611**

Develop your career in this cutting-edge role, working closely with team leadership to provide expert analysis and develop pricing, reinsurance and risk models. Experience in Solvency II is an advantage.

PRICING ACTUARY

Qualified — Major Global Insurance Group

LIFE LONDON — **STAR4802**

Seeking a candidate with experience of pricing and reinsurance in the UK Protection market to lead on a wide range of potential projects relating to pricing, reinsurance, distribution and product development.

ACTUARIAL TRANSFORMATION – CONSULTANCY

Qualified — Major Global Consultancy

LIFE LONDON — **STAR4757**

Take up a leadership position in an actuarial transformation team, working on a wide range of cutting-edge client projects.

In this fantastic career-development opportunity, you will apply effective stakeholder management skills to help clients adapt their Finance and Actuarial functions to new technologies, new regulations and cost pressures.

The successful candidate will possess strong financial reporting experience including technical knowledge of the key life insurance financial metrics (e.g. Solvency II, Embedded Value and IFRS reporting) and the application of these in various areas of actuarial work.

Please contact **Jo Frankham** (**+44 7950 419 115, jo.frankham@staractuarial.com**) to discuss this challenging and rewarding role.

FINANCIAL REPORTING ACTUARY

Qualified — Major Reinsurer

LIFE LONDON — **STAR4783**

Take this excellent opportunity to play a key role in IFRS and Solvency II delivery within a leading actuarial employer. You will plan and co-ordinate deliverables and liaise with other teams to ensure timely results are produced.

REINSURANCE ANALYST - BULK ANNUITIES

Part-Qualified — Major Insurer

LIFE PENSIONS LONDON — **STAR4659**

A fantastic opportunity to join an innovative bulk purchase annuity team, supporting the reinsurance tender process, assessing competitive positioning, performing collateral calculations and producing regular accounts.

LONGEVITY RISK ANALYST

Qualified — Leading Global Consultancy

LIFE LONDON, NORTH WEST, SOUTH EAST — **STAR4730**

Use your strong modelling skills in this creative and innovative client-focused actuarial role, which offers exposure to the latest techniques and the opportunity to specialise in longevity and demographic risk.

RISK REVIEW AND PRICING

Part-Qualified / Qualified — Leading Reinsurer

LIFE LONDON — **STAR4782**

An exciting opportunity to promote risk management, develop risk strategy and review changes to pricing bases and tools. You will also advise on the financial, operational, legal and reputational risk of complex transactions.

Is your next role one of the

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LIFE VACANCIES

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NON-LIFE OPPORTUNITIES ON THE BACK PAGE

ACTUARIAL POST RECRUITER OF THE YEAR 2012 · 2013 · 2014 · 2015 · 2016 · 2017

PENSIONS

SENIOR ASSOCIATE – M&A

Part-Qualified — Leading Global Consultancy

PENSIONS LONDON — STAR4794

Join a leading deals team and support all aspects of transactions, from pre-deal due diligence and vendor/purchaser assistance to post-deal implementation leading to ongoing corporate consultancy.

COVENANT REVIEW SPECIALIST

Qualified — Growing Consultancy

PENSIONS LEEDS — STAR4714

Seeking a high-calibre actuary with a desire to help grow a niche line of business, within a multi-disciplinary, dynamic consulting team. This is a great career development opportunity for someone with covenant review experience.

TIME TO SHINE

Qualified — Niche Consultancy

PENSIONS LONDON — STAR4494

Looking for the Big 4 vibe but in a start-up environment? Join this boutique consultancy and grow with them. You will be driven, creative and have proven corporate pensions experience. Time to shine!

PENSIONS CONSULTANT

Part-Qualified — Leading Global Consultancy

PENSIONS BRISTOL — STAR4657

Support both Trustee and Corporate assignments, contributing to defined benefit and defined contribution plan design and strategy, pension plan financial management, ALM and broader risk management work.

INVESTMENT

ALM OPPORTUNITIES

Part-Qualified — Leading Investment Company

PENSIONS INVESTMENT LONDON — STAR4693

Fantastic opportunities for pensions and investment actuaries to take their career to the next level with a leading consultancy.

