Heriot-Watt University October 2013

The Actuarial "Watt"?

EDITOR'S NOTE

The SAS Current Affairs Committee is proud to present "The Actuarial Watt?" – see what we did there? – the newsletter designed to keep you, our readers, up-to-date with all the latest developments in the world of actuaries. This is our first newsletter of the semester and I'm sure you'll be delighted to know that it's free for all actuarial students at Heriot-Watt University. In this edition, we have a range of topical articles on very important issues affecting actuaries and insurance & pensions companies including Solvency II and Auto-Enrolment.

Besides current affairs, we also do our best to keep you informed about any upcoming SAS events. Lots of information can be found on our website at http://hwsas.com/index.php which is currently being updated from last year. As always we encourage everyone to come and participate in any events we have organised!

If you have any ideas you wish to share that could improve our newsletter, just send me an email at jap12@hw.ac.uk. Your feedback is very much appreciated and will be considered in the creation of future newsletters.

Better yet, you could also get involved in the Current Affairs Committee and contribute to our newsletter at any time by once again dropping me an email. Any relevant contributions will be welcomed!

We hope you find all our articles interesting and informative. So enjoy!

-Jack Paton-

THE SAS COMMITTEE

A new year at university has started meaning a new SAS Committee has been established. Here are some basic details about each committee member and how to get in touch with us. If you have any queries or wish to join a sub-committee, do contact us!

Role	Name	Email Address
President	Dean Robinson	djr9@hw.ac.uk
Vice President	Ben Bailey-Conlon	beb5@hw.ac.uk
Treasurer	Pamela Scott	pms7@hw.ac.uk
Secretary	Rebecca Campbell	rmc7@hw.ac.uk
Careers Director	Ley Kuan Law	lkl1@hw.ac.uk
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Current Affairs Director	Jack Paton	jap12@hw.ac.uk
Education Director	Craig Ritchie	cr122@hw.ac.uk
FASS Representative	Katie Hendry	kh135@hw.ac.uk
IT Director	Kevin Pak	ysp2@hw.ac.uk
Peer Mentoring Director	Gráinne Mc Quaid	gm232@hw.ac.uk
Seminar Director	Jagatheesh Subramaniam	js329@hw.ac.uk
Social Director	James Kildare	jk136@hw.ac.uk

ACTUARIAL SCIENCE: AN INTRODUCTION

BY JACK PATON

Once again the summer holidays have come to an end signaling the start of another year at university for continuing students. But for our new readers, we thought we'd start off our first newsletter of the year by sharing some useful and interesting facts about the world of actuaries.

So what is an actuary? And what do they do?

Frankly, that's a hard question to answer. I am *regularly* asked this and struggle to give a brief, concise answer that doesn't leave the enquirer a bit confused. Even some actuaries find it difficult to explain. Hence, I thought I'd collect together a few varied, succinct descriptions of an actuary to help address this:

- An actuary is a professional who uses mathematics, statistics, and financial theory to study uncertain future events, especially those of concern to insurance and pension programs.
- An actuary is a specialist who uses a range of quantitative and qualitative skills in the mathematical sciences, economics and finance, and business in order to make decisions in complex situations occurring in banking, pensions, insurance, finance and possibly other related fields.
- An actuary is a business expert who deals with the financial impact of risk and uncertainty.
- An actuary makes important predictions that help financial and governmental organizations solve current financial problems and make long-term plans.

Are there lots of exams?

In short, the answer is yes. To qualify as an actuary, you need to pass a tough series of actuarial exams known as the 'Professional Examinations'. There are fifteen exams in total and they are usually taken whilst working as an actuarial trainee generally with support from your employer. However, for any actuarial student studying here, there are modules available to be taken as part of your degree that can give you exemptions from eight of the exams, if your grade is high enough. In general you need around 60-70% in the related modules for an exemption. Based on www.actuaries.org.uk the following is a detailed explanation of each of the examinations:

There are nine exams in this stage and all of them are compulsory. The modules related to each exam are listed below in italics. Note: CT9 is a two-day residential course.

