

Chinese Actuarial Network UK Newsletter

Issue 4 | February 2013

Editor's Note



Tony (Yutian) Chen, FSA, Towers Watson UK, editor@chineseactuary.org

Happy Chinese New Year! While the cold, rain sodden London winter is still with us, the good news for us Chinese actuaries in the UK is that we have the chance to celebrate another festival as important to us as Christmas is for Christians: the Spring Festival. It is a Red Letter Day for us Chinese. At the moment in China, the key topic in the news is 'The Spring Festival Travel Rush', all for the purpose of having a reunion dinner with our family on our New Year's Eve.

The Chinese New Year, as a 'real' beginning of a new year, also means that it is customary at this time to review the year which has gone and look ahead to the future and what lies before us.

For CANUK, as a newly-formed association, 2012 is a successful year. The report on the CANUK anniversary event, as you can see in this issue of newsletter, summarizes our achievements this year. We are now looking forward to a wonderful year in 2013!

2013 represents a challenge to actuaries working in the UK. The delay in implementing Solvency II has made contractors flood the job market. This has meant that, as a chain reaction, a candidate has to compete with many more peers than three years ago, for any new opportunity that arises. In consulting firms, the revenue is being challenged owing to the state of economy and market pressures: billable hours are difficult to achieve at the moment. It seems the "grave train" may have come to a grinding halt!

However, let's not panic yet, even when taking into account the challenges of a tough environment. We understand the 'carnival' of the Solvency II job market cannot last forever. More importantly, we are in a profession which is famous for its stability and steadily evolving career path. Being an actuary is rated as one of the best careers in America, based on six factors: environment, income, employment outlook, physical demands, security and stress. Actuaries do not earn as much as investment bankers but never have to undergo the same level of volatility and angst in the job market.

There are various ways of responding to a sluggish job market – one of which is to improve our personal values by taking the long-term view and avoid fickleness with regard to short-term targets. If we have in-depth expertise with regard to the core, rather than on periphery, of an important project, we need not worry too much about the job market environment.

Returning to the newsletter, in Issue 4 we will continue our main themes from Issue 3. In the "Feature" section, we are launching a new topic on 'What Actuaries Actually Do in the UK'. This time we have invited four investment actuaries to share their experiences with us. Two CANUK activities are reported in the following, including our Chinese New Year Dinner. With regard to the technical aspect, we will be sharing our experiences with you in an article on the '2012 Review of Asset classes'. Then we will have the "Tea Break", with an interesting article about one member's working / living experiences in different countries. We are continuing the two sections dedicated to our student members: one sharing exam tips and another comparing the UK and US exam systems. Towards the end of this issue, we will also be sharing some news / activities about CANUK members with you.

As usual, we ask for your kind help by:

- ✚ **Giving us feedback on our newsletter.**
- ✚ **Contributing your stories in the "Features" sections.**
- ✚ **Demonstrating your expertise in the "Technical Corner" section.**
- ✚ **Showcasing your interests or share your experiences in the "Tea Break" section.**
- ✚ **Listing your name in the "Recently Qualified" section.**
- ✚ **Sharing your delight in your career move or new baby born etc. in the "Members' Activities" section.**

We hope you enjoy reading this newsletter and please don't forget to share your ideas/stories with us by writing to: editor@chineseactuary.org.

Acknowledgements to our volunteer editorial team: Yang Zhao, Lin Cong and Yan Liu

Content

Editor's Note

Happy New Year

Features

- [History of Investment Actuaries](#)
- [Interview - Yumeng Zhang](#)
- [Interview - Yi Liu](#)
- [Interview - Yang Yu](#)
- [Interview - Huayin Liu](#)

CANUK Activities

- [CANUK Anniversary Event](#)
- [Chinese New Year Dinner](#)

Technical Corner

- [2012 Review of Asset Classes](#)

Tea Break

Recently Qualified

- [Recently Qualified](#)
- [First-Hand Exam Tips](#)

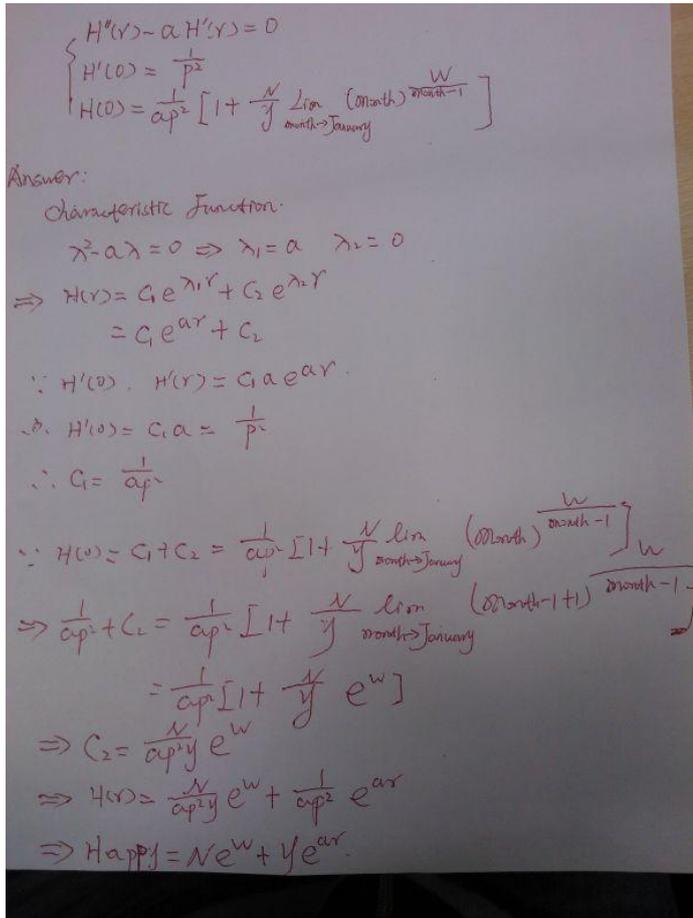
Comparison of UK and US exam system

- [Comparison of exam system](#)
- [Interview - Chelsea Tian](#)
- [Q&A to FSAs working in the UK](#)

Members' Activities

- [Launch of CANUK Edinburgh Sub-group](#)

Happy New Year



Chinese New Year is coming - a mathematic way to say Happy New Year! We believe somebody else can develop another formula to say 'Happy **Chinese** New Year'!

Thanks for our member Xiao YU, who provides this interesting picture from her friend Jie WU.

Features

History of Investment Actuaries

About the author: Huayin Liu, Vice President of Redington. He can be contacted at huayin.liu@gmail.com

Wikipedia uses the following definition of 'actuary', which it borrows from Trowbridge's book 'Fundamental Concepts of Actuarial Science':

"An **actuary** is a business professional who deals with the financial impact of risk and uncertainty. Actuaries provide expert assessments of financial security systems,

with a focus on their complexity, their mathematics, and their mechanisms."

- <http://en.wikipedia.org/wiki/Actuary>

In the very early stage of actuaries' practices, even before the title 'Actuary' was used, actuarial techniques were used to provide people and businesses with protection. Over centuries, actuaries use their knowledge of mathematics, statistics, finance and economics to design insurance protection products, pension schemes and social benefit systems. Despite different working fields, mathematical models and job titles, actuaries are dealing with the same fundamental subjects: risk and uncertainty. These future unknowns arise from uncertainties in terms of the timing, quantity and likelihood of future claims.

Inevitably, there are also risks associated with the investment of insurance premiums or assets that belong to claimants. Of the many levers that actuaries can pull, investment and risk management play very important roles to mitigate those uncertainties in the future. In recent years, many actuaries are employed outside of their traditional fields of insurance and pensions. Actuaries have also started to deploy their knowledge and expertise in investment, asset management and risk management practices.

The term "investment actuary" refers to those actuaries who work in investment-related fields. What is an investment actuary exactly? In what ways are they different to the other investment professionals? I would like to borrow the definition from Trowbridge and apply a few tweaks:

An investment actuary is a professional who deals with the financial impact of risk and uncertainty of an asset portfolio. Investment actuaries provide expert assessment, implement and management of an investment portfolio, with a focus on meeting liabilities or any other forms of contingent claims.

By this definition, it becomes clearer that to distinguish from other investment professionals, investment actuaries consider investment decisions with the other side of the balance sheet – liabilities – in mind. Their investment objective is usually not a specific rate of return target or trying to outperform a market benchmark (e.g. FTSE 100 index). For example, investment actuaries working in an investment consulting firm would consider how to construct an investment portfolio to meet with liabilities of a pension fund that span over 50 years. Another important issue is that investment actuaries will participate in the design, analysis and

implementation of investment portfolios from a top-down point of view. Investment actuaries will make strategic asset allocation and select the most appropriate method or instrument to implement an investment idea. They are not trained to deal with buying and selling of securities and they are not making any judgements on selecting a single security over another. The people who do make the decisions on trading and security selection are traders and fund managers.

In today’s business environment, you can come across investment actuaries in consultancy firms, risk management departments in insurance companies and banks, sales and trading divisions of financial institutions who deal with insurance companies and pension funds and fund management firms which provide liability matching funds. Investment actuaries are using the same actuarial principles to add value to the community in each of those different organisations.

The financial market condition has a dominant effect on the number of opportunities available in banks and asset management companies. The period of 2003-2007 has been the golden age for banking. It was unsurprising to learn bonuses were paid out in multiples of base salaries for someone who worked in an investment bank. Chasing a better salary may not be the only motivation for someone when considering a role outside of insurance and pension. However, it was one of the main reasons that drove investment actuaries to move.

Post the credit crunch and the European sovereign debt crisis, developed countries globally went into recession. Banks are facing increasing scrutiny that the tougher regulations reduce their abilities to take risks. The glory of investment bankers is faded away as more banks de-lever their balance sheets. The supplies of jobs from investment banks are reduced. On the demand side, the concerns over job security and reduced bonuses are taking over the desires to work for an investment bank.

Yet, the global financial crisis has created opportunities in some other areas. Solvency II regulation has led insurance companies to expand risk management and reporting department to hire more investment actuaries to implement the new regulation. With the decreasing real interest rate and asset values, the UK pension schemes have realised the importance of managing interest rate and inflations risks as well as setting risk management objectives to achieve their long-term funding goals. This has created opportunities for

specialised investment consultancy companies and asset management firms which offer liability driven investment (‘LDI’) solutions. More actuaries are expected to take posts in those companies, maybe for better salaries or for the challenges to working in different environments.