Take up a client-facing role where you will develop your stakeholder management skills and commercial awareness in the design and delivery of solutions which are aligned with client objectives, constraints and preferences.

Alternatively, take up a role with a systems focus where you will design and implement systems to improve the efficiency, accuracy and robustness of ALM processes.

Whichever path you choose, you will have the opportunity to make a real difference in a continuous learning environment.

Contact **Adam Goodwin** (**+44 7584 357 590, adam.goodwin@staractuarial.com**) now for further information.

CORPORATE PENSIONS ACTUARY

Qualified — Specialist Consultancy

PENSIONS MANCHESTER — STAR4398

Unique opportunity for a qualified pensions actuary to build and lead a new business based in Manchester.

You will have significant experience of providing corporate pensions advice to a wide range of clients to help them achieve their objectives.

You will have entrepreneurial flair, a commercial focus and a proven track record of business development.

You will enjoy managing long-term client relationships, from initial contact, through feasibility studies and project planning to successful completion.

Contact **Margaret de Valois** (**+44 7591 206 881, margaret.devalois@staractuarial.com**) to find out more about this exciting role with a thriving consultancy.

Is your next role one of the **164** PENSIONS & INVESTMENT VACANCIES on our website?

MANAGEMENT CONSULTANCY

Part-Qualified / Qualified — Market-Leader

PENSIONS LEEDS — STAR4718

Develop your career with a market-leader. You will work in multi-disciplinary project teams developing cutting-edge solutions to a wide range of pensions problems using the latest technology.

INVESTMENT CONSULTANT

Qualified — Growing Investment Practice

PENSIONS INVESTMENT SOUTH EAST — STAR4598

Seeking a talented, motivated and enthusiastic actuary (or CFA) to play a key role in ALM, drafting and presenting advice to clients at meetings, assisting with manager research and providing Trustee training.


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We have consultants based in or near to all of the following major actuarial centres in the UK:

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Snapshot of Live Actuarial Vacancies

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686
LIVE GLOBAL JOBS

Life, Pensions & Investments

Director – Life Consultancy
London
£150,000 - £200,000 + Package

We have been mandated to recruit a number of Director-level hires for a leading actuarial consultancy in London. The roles will play a leading part in developing clients across the Life market. The client is keen to meet senior actuaries with varied experience in the sector.

Senior Risk Actuary
London
Up to £110,000 + Package

A global reinsurer seeks a Senior Risk Actuary in London. The ideal candidate will have 8+ years' experience and recent risk deal review exposure, as that is the primary focus.

Nearly or Newly Qualified Contractors
UK-wide
£700/ day

Nearly or newly qualified actuarial contractors are required to support a number of change, reporting and modelling projects. Notice periods can be accommodated. Please get in touch for further details.

Scheme Actuary
South West
£70,000 - £90,000+ DOE

Scheme Actuary sought to join an entrepreneurial consultancy in a close-knit business due to a series of business wins. Excellent work-life balance and autonomous environment on offer.

Investment Consultant – Fiduciary
Edinburgh/Glasgow
Up to £70,000

Independent and innovative consultancy seeks talented Investment Consultant to bolster its Fiduciary Consulting offering. Excellent opportunity to work with a diverse portfolio of trustee and corporate clients.

Risk Modelling Actuary
UK
£600 - £750/ day

A well-established life client requires a risk modelling actuary for a new six-month contract vacancy. Candidates with MATLAB, R or Python development experience, and experience of proxy modelling, should get in contact.

General Insurance

Consulting GI Actuarial Director
London
Up to £185,000

Global consulting firm is partnered with Oliver James Associates on a Director-level hire to bolster existing Non-Life team within actuarial practice. Industry and Consulting backgrounds considered. FIA essential.

Senior Capital Actuary / Head of Capital
London
£100,000 - £150,000 + Package

We are working with a number of London Market / Lloyd's firms on Senior Capital / Head of Capital positions. Varying from technical modelling to more strategic / business-use-oriented roles. Please get in touch to discuss individual positions.