- CT1 - Financial Mathematics *(Actuarial Financial Mathematics A & B)*
- CT2 - Finance and Financial Reporting *(Finance & Financial Reporting)*
- CT3 - Probability and Mathematical Statistics *(Probability & Statistics A & B)*
- CT4 – Models *(Stochastic Processes & Survival Models)*
- CT5 – Contingencies *(Life Insurance A & B)*
- CT6 - Statistical Methods *(Risk Theory & Time Series)*
- CT7 - Business Economics *(Introductory Economics)*
- CT8 - Financial Economics *(Portfolio Theory & Asset Models, Derivatives Market & Discrete Time Finance, Continuous Time Finance)*
- CT9 - Business Awareness Module

You need to pass or be exempted from all three Core Applications subjects below.

- CA1 - Core Applications Concepts
- CA2 - Modelling
- CA3 – Communications

Once you have completed the Core Technical and Core Applications exams, plus a year's work-based skills, you will be able to take a one-day professionalism course and qualify as an *Actuarial Associate*. If you wish to qualify as an *Actuarial Fellow,* you will need to take the Specialist Technical and Specialist Applications exams, have three years of work experience and then finally have completed a two-day professionalism course.
You will have to pass or be exempted from **two** of the Specialist Technical exams.

- ST0 - Alternative Specialist Technical
- ST1 - Health and Care Specialist Technical
- ST2 - Life Insurance Specialist Technical
- ST3 - General Insurance Specialist Technical
- ST4 - Pensions and other Benefits Specialist Technical
- ST5 - Finance and Investment Specialist Technical A
- ST6 - Finance and Investment Specialist Technical B
- ST7 - General Insurance - Reserving and Capital Modeling Specialist Technical
- ST8 - General Insurance - Pricing Specialist Technical
- ST9 - Enterprise Risk Management Specialist Technical

You will have to pass **one** of the Specialist Applications exams:

- SA0 - Research Dissertation Specialist Applications
- SA1 - Health and Care Specialist Applications
- SA2 - Life Insurance Specialist Applications
- SA3 - General Insurance Specialist Applications
- SA4 - Pensions and other Benefits Specialist Applications
- SA5 - Finance Specialist Applications
- SA6 - Investment Specialist Applications

All of those exams may seem rather daunting but the good news is that with at least 2:1 in an Actuarial Science degree, there's a good chance that you'll achieve the first 8 exemptions in the Core Technical stage, provided that you chose the modules related to those subjects.

<u>What can an actuary earn?</u>

I've asked many people why they wanted to become an actuary and they always mentioned one thing: the salary. Actuaries are handsomely rewarded for their work, and below is a quick summary of the different levels of pay you could expect to earn, based on *http://www.actuaries.org.uk/becoming-actuary/pages/what-can-actuary-earn*

Responsibility level	Average basic salary (£)
Chief actuary, senior partner	£221,250+
Senior function head, practice director	£134,343
Function head, practice head	£110,747
Department manager, managing consultant	£87,557
Section manager, senior consultant	£81,239
Section leader, consultant	£67,298
Senior actuary, junior consultant	£59,836
Actuary	£46,515
Student actuary	£32,842

What is the career path like?

There are modules in later years of your degree that are specifically designed to give you a clearer understanding of the different career paths that are open to actuaries. However, it’s always good to start thinking about which part of the actuarial world interests you most. Open to you are the traditional areas of Life Insurance and Pensions as well as rapidly growing areas such as General (or Non-Life) Insurance. You may find yourself working in:

- Life Insurance
- Assurance
- General Insurance
- Risk Management
- Government
- Pensions
- Banks
- Consultancy
- Healthcare

With any luck, I might have told you something you didn’t know about the actuarial profession or at least confirmed a few things you already knew. You can find lots more information about actuaries from any of the lecturers in the department as well as from the careers advisory service. ‘The Actuary’ current affairs magazine is also available free from the School Office at EM125.