Investment Actuary Interview 1

About the interviewee:

Full name *Yumeng Zhang*
Universities (year of completion) / degrees
Cass Business School (2006)/PhD
One line description of jobs to date



Investment consultant, LDI structurer

Family: *Married, no kids*

Hobby / Interest: *Most sports, music, poker and travel*

Home province / region: *Beijing/China*

Favourite quotes: *“Feel the fear and do it anyway”*

Interview Q&A

Question1: Brief description of each experience/direction in your career:

- factual description (length, area, location etc.)
- what have you learnt
- what you would do differently with the benefits of experiences to date

At present, I work in the LDI funds team at Legal & General Investment Management (London). I joined LGIM in 2009; prior to that, I worked as an investment consultant at KPMG (London) for 3 years.

Both experiences are really interesting and very valuable. As a consultant, you have a chance to look at the big picture covering all aspects of the client’s investment arrangements. At KPMG, I was involved in a wide range of work e.g. reviewing strategic asset allocation, trustee training, manager selection and on-going monitoring etc.

In my current role at LGIM, I structure and implement risk management solutions for pension fund clients. This covers different types of derivatives (interest rate/inflation swaps, swaption, asset swaps, TRS/Repo, CDS and equity options

etc.) together with physical assets. The role is very much closer to the market. I work together with traders/quants and provide a key input into the design and implementation of these solutions.

A bit too hypothetical to say what I would do differently with the benefits of experience to date. However, having the first-hand experience of designing/implementing the hedging solutions will definitely help when you speak to a client, regardless whether you are a consultant, a sale person, a fund manager or a banker.

Question 2: Why did you choose the career path as an investment actuary? What do you think of your career path? How many different ways can one become an investment actuary (give 3 if possible)?

I spent 3 years doing my PhD research in the area of pension fund investment strategies. So, when I started my job hunt, investment was always the obvious first choice in my mind.

The experience so far from both consulting and asset management side gives me a good combination of knowledge and skill sets.

In terms of different routes to be an investment actuary, investment consultancy is still the typical route I guess. ALM teams in life insurers are another traditional option. From time to time, the investment market will be looking for people with expertise on the liability side as well, for example with-profit products, longevity modelling etc.

Question 3: What do investment actuaries do in the UK (work scope, type of employers, career path etc.) from your point of view?

From what I can see, most of investment actuaries are still working in consulting firms (e.g. Towers Watson, Mercer, Aon Hewitt etc.) doing ALM related work. Over time some of them moved to asset managers focusing on liability-driven investment solutions (myself included); before credit crunch, a few of them moved to investment banks as well, doing LDI, longevity or life insurance solutions on the sell side.

Of course, there will be some traditional ALM actuaries working for life insurers. In addition, with the development of pension buy-out market, there

are a number of actuaries working in the specialised buy-out firms as well.

Question 4: Could you please describe your typical day (in less than 100 words)? Could you please describe your current work scope? Which one do you think is most valuable? Which is most interesting? Why?

My day starts at 8 with a daily market update meeting with traders. Then it is pretty much dominated by different new and existing bespoke LDI hedging mandates, for whom we need to either implement the new hedge or review their existing position so that it remains effective/optimal, using the knowledge of market conditions, emerging trade ideas, liability cashflows, risk ladders and other analytics. There are often a few conference calls or meetings to engage with clients and investment consultants on a typical day.

Working with some high profile clients and designing/implementing some of the biggest derivative transactions in the market are probably the most interesting and valuable part in my current work. They are challenging but really enjoyable.

Question 5: What do you think is the key successful factor as an investment actuary?

I would say, to be really good at the "actuarial" expertise; in the mean time, stay hungry and stay foolish.

This probably applies to any career but is particularly relevant to qualified actuaries who would like to move out of their comfort zone and make a success in a market where just having a FIA/FSA does not mean anything.

Question 6: What's the advantage and disadvantage of an actuary working in investment field, compared to other professional such as CFA?

Apparently the key advantage is the knowledge around pension liability valuation and mortality modelling etc.

Not necessarily a disadvantage, but an actuary tends to be trained to focus on the actuarial valuation model on a very technical and detailed level. Compared to other professional like CFA, they might need to make additional effort to think and explain the risk in a less numerical way.

- what have you learnt
- what you would do differently with the benefits of experiences to date

It's definitely not a "conventional" actuarial career. I started my career in Ping An in China, not as an actuarial trainee but as a member of its IPO team. After witnessing some tough negotiations and deal-makings, I withdrew back to my "comfort zone" – the area of technicalities, Ping An Group's actuarial reporting department, and set off on my journey through the actuarial world. After 2 years, I felt that the information of one company couldn't satisfy my curiosity and I joined PwC and gained wider exposure to Asia-based clients with a variety of projects from EV review to modelling. It is the combination of curiosity and nostalgia that eventually drove me back to the UK in 2007, where I studied before, to join another financial modelling team in Tillinghast (Towers Watson, presently), when the market-consistent valuation was in its heyday. I had a wonderful time with Tillinghast but a symptom of mental "myopia" had gradually developed during my 3 years' intensive focus on MoSes modelling. In 2010, I was lucky enough to land my current job as a multi-asset solution manager in Legal & General Investment Management.

I don't know how things will pan out differently in terms of career path but I should have probably asked myself more questions starting with "why" and "what then" instead of just "how" in my early career. I was so easily swayed by the fascination of technical details while ignoring the actual problems I was trying to solve.

Question 2: Why did you choose the career path as an investment actuary? What do you think of your career path? How many different ways can one become an investment actuary (give 3 if possible)?

I didn't really have any career plan straight after school because I felt that I knew little about the business. My career progression is more like a combination of exploration and soul-searching as I had absolutely no idea how it would unfold in the coming years. IPO due diligence put me on a fast track to understanding aspects of the insurance business and then I chose the actuarial path. After several years of valuation, pricing, reporting and modelling works, the asset management left me a big hole – or perhaps one of the last biggest missing pieces of my insurance puzzle, which I

decided to explore. From a personality point of view, I enjoy challenges, which the dynamic financial market can always offer.

From my observation, there are 3 typical approaches for being an investment actuary:

- ✚ Pension investment consulting where actuaries have direct involvement in setting the investment strategies for pension trustees. Quite often, they progress their career in one of the investment banks helping on sales and structuring financial products
- ✚ Actuaries have great exposure to investment strategy function, ALM or capital management of an insurance company
- ✚ There are a few investment actuaries working in LDI (liability driven investment) and multi-asset solutions

Question 3: What do investment actuaries do in the UK (work scope, type of employers, career path etc.) from your point of view?

Answered in the last question.

Question 4: Could you please describe your typical day (in less than 100 words)? Could you please describe your current work scope? Which one do you think is most valuable? Which is most interesting? Why?

There is no such a thing as "business as usual" in my current job. One "typical" day may include a review of the internal clients' investment initiatives, asset allocation analysis of our multi-asset funds, new fund launch, investment analysis of a large DB scheme or multi-period ALM modelling. But the main themes are:

- ✚ to provide multi-asset solutions for UK DC/DB schemes including fund management and launches
- ✚ to provide strategic investment analysis to the internal insurance clients and large DB schemes such as strategic asset allocation and tail-risk hedging

Unlike my previous jobs, it forces me to think more about the "big picture". For example, what are the biggest concerns of a DC fund holder or how the matching adjustment impacts the annuity fund's investment strategies? My previous bottom-up approach probably does not work to answer these

questions. In the example of the annuity, I would have to start asking myself questions like what's the largest risk exposure of an annuity fund instead of burying myself in piles of data and models without knowing what the real objective is.

Question 5: What do you think is the key successful factor as an investment actuary?

An investment actuary adds value not just because he/she knows the liabilities better but understands how to use risk to steer the investment in the right direction. I think it's key to have a strategic and analytical mindset to understand such linkage. If you are a WP investment actuary, you may come across a question like whether purchasing a put is a good idea to hedge against equities. It is not a question whether a put is of good value now. Again, you can't answer such a question without understanding the risk.

Question 6: What's the advantage and disadvantage of an actuary working in investment field, compared to other professional such as CFA?

Understanding of liabilities is probably the biggest advantage for an actuary. Very strong analytical skill is also a big plus. However, there are two areas actuaries should improve on:

- ✚ Big picture view
- ✚ Knowledge of the capital market

For example, it is not difficult to use standard formula to calculate SCR. Investment actuaries should take a further step to think through how SII could lead to irrational investment decisions – e.g. buying too many Italian government bonds for a higher return on capital and how to avoid them. Without the good knowledge of the market, it would also be hard to be credible in the conversations with fund managers and senior management.

I happen to be also a CFA charterholder. In terms of efforts, becoming a qualified actuary is far harder than finishing all three CFA exams. It is also more relevant than CFA if you choose the investment or risk management stream in the actuarial exams as an investment actuary. At the end of the day, a qualification wouldn't really matter but there are a lot more you need to learn than merely passing all the exams. "Formal education will make you a living; self-education will make you a fortune." I learnt far more through my work and self-learning than any of the exams.

Question 7: For those who are working in actuarial fields other than investment, would you suggest them changing to investment field? Who should take this change and who should not?

This is more a question they should ask themselves - what is their real drive for the switch and whether they are ready for a change? It looks a little bit circular – you wouldn't be able to say whether you like it or not unless you know more about it. There are quite a few hurdles from a traditional actuarial role to an investment actuary. But if you want to be closer to the financial market and love the challenges and changes, this is probably the job for you.

Question 8: What are you looking for from your career and from your life? How has this changed over time?

I think it's the sense of fulfillment that is the real drive of my career. Life is meaningless if you make no difference to this world, isn't it?

This is just my personal opinion at this time. At one stage of my career, I did loads of reporting before I started to question myself – "Why am I doing this? Am I just putting money from my left pocket to my right pocket? Am I adding value to anything? Or am I merely a cost item of the P/L". In my very simplistic mind, it's the sales and investment that keep the insurance companies afloat. I am sure a lot of actuaries would disagree with this but this is the reason why I made such a switch eventually. This also means that I didn't do very well in sales when I was a consultant (a big laugh 😊)

Question 9: What is your view of the impact of the current financial crisis on investment actuaries (if any)? Will this crisis lead to more or less opportunities for investment actuaries? Could their skill sets be used in a wider context to address today's ills in the banking world?