ReInsurance Pricing Contractor
London
£800 - £900/ day

An international (Re)insurer is seeking a pricing actuary for maternity cover. You must have treaty pricing experience in various lines of business, and be able to demonstrate good underwriter engagement.

Pricing Manager
Birmingham
Up to £78,000

We are currently recruiting for a pricing manager to join one of our national insurance clients in their West Midlands office. Previous pricing knowledge and senior stakeholder management skills essential.

Capital Analyst
London
£55,000 + Package

Highly reputable London Market firm requires a part-qualified actuary to join its expanding team. Candidates will have worked with standard formula, and have strong capital modelling experience with Solvency II.

Reserving Contractor
London
£800 - £1,000/ day

We have multiple projects calling for qualified or part-qualified actuaries with London Market and commercial lines reserving experience. Please call to discuss.

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EXCLUSIVE

PRICING & ANALYTICS LEAD

Qualified — Growing Business

NON-LIFE NORTH WEST — **STAR4825**

Fantastic opportunity for a qualified actuary to take their career to the next level with a growing specialist insurer.

You will apply your exceptional technical skills in the development of cutting-edge analytic capability and your refined stakeholder management skills in effective project management and implementation.

You will enjoy leading a team, be creative and innovative, and determined to make a real difference to this successful business.

Contact **Lance Randles** (**+44 7889 007 861, lance.randles@staractuarial.com**) now for more information regarding this leadership role.

ACTUARIAL TRANSFORMATION

Qualified — Global Consultancy

NON-LIFE LONDON — **STAR4808**

In this leadership role, you will use your experience in reserving and passion for actuarial transformation to help clients develop their finance and actuarial functions using new technologies.

GI PRICING ACTUARY

Part-Qualified / Qualified — Managing Agency

NON-LIFE LONDON — **STAR4803**

In this varied role, you will work with the underwriters to develop, review and maintain appropriate pricing tools, and also contribute to reserving, business planning, capital modelling and outward reinsurance purchase.

EXCLUSIVE

CUTTING-EDGE CAPITAL

Qualified / Part-Qualified — Leading Insurer

NON-LIFE LONDON/HOME COUNTIES — **STAR4828/4829/4830**

We are working exclusively with a client with exciting growth plans for its Capital and Actuarial teams, to bring them to the forefront of modern techniques and processes.

We are recruiting across a range of Capital Modelling and Actuarial skill sets, offering fabulous development opportunities for creative thinkers seeking to develop themselves and the team as a whole during a period of expansion, change and modernisation.

Initial vacancies are for qualified actuaries with capital experience wishing to specialise in capital management, technical development or operational processes. Non-qualified candidates with relevant experience will also be considered.

We are also keen to hear from student actuaries for reserving and pricing roles.

Please contact **Louis Manson** (**+44 7595 023 983, louis.manson@staractuarial.com**) for further information.

EXCLUSIVE - INSURTECH ACTUARY

Part-Qualified — Innovative Organisation

NON-LIFE LONDON — **STAR4800**

An exclusive role within a close-knit team, deploying innovative mobile technology across the globe. A creative, collaborative and commercial approach is essential, along with end-to-end product development and pricing experience.

INSURING THE FUTURE

Qualified — Lloyd's Syndicate

NON-LIFE LONDON — **STAR4638**

Exciting opportunity to become a thought leader in a growth area of specialty insurance. You will work closely with underwriters and the Chief Actuary in developing insurance solutions in relation to the sharing economy.

PRICING AND RESERVING ACTUARY

Qualified — Lloyd's Insurer

NON-LIFE LONDON — **STAR4696**

Seeking a qualified actuary with European language skills, experience of a variety of business lines and knowledge of exposure and experience based pricing methods to take up a pricing and reserving role within a growing team.

RESERVING & CAPITAL ANALYST

Part-Qualified — Growing Global (Re)insurer

NON-LIFE LONDON — **STAR4744**

A new capital and reserving role in a growing team for a part-qualified actuary with a proactive approach and strong stakeholder management skills. Develop your career as you gain exposure to and work closely with senior management.

Is your next role one of the **100 NON-LIFE VACANCIES** on our website?


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