The delay and uncertainties of SII definitely have a negative impact on the actuarial job market. Nobody should expect the SII party for actuaries to last forever, especially when we are still in the middle of an economic downturn. However, the financial crisis has deepened people's awareness on risk, which will offer more important roles for actuaries in the longer term, especially those who can really join up risk with returns and opportunities.

The UK insurance industry has weathered through the 2008-2009 financial crisis quite well without SII. I suspect that the crisis might have claimed more casualties if QIS 5 version of SII were implemented because SII was too pro-cyclical due to the market-consistency. It is extremely hard for regulation to strike the right balance between the transparency and prudence given the illiquidity nature of the life insurance, which partly explains why it's dragged for so long. On the positive side, it definitely helps creating a risk-centered culture for insurance business but that will not stop us from the next financial crisis.

Question 10: What If career choices

- With all your experiences to date, what would you choose to do differently
- If you were a graduate, would you follow the same path you have followed to date? If not what would that be?
- Advice

I think this is the same as the first question.



Investment Actuary Interview 3

About the interviewee:

Full name: Steven Yang Yu

Universities (year of completion) / degrees

University of Cambridge, MA in mathematics, completed in 2005

One line description of jobs to date: Asset and liability management, asset

allocation and investment advice for institutional investors, e.g. Pension funds, insurance companies etc.

Current job: Director in ALM & Investment Strategies, Redington Ltd

Achievements that you are most proud of (any field): Every Effort and Improvement I've made

Hobby / Interest: Sports, Music, Chinese Martial Arts

Home province / region: Hubei, PRC

Favourite quotes: Profit margin and scalability determine the success of the business



Interview Q&A

Question1: Brief description of each experience/direction in your career:

- factual description (length, area, location etc.)

Six years' experience in pensions and investment in London, providing innovative, clear, cutting edge advice to institutional investors.

- what have you learnt

- ✚ Pension fund and insurance ALM, risk management and asset allocation;
- ✚ Understanding of various risk systems as well as risk management processes widely used in capital markets;
- ✚ Knowledge of investment and derivative markets and their use for managing pension fund and insurance company risk;
- ✚ Various actuarial skills and techniques including professional judgement, problem solving, management, technology, communication and commercial awareness.

- what you would do differently with the benefits of experiences to date

I would still follow almost the same career path and work in the same industry sector but perhaps broaden my knowledge and expertise in my spare time. For example, spending more time on asset management, corporate finance etc.

Question 2: Why did you choose the career path as an investment actuary? What do you think of your career path? How many different ways can one become an investment actuary (give 3 if possible)?

I was interested in finance and investment when I was young: I made my first successful investment when I was in junior school and paid the following year's tuition fees via investment return. That was the beginning for me. When I started my actuarial studies at Cass Business School, I realised investment was essential for actuaries who work professionally in the financial industry. I found it was my honour to help to solve challenging issues in the financial markets, and I take great pride in my work.

My career path has been unusual, varied and fascinating, thanks to the excellent opportunities provided by my employer - Redington Ltd; I've been able to develop such a wide range of skills and experience in the last few years.

There are a few possible ways to become an investment actuary:

- ✚ Work for an investment consulting firm
- ✚ Work for an asset management company
- ✚ Work for capital management or corporate finance departments at investment banks. (This is more difficult, though, as banks are less willing to support professional qualification now and study leave is restricted.)

Question 3: What do investment actuaries do in the UK (work scope, type of employers, career path etc.) from your point of view?

- ✚ Employer: Investment Consultancy
Work Scope: Giving investment advice to institutional investors such as banks, insurance companies, pension funds, asset managers. This involves actuarial modelling, asset allocation, portfolio optimisation, derivative and hedging implementation, manager research, monitoring and reporting.
- ✚ Employer: Investment Manager
Work Scope: Day to day asset management on behalf of institutional investors as listed above. This could be on the technical side, e.g. investment product design, mandate design, ALM modelling, risk reporting and monitoring etc., or this could be on client facing side, e.g. presenting to client on regular performance update, new business pitches etc.

There is also a scope to work for an asset owner such as a pension fund or an insurance company. However, this seems to be less common and is normally for more senior positions. For any of the roles I listed above, there is always a degree of career progression. Ultimately, Investment Actuaries can take on senior positions such as senior investment consultant, fund manager, or Chief Investment Officer in financial organisations.

Question 4: Could you please describe your typical day (in less than 100 words)? Could you please describe your current work scope? Which one do you think is most valuable? Which is most interesting? Why?

My typical day:

- ✚ Internal meeting, business and client update
- ✚ Distribution of workload to junior staff

- ✚ Working with technology department on product development and prioritisation
- ✚ Analytical work for clients. e.g. asset allocation and investment ideas, risk modelling and reporting
- ✚ General management, involving helping other people in the team with their workloads and analytical questions
- ✚ Internal investment committee meeting to update our process, methodologies and framework
- ✚ Client meeting when necessary
- ✚ Business pitch when necessary

My current work scope:

- ✚ Asset liability modelling for pension funds, insurance companies
- ✚ Advice on asset allocation, hedging and risk management
- ✚ Performance and risk reporting and monitoring
- ✚ Workload and people management
- ✚ Mentoring of actuarial students
- ✚ Client meeting
- ✚ Business and product development

All these responsibilities are interesting and valuable at different stages; it is difficult to choose a favourite as they balance each other well during the course of a day, week and career. I believe these skills are very important for an actuarial career path, and I feel lucky to have such a varied and interesting role.

Question 5: What do you think is the key successful factor as an investment actuary?

Hard work, commitment and persistency.

Keep up-to-date with the general market, understand and think about current issues faced by institutional investors, as well as solutions being discussed and debated by different people. Be proactive and innovative with new ideas.

Question 6: What's the advantage and disadvantage of an actuary working in investment field, compared to other professional such as CFA?

It's always difficult to compare professional qualifications; advantages and disadvantages also depend on the context and specific situation. My understanding is that a CFA is more about investment analysis and research, while actuarial qualification is more about risk management and

product development. Typically, it takes longer to qualify as an actuary than as a CFA. The actuarial syllabus considers a broader set of skills and disciplines including communication, modelling, commercial awareness and management. On the other hand, CFA exams have more focus on technical understanding of the investment market. In terms of career, they are broadly similar although banks and asset managers might prefer CFA in their more technical roles. However, as investment is a very competitive and ambitious area, I would personally place more value on experience than exams and qualifications.

Question 7: For those who are working in actuarial fields other than investment, would you suggest them changing to investment field? Who should take this change and who should not?

In general, I would not suggest changing to investment from a particular actuarial field as everyone has their own interests, commitment, and preferred career life. If these investment actuarial topics sound interesting to you and you're an actuary working in a field other than investment who is not completely satisfied, then it is always good to look into your options and see if there is a field out there that is better for your skills and interests.

Question 8: What are you looking for from your career and from your life? How has this changed over time?

This has certainly changed a lot through time and there is also a clear progression since I started my career. In the first few years, I had more of a focus on technical skills, building and designing analytical frameworks in our service offering. Subsequently, my focus has shifted away from pure analysis and towards management, client facing and product development. Currently, I'm looking at the strategic direction of our team and identifying new business opportunities.

Question 9: What is your view of the impact of the current financial crisis on investment actuaries (if any)? Will this crisis lead to more or less opportunities for investment actuaries? Could their skill sets be used in a wider context to address today's ills in the banking world?

I think this is a question that applies to all actuaries, not only investment actuaries.

It is fair to say a lot of people who work in the financial industry are more or less impacted by the current crisis. However, wherever there is risk, there are opportunities for actuaries and the recent financial crisis has further highlighted the skills that actuaries can bring to the world. In recent years, with the rise in balance sheet risk of many financial institutions, risk-based capital regimes have been put in place, and have gradually improved in various jurisdictions. For example, Solvency II for insurance companies and Basel II and III for banks in Europe are new regimes that require understanding. Financial institutions now have more reliance on actuarial risk evaluation to frame their strategic management decisions. Chief Risk Officer (CRO) positions are also widely open now, and actuaries are fantastic candidates for these kinds of roles. Because our professional judgement is highly valued, our career paths often lead to senior management and executive positions.

Question 10: What If career choices

- o With all your experiences to date, what would you choose to do differently

I would follow the same career path, which has been ideal for my interests and skills. The only thing I would do differently is to focus earlier and more on perhaps a broader set of skills, to widen my expertise in the market.

- o If you were a graduate, would you follow the same path you have followed to date? If not what would that be?

Yes, definitely.

- o Advice

My simple advice is: commit to what you do currently if you are interested and can see a clear potential and future development. Set your goals and objectives and review them on a regular basis; you will start to see marginal improvement through time. Do not give up simply because of the challenge and pressure: these will exist everywhere in your life.



Investment Actuary Interview 4

About the interviewee:

Full name Huayin Liu

Universities (year of completion) / degrees

Heriot-Watt University, First Class Honor Degree in Actuarial Mathematics and Statistics 2007
Imperial College, MSc Actuarial Finance (Part time), expect to finish in Sep 2013.

Current job

Vice President, Redington

Favourite book/film/songs/popGroup

Film - 'The Big Blue'

Hobby / Interest

Badminton, swimming, travel

Home province / region

Hubei, Wuhan

Favourite quotes: "Your time is limited, so don't waste it living someone else's life. Don't be trapped by dogma — which is living with the results of other people's thinking. Don't let the noise of others' opinions drown out your own inner voice. And most importantly, have the courage to follow your heart and intuition. They somehow already know what you truly want to become. Everything else is secondary." -- Steve Jobs



Interview Q&A

Question1: Brief description of each experience/direction in your career:

- factual description (length, area, location etc.)

- ✚ 2007 – 2009 Redington, London, ALM and Investment Strategies

- ✚ 2009-Present Redington, London, Manager Research and Portfolio Strategy

- what have you learnt

I started my career with this start-up independent investment consulting firm set up by two very visionary investment bankers. Growing with the company means that I have the opportunities in the very early stage of my career to think about designing workable solutions to meet clients' needs and requirements. I've gain both technical skills and communication skills through work in different areas of the investment consulting practice.

- what you would do differently with the benefits of experiences to date

My career develops from working with models to become more clients facing. I think this is my focus at the moment.

Question 2: Why did you choose the career path as an investment actuary? What do you think of your career path? How many different ways can one become an investment actuary (give 3 if possible)?

Through my four-year course in the university, I studied many different fields of actuarial science. I understand that behind designs of each insurance product or pension scheme, making the appropriate investment is vital to lead to the longer term success of a company. And I have always been very interested in investment related topics. Naturally, I chose the career to become an investment actuary.

Investment actuaries work in many different aspect of the investment practice, and I work in consultancy. My current role is to help clients designing bespoke solutions and select the most appropriate asset manager(s) to implement ideas.

Becoming an investment actuary requires knowledge and understanding in many different investment related fields e.g. finance, economic, accounting etc. But most importantly, the individual should have a genuine interest in what he/she is doing. There are many ways that one could become an investment actuary. I can't see any limitations. However the general market sentiment will have a dominant effect on the opportunities available.

Question 3: What do investment actuaries do in the UK (work scope, type of employers, career path etc.) from your point of view?

Here I can only list the main types of the work that investment actuaries do in the UK. However, I believe with the skill set of an actuary, there is a much larger scope for the type of the job he/she is capable of.

- ✚ Investment Consulting (including different aspects of the consulting practice, e.g. ALM, Manager Research, Fiduciary Management, consultant etc.)
- ✚ Working as an investment consultant is a traditional career path to be an investment actuary. The employer will generally support the actuarial qualification.
- ✚ Fund Management (Managing assets on clients' behalf. Including design client solutions in fund

management companies). Qualification as an actuary is not necessary in a fund management company. They will typically accept qualified actuary, which is not a must however.

- ✚ Sale Side (sales person in banks.)
Similar to fund managers described above, in terms of career path
- ✚ Risk Management
It depends on the employer: different career path in insurance companies compared to banks and asset managers. Insurance companies and banks are facing different regulatory requirements in terms their approaches to risk management. They have different reporting needs and different reporting frequencies. Actuaries have the advantage of understanding insurance products and modelling which can help them pursuit a career of a risk manager. However, actuarial qualification is not a must-to-have in risk management departments of banks and asset managers. They favour people with strong quantitative skills and modelling capabilities. However, with the introduction of the ST9 course on enterprise risk management, I think there is a potential wider scope for actuaries to take on responsibilities in banks and asset management companies.

Question 4: Could you please describe your typical day (in less than 100 words)? Could you please describe your current work scope? Which one do you think is most valuable? Which is most interesting? Why?

8am: Office, tea, catch up on emails.
8.30am: team catch up on tasks and projects
Rest of the day: dive into meetings, phone call or projects
2.30pm: Catch up on market news
6pm: Clear up emails.
6-8pm: overtime when there is a deadline.

After working as a quantitative analyst in the ALM & Investment Strategy team for two years, I shifted my focus to manager research and managing the fund managers. I help to bring quantitative tools into the previously more qualitative manager research and performance-monitor process. There are three main scopes in my current role: portfolio construction and analysis, manager assessment and portfolio monitoring.

Manager assessment is most valuable to me. Through talking to fund managers directly, you really have a good understanding of the market and

their thinking process. It helps to bring together my own view.

I would say meeting with asset managers and banks and talking about their latest product offerings would be the most interesting part. It helps me keeping up with the most innovative ideas in the market.

Question 5: What do you think is the key successful factor as an investment actuary?

- ✚ Understanding of client's needs and objectives
- ✚ Innovation
- ✚ Understanding investment instruments and most importantly the risks involved
- ✚ Diligence

Question 6: What's the advantage and disadvantage of an actuary working in investment field, compared to other professional such as CFA?

Many of my colleagues in the firm have chosen to do a CFA degree. Without looking into the difference in great deals, I can only tell the following:

- ✚ CFA exam aims for someone who would like to work in a fund management firm. It addresses the various issues and topics in fund management.
- ✚ Investment actuaries are typically working in fields which relate to the traditional actuarial practice areas such as insurance or pension funds.

Question 7: For those who are working in actuarial fields other than investment, would you suggest them changing to investment field? Who should take this change and who should not?

It depends on a lot of things. It does not fit for everyone.

One should think about his/her general interest, the preferred work/life balance, personalities etc. I don't think I should comment on who should take the change and who should not. I believe that if someone is considering making this change, he/she knows deeply inside what he/she is looking for.

Question 8: What are you looking for from your career and from your life? How has this changed over time?

- ✚ Job satisfaction – participating in the solution design for clients.
- ✚ Compensation – performance related pay.
- ✚ Looking to gain knowledge and experience

I believe I am still in the very early stage of career. As per the change over time, I don't think things have evolved much. In the future I hope to focus more on career development.

Question 9: What is your view of the impact of the current financial crisis on investment actuaries (if any)? Will this crisis lead to more or less opportunities for investment actuaries? Could their skill sets be used in a wider context to address today's ills in the banking world?

Over the past four years post credit crisis 2008, there are large numbers of talented people made redundant from banks and other financial institutions. Many of those talents have lived on their knowledge in capital markets to work for fund managers, investment consulting firms and pension schemes. Hence the working opportunity squeezed from both sides. On one hand, there are more people moving out from banks as mentioned above. On the other hand, the general depressing market sentiment has led to firms' cutting off costs and increasing efficiencies. The opportunities in the market have focused on more specialised areas.

The answer to the last question is definitely a 'Yes'. For example, risk management can be enhanced with the skills of an actuary.

Question 10: What If career choices

- With all your experiences to date, what would you choose to do differently

Probably not. With all the experiences to date, I would probably make fewer mistakes in the early stage of my career. However I also believe not afraid of making mistakes can help one grow.

- If you were a graduate, would you follow the same path you have followed to date? If not what would that be?

Yes I would probably do. It was a very steep learning curve when I started my career. However, I've had great exposures to clients and product providers (i.e. banks, asset managers) and I have been working with the smartest people in the city of London. I believed I could hardly get those exposures from elsewhere.

- Advice

Choose something you find really interesting.

CANUK Activities

Chinese Actuarial Network UK (CANUK) Hosts Anniversary Event

On 12 December 2012, Chinese Actuarial Network UK (CANUK) celebrated their first anniversary at Staple Inn, London. Over 120 actuarial professionals from insurance, banking and consulting firms attended the event. Dr Yan Liu reports on the event.

About the author:

Dr Yan Liu is the head of actuarial Solvency II reserving at Direct Line Group. The views expressed in this article are his own and not those of his employer.

2012 is a year to remember, especially if you were lucky enough to be in London. This year saw the Queen's Diamond Jubilee, the Olympic Game and Paralympic Game, the Euro Cup, the Ryder Cup, the French election, the American election, the change of leadership in China, the Japanese election and the appointment of a new governor for the Bank of England. December tends to be a month of reflection, analysing our performance from the past twelve months alongside important trends in order to plan for the upcoming year.

Miss Xie Wan, actuarial adviser at KPMG and CANUK committee member, chaired the evening. Mr. Feifei Zhang, Director of Global Complex Assets at Aviva and President of CANUK, spoke at the event and reflected on the journey CANUK had made since its launch over a year ago against the macro backdrop above. He used actuarial jargon to good effect and generated much laughter in the audience. He summarised CANUK's key achievements in a comparable range of possible/probable events from a certain delay, a 1-in-1 event, of the implementation of Solvency II, to a possible the end of the world on 21 December 2012, a 1-in-5125 event according to the ancient Mayan calendar, and many chance events in between. Key achievements in 2012:

- CANUK website: www.chineseactuary.org is up and running;
- CANUK newsletters – 3 issues to date and downloadable from the CANUK website;

- Creation of a '**Chinese Actuarial Network UK** LinkedIn group;
- CANUK Weibo account: weibo.com/canuk;
- CANUK email list is over 250 and growing;
- CANUK technical events: one in London and one in Beijing/Shanghai. The London event was reported in The Actuary magazine as "Chinese Actuarial Network hosts longevity risk forum" which is accessible from www.theactuary.com;
- Several social events including post April and September exam drinks, bowling/ice skating nights and group golf lessons. Our first event in 2013 is the Chinese New Year Dinner on Friday, 8 February 2013;
- Establishments of CANUK subgroups in Edinburgh and York;
- Establishments of links with Chinese actuarial groups overseas and in China.

This is only the beginning. CANUK was established on 2 December 2011 with the dual objectives of supporting Chinese actuaries and sharing information. CANUK has a lot to do to fulfill its full potential.

Mr. Lei ZHAO, First Secretary and Consul from the Chinese Embassy in London, spoke at the event and was delighted with the progress CANUK had made over the past year. He encouraged CANUK to broaden contacts with actuarial societies as well as those in other professions, both in China and in the UK, to enhance its influence in the financial services industry between the two countries.

Dave Hare, President Elect of the UK actuarial profession and partner at Deloitte UK also spoke at the event. He shared his reflections on a recent promotion trip to Asia (mainland China, Hong Kong and Singapore) and what his priorities would be. Mr. Che Sidanius from Bank of England made a keynote speech on **OTC derivatives reform and estimating collateral demand** which was well received.

Looking forward to 2013, Mr. Feifei Zhang and his fellow committee members confirmed the following priorities a) constitution and rulebook, b) technical events, c) social events including Chinese New Year Dinner and sports events and d) enhancement of existing channels such as

website/newsletter/emails and development of new channels.

Acknowledgement

CANUK would like to thank the UK Actuarial Profession and Star Actuarial Futures for sponsorship, Emma Pegg and Xu PEI for photography and all staff members at the Staple Inn and CANUK volunteers who have made this event possible.



Chinese New Year Dinner

Report by Sarah Chu

神龙挥手自兹去，金蛇抖擞新春到。

在这辞旧迎新春的时刻，45位 CANUK 英华精算协会的成员，欢聚一堂，共同庆祝新年的到来。

晚宴开始前，CANUK 英华精算协会会长张非非先生发表了新年祝辞，感谢在这一年多来，广大会员对 CANUK 英华精算协会工作的支持与肯定，并且祝愿大家在新的一年里学业进步，工作顺利。祝辞后，张非非会长分别为来自 Towers Watson 的 Miriam Lo 女士和来自 Redington 的 Huayin Liu 先生颁发了年会最佳问题奖——来自 Star Actuarial Futures 的香槟酒。晚宴间，欢笑声、碰杯声此起彼伏，其乐融融。幸福的感觉和食物的香气弥漫在饭桌的上空，思乡的愁绪早已抛诸脑后。因为在这里，CANUK 就是一个温暖的大家庭！

春回大地，万象更新，值此新春佳节之际，英华精算协会祝愿全体华人精算师、精算学生以及家人身体健康，万事如意，蛇年行大运！




BE A STAR IN 2013

STAR ACTUARIAL FUTURES
 Louis Manson
 M +44 7595 023 983
 Anthony Buxton FIA
 M +44 7766 414 560
 W www.staractuarial.com

STAR ACTUARIAL FUTURES

Technical Corner

2012 Review of Asset Classes

About the author: Steven Yang Yu, Director of ALM & Investment Strategy, Redington Ltd. He can be contacted at steven.yangyu@redington.co.uk.

As we approach 2013, the Year of the Snake, let's review the Year of the Dragon by looking at how major asset classes have performed and the key drivers behind the moves. Note: all 2012 asset class returns quoted in this article are to 31 December 2012, data source for all returns is Bloomberg unless otherwise stated, calculated by Redington.

UK Inflation

Long-term inflation expectations fell – 30 year breakeven inflation (as measured by the zero-coupon RPI swap curve) is currently around 3.31%, this compares with 3.5% at the start of the year and recent highs of around 4% in 2008. Long-term real yields rose, moving from negative territory in December 2011 to slightly positive today.

A number of factors were behind this move lower, although the inflation outlook remains uncertain. The Consumer Prices Advisory Committee (CPAC), which advises the National Statistician on inflation matters, announced it is working to “*identify, understand and eliminate unjustified causes of the formula effect gap between the CPI and RPI.*” UK growth remained subdued, as highlighted by the OBR's -0.1% forecast for GDP in 2012 announced in the Autumn Statement. Wages and retail sales have failed to keep up with rates of inflation, keeping the economy in the doldrums.

The CPAC issue is expected to be resolved during 2013, until there is a final decision we expect to see volatility in the breakeven inflation markets.

UK Interest Rates

The lack of UK growth did not deter investors from buying UK government bonds. We saw a sharp fall in 10 year government bond yield, over 15 basis points lower than a year ago. However, 30 year bond yield moved slightly higher than where they finished in 2011. There were ups and downs along the way, with the 30 year yield moving in a range of 2.85-3.49%, highlighting the benefits to a pension

scheme of being hedged with respect to these exposures.

Global Government Bonds

The crisis in the Eurozone seems to be relieved rather than resolved, making the UK a relative safe-haven from the turmoil abroad. With elections over, the US is staring at a fiscal cliff. And, the Bank of England announced a £50bn increase to their asset purchases in July, bringing the total to £375bn (over 30% of outstanding public debt).

Globally government bonds continued to fall into two categories: “safe haven” markets or the increasingly more risky markets associated with the European Periphery. Another influence on these markets continued to be the extent of monetary easing policies undertaken in the local market. Spanish and Italian bonds continue to remain in the more risky European peripheral camp in 2012 with yields on their generic 10 year issues around the 5% mark, although Italy's bonds did rally in price terms over 2012 with the generic 10 year yield down from the highs of 7% at end of 2011. US, UK and Germany continue to be seen as safe havens with yields on generic 10 year issues further decreasing. The UK yield has fallen from 2% to 1.8%, the US from 1.9% to 1.8% and the German yield has dropped from 1.9% to 1.3% over the course of 2012.

Equities

Equity market returns over 2012 were above long term averages in most major markets, although there was some divergence between different markets. As of 31 December 2012 the FTSE 100 is back to levels seen at the end of 2010 with a total return of 8% in 2012. This compares with a total return of -2% in 2011, 11% in 2010 and an average over the last 5 years of 2%. On a global basis the FTSE 100 was not one of the top performing major equity markets over 2012. The S&P 500 and DAX both outperformed the FTSE over 2012 with total returns of 14% and 25% in local currency respectively. The MSCI World Index as whole has returned 16% in 2012 (in local currency terms) whilst the MSCI Emerging Markets index shows a return of 18% (in USD terms).

Generally speaking realized volatility in equity markets was a little lower than it has been in the recent past, although admittedly recent years have seen much higher levels of volatility than has historically been the case. The realized volatility of the FTSE 100 total return index (measured as

annualized standard deviation of daily log price changes) was 14% in 2012, compared to 21% and 17% in 2011 and 2010 respectively. By comparison the realized volatility of the S&P 500 and DAX indices were 13% and 19% respectively for 2012.

The market pricing of options to hedge against equity market falls reflected the slightly lower levels of volatility. In 2012, the VIX volatility index (which represents the implied volatility on short term S&P 500 options) has fallen c.5 volatility points from 23 at the end of 2011 to 18 at the end of December 2012. Overall the VIX level has been on the decline since the recent highs of 43 in August of 2011, although there was an intra-year spike to a level of 27 in May 2012.

One trend we have seen over the course of 2012 is increased demand for equity mandates that seek to deliver a lower volatility than the market-capitalization weighted indices. In our experience there are two ways of implementing this: *Volatility Control* at an aggregate level by de-gearing the level of exposure, and a *Low Volatility Stocks* approach which seeks to select the least volatile stocks in the index and/or weight these inversely to their level of volatility as opposed to their market capitalization. Many product and index providers have launched products in these areas and we expect to see this continue.

Credit

The three broad classes of credit all performed strongly, with spreads tightening. UK Investment Grade credit saw a return in excess of swaps of 7% to 31 December 2012, compared to returns of 4% and 1% in the previous two years. Subordinated Debt is up 28% and European High Yield debt up 22% over the year to 31 December. The asset swap spread – a measure of the credit risk associated with the underlying bond on European High Yield is at c.500 basis points, well below the levels seen at the end of 2011 of 780, and the highs of 1500 in 2008-9.

Given the historically low level of credit spreads we have seen an increasing desire on behalf of pension funds to manage their credit exposure on a “Go anywhere” mandate where the manager has discretion to dynamically allocate between Investment Grade, High Yield, Subordinated bonds as well as other types of credit.

Commodities

It has been a mixed bag for commodities in 2012. Crude oil prices are almost 7% lower, cotton prices are over 20% lower and coffee prices have dropped 35% from a year ago. Meanwhile, corn, cocoa, soybeans and wheat all recorded double-digit price rises. Gold, revered by some investors as protection against monetary easing, did not surpass its 2011 high above \$1,800/oz and is currently 5% higher than last year's closing price. Overall, commodity price indices are very close to where they finished in 2011.

Building a diverse portfolio of exposures

As always the need to build a properly risk-managed diverse portfolio of asset classes remains as pertinent as ever. We have also seen an increasing interest on behalf of pension funds to look at their exposures to different asset classes through the lens of risk exposure as opposed to fixed market exposures. This has motivated an increasing look at the family of Risk Parity strategies, for which various providers have been running mandates for some years – albeit with significant methodological difference between providers, particularly since 2009.

Tea Break



Yang Zhao is currently studying MSc in Actuarial Management in Cass Business School. Prior to that, she had worked in KPMG, Friends Provident and Towers Watson in Ireland, the Netherlands and Romania. She holds an honour degree in Actuarial and Financial studies from the University College Dublin. She will be looking for actuarial jobs in Great London Area

upon completing her master study in September 2013.

Her full profile can be found on uk.linkedin.com/in/yangzhaocool/.

留学爱尔兰，工作在爱尔兰，荷兰和罗马尼亚。如今回到原点，留学在英国。人生要思考过后再重新上路。

旅欧近十年，白驹过隙。时间的漏斗滤去斑驳，沉淀下的点点滴滴都值得细细体味。

留学爱尔兰

当我告别家人第一次走出国门，有一点不舍不安，更多的是挣脱父母束缚的兴奋和对未来的憧憬——那个以U2，小红莓乐队闻名的小岛和照片上绿草如茵的校园。大概初生牛犊就是这样的心情吧。

开学没多久，受到爸爸的朋友的指点，我决定从经济金融系转到精算系。当时我不知道，在我们学校转系是非常困难的，尤其是从录取分数低到高的系。爱尔兰的高考满分是600分，经济金融系的录取分数是450，精算系是585，仅次于医科的590。

幸运之神眷顾，有一位泰斗级别的数学教授热情推荐了我。大概我的高中成绩也多少起了作用。开学两个星期后，我成了精算系第一个没有爱尔兰高考成绩的外国学生。

本来带着中国学生数学功底很好的偏见。第一堂课，我就被外国同学的心算能力彻底击破了。我的同学是一群都真的非常热爱数学的孩子，多半来自都柏林外的城市，和我一样，第一次离开父母到其他城市独自生活。和这样一群好朋友一起学习成长是我最宝贵的财富。

和所有人一样，大学时光是我人生最美好的时光之一。在都柏林大学的学生活动中心到 JAMES JOYCE 图书馆，我从青涩走进成熟，从娇生惯养的独生女成为独立生活思考的成年人。除了留学生必经的料理生活和挑灯苦读，爱尔兰的文化在我身上留下斑驳的印记，尽管我依然滴酒不沾，至今不能体会爱尔兰黑啤酒的魅力。

在爱尔兰工作

爱尔兰共和国，位于北爱尔兰之南，和英格兰隔海相望，直到20世纪初都是日不落帝国的殖民地。尽管爱尔兰人以更加幽默和友好著称，盎格鲁-撒克逊（Anglo-Saxon）文化对凯尔特文化的影响反映在日常生活和工作的各个方面。

爱尔兰精算师协会与其说是独立的专业机构，不如说算是英国精算师协会的一个分支。爱尔兰精算师大部分都是通过考英国精算师考试的，因为爱尔兰的大学可以得到英国精算师的免考。爱尔兰国家虽小，却是人均精算师最多的国家。

在爱尔兰的韬睿惠悦养老金部门完成实习后，我不想过早把将来的职业限制在一个方面。大学毕业后，我选择了Friends Provident。在那里我可以在三个保险精算部门轮岗：定价、财务报告和养老金顾问。

在Friends Provident的工作期间，我发现人寿保险公司的养老金精算部门的工作与韬睿惠悦的养老金部门大同小异，集中于固定给付福利计划（DB Plan）的估值及清盘。某种意义上，这个部门是一个相对独立的业务。

在荷兰工作

在爱尔兰工作不到一年，我很幸运地被选中进入荷兰母公司（Eureko）的精算师培训项目。外派生活的方方面面，从交通到住房，从行李打包到健康保险，都有公司专人负责。这让更多时间和精力集中在工作和个人成长上。

我在三个不同地点的四个部门分别轮岗了六到十二个月。我曾工作的部门包括集团的保险风险和金融风险部门以及其中一个分公司的评估部门。

集团公司位于泽伊斯特（Zeist），离乌得勒支（Utrecht）仅20分钟车程。在集团公司的保险风险部门，我的主要工作是保险风险、利率风险模型、复制组合工具、以及在投资策略的基础上产生的利率风险报告。同时，我还负责罗马尼亚，保加利亚和斯洛伐克分公司的负债充足性测试。在Solvency II的大环境下，集团公司的金融风险管理团队正式成立。我被分配到充满活力的评估市场风险的项目，包括各种外部专家，如Algorithmics公司。我每天的任务包括测试定价和运行VaR，以及协调内部和外部利益相关者的沟通。

在蒂尔堡（Tilburg）分公司，我进行了一些死亡率调查，参与了反映利率期限结构的利润测试工具，并进行EV和MCEV的计算。

和英国公司相比，荷兰公司结构更扁平——这有利于信息共享，但同时很容易使决策更加困难。漫长的系列会议有时持续数月，其中一次公司决定雇佣一家咨询公司来实施一个为期两年的项目，因为部门内部分成两派，各倾向于不同的合作公司，最后只好同时雇佣，在为期六个月的项目完成后，再二者取其一。在我看来，这种多余的费用完全可以避免。

荷兰人注重家庭生活，工作时间是国际经合组织（OECD）国家里最短的，大概每周26.5小时（不包括节假日）。我的很多女同事甚至是兼职的，一周工作一天到三天不等。对我来说，在这样的氛围下唯一的瑕疵是同事之间没有太多的工作以外的社交活动。

和英国社会相比，荷兰社会贫富差距更小，寿险市场也很发达。然而，健康保险市场是完全不同的，尽管

几年前被私有化，仍然受政府严格的监管和控制。对所有被保险人都收取统一的保费，拒绝投保申请或收取较高的保费都是非法的，保险公司因此面临的风险和损失由政府来补偿。

在罗马尼亚工作

在荷兰完成了两个轮岗以后，我有幸被选中去罗马尼亚分公司协助他们的Solvency II项目。

Solvency II的工作和其他欧洲国家大致相同。在一个较小的精算部门，和CEO,CFO和首席精算师一起工作的机会让我受益匪浅。

在罗马尼亚分公司，我的工作职责转移到项目管理和沟通。除了参加公司内部的每周偿付能力II指导委员会会议以外，我主导了定量影响研究（QIS）和最终结果整合的项目管理工作。同时，我开发了一个模型来计算未来保费的预期利润（EPIFP）和重建了EV计算模型里的佣金结构。

罗马尼亚曾经是社会主义国家，工作文化可以看到集体主义社会形态的遗存。我的罗马尼亚同事们常常也是工作外的好朋友。罗马尼亚的保险市场还不是很发达。保险被看作是一个奢侈品而非必需品。尽管加勒斯特之外的乡村风光非常美丽，由于齐奥塞斯库曾经的大幅改建，加勒斯特本身却乏善可陈。

后记：旅历过欧洲的很多城市，伦敦，保守又包容，古老又现代，是一个让人想要停留的城市。带着这份向往和期待，我放弃了荷兰KPMG的工作来到伦敦求学。每晚当我沿着泰晤士河慢跑时，总会想到父母当初的鼓励：人生的选择没有对错之分，只在合适与否。放眼蓝色的伦敦眼，橙色的伦敦桥，满眼星星点点的灯光，总会觉得很开心——没有特别的原因但如愿以偿。

Recently Qualified

Congratulations to CANUK members who were recently qualified:

Miss Wei Fu, Deloitte, FIA

Miss Vita Zang, Deloitte, FIA

Mr Kennard Lee, Unum, FIA

Mr Jimmy Chiawei Chiu, Towers Watson, CFA

First-Hand Exam Tips from a Newly Qualified

About the author: **Kennard Lee**

- BSc in Actuarial Science from Heriot-Watt University
- 2 years' experience in Product Operations, Standard Life (bespoke retirement planning tool development, production issues resolution)
- 2 years' experience in ICA, Standard Life (risk calibrations, capital aggregation, solvency monitoring)
- Recently joined Unum as a Solvency II Actuary
- Email: kennard.lee@unum.co.uk

Tips for wordy exams

The core applications and specialist applications papers require a great deal of memorisation to pass, not to mention good exam technique and a good understanding of the course material. I struggled more than most people on my first written exam until I had a methodical and disciplined study approach. Everyone studies differently but here's what I did that really made a difference to my exam success:

Learning the course material

1. **Read the core reading once to get a feel for the course and list the headings and sub-headings of each chapter.**

I do this to find out what's in the course and spot any difficult/tricky areas in the course that I need to spend more time on or learn in more detail. At this point, I'm more focused on understanding the material rather than committing it to memory.

2. **Summarise core reading in point form. ActEd's flashcards does a good job at this and saves me time from doing it myself.**

This is the first step of committing the course to memory. It is easier to memorise and recall bullet points rather than paragraphs of text. Condensing information into one or two pages per chapter will make it a lot easier to review again. A good way to structure this is to frame the sub-headings as questions to encourage more active thinking and it should help you remember better. Revision booklets do this too but I personally prefer the format of flashcards.

3. Create mnemonics or inherit one from your colleagues to help memorise long lists.

Even bullet points may be too much to remember. Mnemonics can help you condense 10 bullet points into 1 strange word. Think of mnemonics like an index of a book. It helps the reader find what he/she needs very quickly without going through every single page in the book. You will probably need to remember 30-40 words to recall the entire course at will. How powerful is that?

4. Print out the course syllabus from the Actuarial Profession’s website and write down key ideas and mnemonics under each learning objective.

The purpose of doing this is to create very short triggers, either using mnemonics or keywords under each learning objective. This helps me identify part of the course the question is examining and come up with the right memory triggers in no time. Closer to exams, you’ll only have 3-4 sheets of paper to go through if you need to review the whole course!

5. Practice past papers

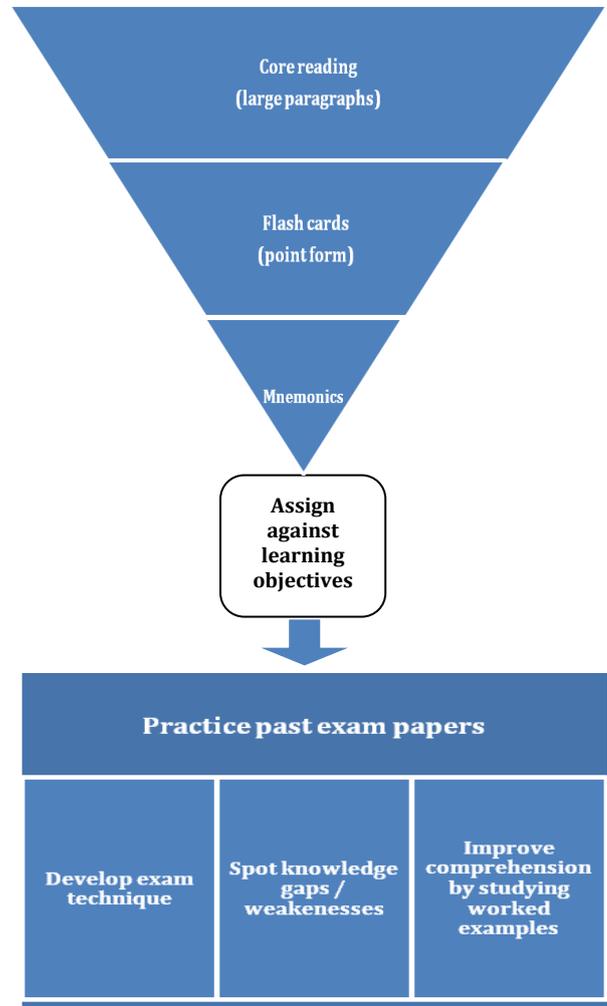
So now, you know the course fairly well and have acquired good knowledge. You will be great at doing the ‘list’ or ‘outline’ questions, but probably need to practice doing questions that require a higher level of comprehension. Practising and reviewing examiner’s reports help you develop the skill of processing your raw knowledge (think raw unprocessed data) into coherent arguments. It may also be useful as another line of defence to spot any knowledge gaps from the earlier steps.

General points on exam technique

- Pay attention to action keywords such as outline, describe, list etc. You should be able to get a good feel for what is required by reviewing the examiners’ report in the published past papers
- Be aware of the number of points you need to make to get the full allocated marks
- Get the easy marks first. Time is currency in the exam. You want to spend it on the most marks to increase your chances of passing.
- 3 hours for 100 marks means 1.8 minutes per mark. Know when to draw the line when you’ve spent too much time on a question.

- Identify the part of the course the question is testing and scribble some keywords (or mnemonics if applicable) before answering the question. You could even do this during the reading time if you have time.

Summary of Process



Are you ready?

If you can look at a question and say ‘been there, done that’, then you’re well on your way for a pass. Good luck!

Comparison of UK and US actuarial exam systems

Summary:

Edited by Lin Cong

The actuarial profession has become more and more well-known in China. As a result, the number of students who are interested in taking the actuarial exams has been increasing rapidly. An obvious question to encounter would be which actuarial exams system to follow?

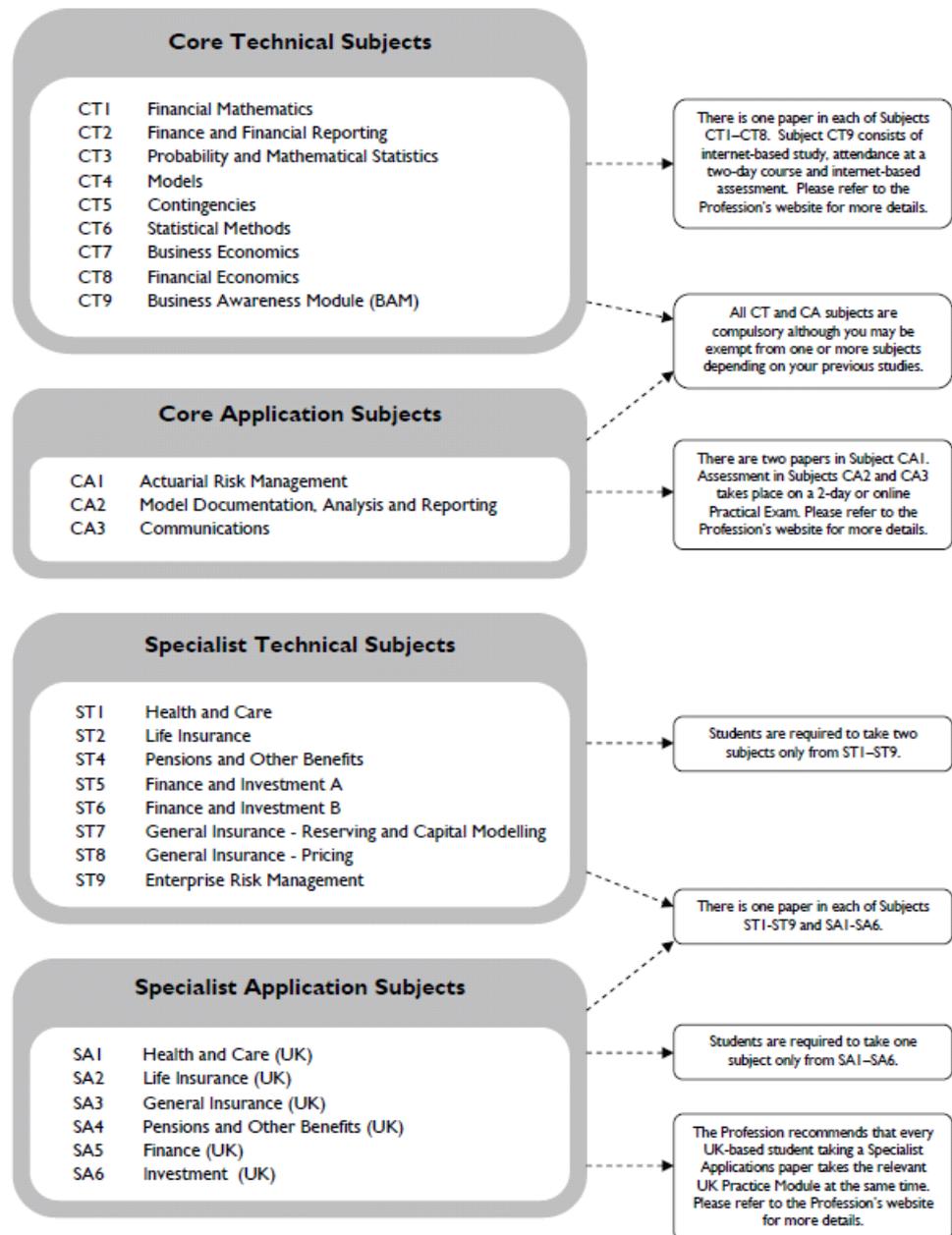
In order to help our students to make more informed choice, we have outlined the key exam requirements to qualify in both the UK and US including the recognized equivalents of exams in both systems.

An interview has also been carried out to Chelsea Tian who has experienced both systems to offer her personal view on this matter.

Finally, we will finish up by quoting some US actuaries working in the UK on what they think are the advantages / disadvantages of both systems.

Of course, this is a personal decision about which exam to take and we hope the following information would be helpful for your decision-making process.

Exams requirements for the Actuarial Profession (UK)



Source: Taken from ActEd Student Brochure 2013.

Exams requirements for SOA (US)

ASA Requirements		CERA Requirements		FSA Requirements	
Exam P–Probability	Exam FM–Financial Mathematics	Exam MFE–Models for Financial Economics	Exam MLC–Models for Life Contingencies	Exam C–Construction and Evaluation of Actuarial Models	
VEE* Economics	VEE* Corporate Finance	VEE* Applied Statistics	Fundamentals of Actuarial Practice (FAP) e–Learning Course	Associateship Professionalism Course (APC)	
<p>Choose a specialty track below and complete the requirements in that column (move your cursor over a track to activate). All candidates must complete DMAC and FAC.</p>					
Finance/ERM Track (Transitional Year Fall 2012–Spring 2013)	Investment Track	Individual Life & Annuities Track **	Retirement Benefits Track **	Group & Health Track	
Enterprise Risk Management (ERM) Exam	Advanced Portfolio Management Exam	Individual Life & Annuities Company/ Sponsor Perspective (CSP) Exam	Retirement Benefits Company / Sponsor Perspective (CSP) Exam	Group & Health Company/ Sponsor Perspective (CSP) Exam	
Advanced Finance (AdvF) Exam (transitional exam)	Financial Economic Theory & Engineering Exam	Individual Life & Annuities Design and Pricing (DP) Exam	Retirement Benefits Design and Pricing (DP) Exam	Group & Health Design and Pricing (DP) Exam	
Financial Economic Theory & Engineering Exam	Financial and Health Economics Module	Financial and Health Economics Module	Financial and Health Economics Module	Financial and Health Economics Module	
Financial and Health Economics Module	Investment Strategy Module	Regulation & Taxation Module	Social Insurance Module	Health Foundations Module	
Financial Reporting Module	Enterprise Risk Management (ERM) Module or Financial Reporting Module	Enterprise Risk Management (ERM) Module or Financial Reporting Module	Enterprise Risk Management (ERM) Module or Investment Strategy Module	Pricing, Reserving & Forecasting Module	
Enterprise Risk Management (ERM) Module			Enrolled Actuaries (EA) Exams (U.S. Only)		
Decision Making and Communication (DMAC) Module					
Fellowship Admissions Course (FAC)					

Source: <http://www.soa.org/Education/Exam-Req/edu-fsa-req.aspx>

What exemptions could you get when switching from US to UK?

<u>US exams passed</u>	<u>UK exemption granted</u>
Exam P – probability, and VEE statistics	CT3
Exam FM – financial mathematics	CT1
VEE corporate finance	CT2
Exams MLC – life contingencies, and C – construction and evaluation of actuarial models	CT4 and CT5
VEE – economics	CT7
Exam MFE – financial economics	CT8
All modules of fundamentals of actuarial practice	CA1
Group and health company / sponsor perspective (CSP)	ST1
Individual life and annuities company /sponsor perspective (CSP)	ST2
Retirement company / Sponsor perspective (CSP)	ST4
Advanced portfolio management (investments)	ST0

Interview

Interviewee Profile: **Chelsea Tian**

- *Diploma in Actuarial Techniques from IOA in 2006*
- *Master Degree from Shanghai University of Finance and Economics in 2008*
- *FSA in 2012*
- *Currently working in Manulife – sinochem life insurance company as a pricing actuary*
- *Contact Email: thz921@yahoo.com.cn*

Question: Why did you switch from the UK exam system to the American system?

It was a combination of reasons. Firstly, I think there are a lot more people studying towards FSA rather than FIA in China, therefore it's much easier to get information and study materials for the US exams than the UK ones. It also means that you could discuss any exams-related issues with a lot more people. Secondly, people generally do think that the UK exams are slightly harder than the US ones, and personally I have attempted ST5 under the UK exam system and didn't pass that and I switched to the US system after that. Finally, I think there are more North American insurance firms operating in China than UK ones, so it might be another reason that why it is more favorable to qualify as a FSA.

Question: Is there any working experience requirements to qualify as a FSA?

I don't think there is any working experiences required in order to qualify as a FSA. However, some relevant working experiences would greatly improve the exam performance especially for the later exams. On the other hand, in the UK, you need to have at least 3 years of working experience in order to qualify as a FIA.

Question: Do you think it's harder to pass the UK exam?

I have tried the ST5 under the UK system and failed then transferred to the US ones, so I couldn't comment on any later exams under the UK systems. However, I think for the US exams, as long as you study hard, there is nothing too difficult to stop you from passing.

Question: What do you feel are the main differences between the two exam systems?

I think the US exams are much more practical than the UK ones. The UK study material is very bookwork, and there is some context which is quite

outdated, for example, there might be details of some products that are not actively sold anymore. Whereas the US material is composed of both course notes and papers in the relevant fields, and normally is updated quite frequently. Especially there are 8 subjects that are done online in the form of assignments rather than paper exams, so it's less of a 'memorize all the bookwork' and more of 'understand and apply'.

Question: Is there anything good about the UK system then?

Definitely there are. I think the UK system is very good with structured study support. There is always detailed core reading which follows the same style for every subject. Therefore it's very easy to get used to a good study pattern. That is also why it took me a while to adapt to the US system as the study materials are not as organized.

Question: What would you suggest students who are trying to decide whether to take the US system or the UK system?

I think there is no system better than the other one in any way. Employers tend to treat FIA and FSA the same as long as they qualify. Therefore it's just a matter of which system might suit each individual better. If you prefer a structured text book approach, UK exams sound better; whereas if you want more flexibility, enjoy learning online and doing assignments rather than exams, then US ones might be more suitable. Also, students who are studying in the UK or who have been studying in the UK might have exemptions for some CT subjects already and therefore could naturally keep on taking the UK exams as they are more familiar with the system. For students who has never studied abroad and want to start their exams in China, they might find it easier to get information and access about the US exams.

Question: Is there any final points that you would like to make?

Just a minor point to add: You need to pay membership fees to the UK profession once you join the profession as a student when you start taking exams, whereas for the US profession you only start paying membership fees after you qualify as an Associate of Society of Actuaries (ASA).



Q&A to FSAs working in the UK

Question: As a FSA working in the UK, do you think you have any disadvantages / advantages compared to a FIA/FFA here? Based on your own experiences, what are the disadvantages / advantages of each exam system?

Keli Zhang, Towers Watson:

As a FSA working in the UK, the biggest advantage to me is the broader experiences you now have: the working knowledge of UK/European market and the theoretical knowledge of the US market. It also gives you the exposure to both professions, for example, you have access to seminars/webinars/research projects organised by both SOA and Faculty/Institute of Actuaries.

With the mutual recognition now between SOA and the Institute, the disadvantage is minimal.

Exam-wise, the essay-styled exams of the FIA really put lots of non-English speaking people to their disadvantages. SOA exams, by comparison, demand less from language perspective. There seemed to be fewer but BIGGER exams to qualify as a FSA than a FIA when I studied (back a few years ago). But still the common rule applies to both, if you don't study, you can't pass.

Another point to make UK exams easier: you can enroll a MSc course and get most of the exemptions of the advanced ones, which is not possible under SOA.

Fulin Liang, Prudential:

Generally I don't think being an FSA is at any disadvantage in terms of qualification or presentation.

Having said that, educated under US system would definitely mean I'm short of UK/European knowledge. I didn't know the popular products or the basic reporting requirements. However, it's unfair to attribute all this to an US education system because even under a UK education system it's possible that knowledge learned 10 years ago would be obsolete. That's why we have a CPD requirement.

In terms of advantage, I would say FSA title "naturally created a sense of connection" among a small group of people. This would help a new comer like me start networking more easily.

Tony Chen, Towers Watson

In terms of disadvantage, a FSA may not have the knowledge about UK insurance market and practices; however, this is one of the reasons why we come to the UK. Another unfavorable position to somebody who tends not to be 'a special one' is as a FSA, you look a bit 'different', surrounding by many FIAs in your company. In addition, you don't know how to provide specific and useful exam tips to junior staff in your team.

A minor advantage is you have some special knowledge from the education of SOA such as US GAAP, which may be useful in some international projects relating to US companies.

More comments on the credential of FSA or FIA in China: most students in China take SOA exams because there are many more SOA exam centres than UK ones. It is convenient to take the one with an exam centre in your university, isn't it? Somebody may argue UK exams are more difficult than SOA exams, which may be right as you can only see the switch from UK exams to SOA exams, but not the other way round. From employer point of view, these two qualifications are almost at the same level, both of them are the most popular and well-recognised actuarial titles in the world.

A bit more than the answer to this question: after all, it is working experience / personality / attitude make an actuary prominent, rather than the qualification itself. In the past an actuary especially in developing countries may be able to enjoy the 'bonus' as there were few people qualified. However, nowadays more and more young and energetic students pass all the exams very soon. What's more, as new techniques on actuarial and risk management topics are galloping along, the earlier you qualified, the more urgent you need to update your knowledge via continuing professional development!

Members' Activities

Launch of CANUK Edinburgh Sub-group

On 5th Feb 2013 evening, over 40 actuarial professionals gathered in the Maclaurin House, Edinburgh, to mark the launch of Chinese Actuarial Network UK Edinburgh Subgroup. Mr. Weihe Qin

from Lloyds Banking Group, the head of CANUK Edinburgh Sub-group, chaired the night and introduced another milestone in the development of CANUK.

Alex-yu Pei, FIA, from CANUK Committee, gave an opening speech to introduce the CANUK's history and the development plan. David Martin, the leader of Scottish Board Institute and Faculty of Actuaries shared the expanding cooperation between the Institute and Faculty of Actuaries and the China Association of Actuaries. Mark Willder from ActEd gave exclusive view of the exam systems and the assistance that can be given to actuarial students. Prof. Howard Waters, FIA & FFA, from Heriot-Watt University discussed the history of the famous Multiple State Model which is quite fascinating.

With this great start, more events will be organised to make the CANUK Edinburgh Sub-group become a critical hub to connect CANUK and their members in Scotland.



Contact Us

Email: CANUK@chineseactuary.org

Website: www.chineseactuary.org

Weibo ID: [CANUK 英华精算协会](#)

LinkedIn: [Chinese Actuarial Network UK](#)

Contribute to CANUK Newsletter:

Editor@chineseactuary.org

Join CANUK:

<http://www.chineseactuary.org/index.php/registration>

Join CANUK's Events:

<http://www.chineseactuary.org/index.php/events>

Visit CANUK on the website of Actuarial Profession:

<http://www.actuaries.org.uk/members/pages/chinese-actuarial-network-uk-canuk>

LIFE PENSIONS INVESTMENT FUTURES



START-UP LIFE BUSINESS

LIFE

LOCATION UPON APPLICATION up to £130k + benefits

Start-up life business is seeking a high calibre actuary to provide strategic support in the development of its business model. The successful candidate will play a key role in establishing pricing processes. Ref: Star1196

ACTUARIAL RISK MANAGEMENT

LIFE

EDINBURGH £ excellent + bonus + benefits

Our client is offering an exciting role that will provide true insight into how a market-leading life insurance company really works. Work with key stakeholders to identify, assess and communicate risks to the business. Ref: Star1327

BUSINESS DEVELOPMENT ACTUARY

LIFE

SOUTH EAST up to £68k + bonus + benefits

A high profile role, within the international business unit, where you will be responsible for the production and communication to the market of new business performance statistics. Ref: Star1354

RISING MODELLING STAR

LIFE

BRISTOL up to £60k + bonus + benefits

Our client is seeking a part-qualified actuary to design, develop and maintain complex actuarial modelling solutions to meet customer requirements. An excellent opportunity to gain experience in a large life insurance company. Ref: Star1378

HEAD OF INVESTMENT CONSULTING

LONDON £ excellent + bonus + benefits

Our client seeks a high calibre investment consultant with the knowledge and skills to take its successful practice to the next level. You will develop new and existing clients and grow the team and its capabilities. Ref: Star1368

MANAGEMENT CONSULTANCY

PENSIONS

BIRMINGHAM £ excellent + bonus + benefits

Global firm seeks qualified actuary to provide management consultancy services to corporate sponsors of pension schemes. You will provide specialist advice on risk solutions and scheme financing to a wide range of clients. Ref: Star1377

MOSES DEVELOPER

LIFE

LONDON £ excellent + bonus + benefits

Global organisation seeks a talented MoSes developer to take responsibility for the design and implementation of innovative technical solutions. The successful candidate will have strong communication and project management skills. Ref: Star1338

CAPITAL ACTUARY

LIFE

SOUTH EAST up to £80k + bonus + benefits

Leading life assurance and pensions provider is seeking a qualified actuary with experience of Solvency II to take up a key role reporting to the Chief Actuary and advising the Board on capital management. Ref: Star1344

WITH-PROFITS MANAGEMENT

LIFE

LONDON £ excellent + bonus + benefits

Leading insurer seeks part qualified or qualified life actuary with strong analytical and problem-solving skills and the ability to interpret detailed requirements and implement model developments. Ref: Star1393

SPECIAL PROJECTS

LIFE

SCOTLAND up to £45k + bonus + benefits

Leading UK life insurer seeks a part-qualified actuary to work on a wide variety of pricing projects. The successful candidate will have strong communication and stakeholder management skills. Ref: Star1382

HEAD OF LONDON OFFICE

PENSIONS

LONDON £ excellent + bonus + benefits

Are you seeking a new challenge? Do you enjoy business development and team leadership? Take this opportunity to build your career within a dynamic organisation. Ref: Star1326

STOCHASTIC MODELLING

PENSIONS

EDINBURGH up to £40k + bonus + benefits

Our client is seeking a part-qualified actuary to work with product managers and quantitative analysts to develop technical methods for the modelling of pension liabilities within a stochastic modelling framework. Ref: Star1369

www.staractuarial.com



Lance Randles MBA
ASSOCIATE DIRECTOR

M +44 7889 007 861
E lance.randles@staractuarial.com



Paul Cook
SENIOR CONSULTANT

M +44 7740 285 139
E paul.cook@staractuarial.com



Clare Roberts
SENIOR CONSULTANT

M +44 7714 490 922
E clare.roberts@staractuarial.com



Peter Baker
SENIOR CONSULTANT

M +44 7860 602 586
E peter.baker@staractuarial.com



NON-LIFE FUTURES

PEOPLE, PROJECTS, POTENTIAL NON-LIFE

LONDON up to £150k + bonus + benefits

Can you bring out the best in people? Do special projects bring out the best in you? Contact us to fulfil your potential in this unique role with a market-leading insurer.

Ref: Star1380

GLOBAL HEAD OF PRICING NON-LIFE

ZURICH PLUS TRAVEL CHF excellent + bonus + benefits

Take up this vital role leading a worldwide pricing team. Working alongside the Chief Pricing Actuary, you will coordinate global pricing projects, training and developing local teams.

Ref: Star1391

ACTUARIAL LEADER NON-LIFE

LONDON up to £100k+ bonus + benefits

Develop new products. Make commercial decisions. Build technical models. Bring a fresh perspective. Inspire a team. This role will provide variety, challenge and responsibility.

Ref: Star1375

RISK ACTUARY NON-LIFE

LONDON up to £90k + bonus + benefits

Are you seeking exposure to a highly commercial environment to enhance your strong influencing and business skills? We are working on a varied role in a high-performing team that could provide exactly what you are looking for.

Ref: Star1395

HEAD OF PRICING AND RESERVING NON-LIFE

LONDON up to £120k + bonus + benefits

Contact us regarding this fantastic opportunity to take up a key position in a global, non-life specialist business with growth on its mind.

Ref: Star1224

HEAD OF INTERNATIONAL RESERVING NON-LIFE

SOUTH EAST PLUS TRAVEL up to £110k + bonus + benefits

Experience key international markets. Provide strategic direction. Solve complex problems. Develop and support a high-performing team. Please contact us to discuss this exciting opportunity.

Ref: Star1265

LONDON MARKET INNOVATION NON-LIFE

LONDON £ excellent + bonus + benefits

Leading London Market company seeks creative and enthusiastic part qualified or qualified non-life actuary to lead its reserving process, working closely with claims managers and underwriters.

Ref: Star1238

RESERVING. PRICING. CAPITAL. NON-LIFE

LONDON £ excellent + bonus + benefits

Fantastic opportunity to join a specialist (re)insurance group as the first actuary within a growing business unit. You will lead the reserving process, provide pricing support and calibrate the internal model.

Ref: Star1392

LONDON MARKET PRICING NON-LIFE

LONDON circa £50k + bonus + benefits

Our client is seeking a talented, motivated part-qualified non-life actuary to take up a key role within its pricing team. Candidates from a reserving or capital modelling background will be considered.

Ref: Star1394

ONCE IN A LIFETIME OPPORTUNITY NON-LIFE

LONDON £ excellent basic + upside

A truly unique opportunity for a part-qualified actuary with reinsurance experience to join a dynamic organisation on an upward trajectory and work with some of the sharpest minds in the industry.

Ref: Star1389

REINSURANCE BROKING ANALYST NON-LIFE

LONDON £ excellent + bonus + benefits

Design and place reinsurance contracts. Develop your skills through cutting-edge risk advisory projects. Work with brokers, underwriters and catastrophe modellers. Build your profile in a niche market. Call us now and never look back.

Ref: Star1379

RETURN ON YOUR CAPITAL NON-LIFE

12 MONTH CONTRACT £ market rate

Provide your expertise in capital modelling and people management. In return, gain exposure to a worldwide organisation with cutting-edge enterprise risk management.

Ref: Star1356



Louis Manson
MANAGING DIRECTOR

M +44 7595 023 983
E louis.manson@staractuarial.com



Antony Buxton FIA
MANAGING DIRECTOR

M +44 7766 414 560
E antony.buxton@staractuarial.com



Joanne Young
OPERATIONS DIRECTOR

M +44 7739 345 946
E joanne.young@staractuarial.com



Irene Paterson FFA
PARTNER

M +44 7545 424 206
E irene.paterson@staractuarial.com