SOLVENCY II

BY JOHN WATRET

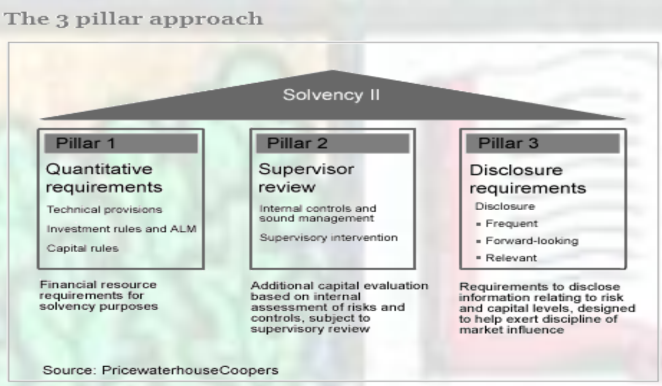
One of the biggest topics affecting insurance companies across Europe at the moment is Solvency II and when it will finally be implemented. It was created to replace the current Solvency I policy that has been in place throughout Europe since 2002. It was not certain at the time how insurance companies should be monitored: what sort of risks should be taken and what reforms should be implemented. This reduced the effectiveness of Solvency I which was supposed to harmonise insurers across the EU. To combat this, Solvency II intends to implement a new set of rules which will offer a more uniform level of protection for consumers.

The main aim of Solvency II is to better manage the risks associated with insurance firms so that they have enough capital to protect their policyholders. The directive consists of three pillars:

1. Quantitative requirement
2. Supervision
3. Disclosure

Each section is designed to be mutually reinforcing. Pillar one determines how much capital an insurer must hold. It features a ‘solvency capital requirement’ and ‘minimum capital requirement’ to cover all the risks an insurer faces, such as sudden interest rate changes or fraud. An actuary establishes how to finance both requirements based on either an internal model or standard formula approach.

Pillar two focuses on the management and control of risks. Here an actuary would identify the risks taken by a company and assess the best method for managing them. Pillar three deals with publication of financial results which contain details about a company's risks and capital management.



Solvency II will have a major impact in Europe and the world when in effect. It will prevent companies taking on too many risks they cannot afford thus offering increased protection for policyholders. It will require more specialists in risk management and increase competition across Europe. Other countries outside Europe will strive to adopt a similar directive to improve their protection.

The only problem is that Solvency II has been delayed several times already. The European Commission, Council and Parliament met in September 2012 to discuss when the new law should be in effect. The outcome was a launch date of 1st January 2014, a year later than the original date. This has led to people questioning how ready Europe is for the new directive.

A recent survey by Ernst and Young asked the question whether insurance companies in Europe felt they were ready for the law in 2014. It found that a staggering 43% do not fully expect to meet the Solvency II requirements by January 2014. Pillar 3 represents the most challenging area to satisfy with only 20% currently meeting the requirements. Overall, the UK and the Netherlands were the best placed insurers with Germany and Italy the least prepared.

Perhaps in light of these findings, there has been a motion by the European Commission to delay the implementation of the directive to 2016. In the end only time will tell when the directive will be law but let us hope it is in place before the next financial crisis.

THE US GOVERNMENT SHUTDOWN

BY JIA-HUI LIANG

What is it about?

The US government has begun to close its non-essential services as Democrats and Republicans could not agree on a budget for the financial year of 2014. This was due to the fact that the Democrats opposed the Republicans' proposal to defund or delay the Affordable Care Act, also known as Obamacare. Furthermore, the shutdown is raising concerns over the debt ceiling. If the debt ceiling is not raised by October 17th, the US government will have to default on its public debt as it does not have any more room for borrowing.

Background

The recent government shutdown is not new. There have been 18 shutdowns since 1976. Under the US Constitution, bills comprising government spending must be approved and passed by the US Congress. If the Congress fails to pass all of the bills by the end of the fiscal year, a government shutdown results.

What are the effects?

Hundreds of thousands of federal employees will be the first to feel the impact of the shutdown as they will be forced to take unpaid leave. Non-essential services such as national parks and museums will be closed. However, the US military, Social Security and Medicare benefits will remain in operation.

As federal employees are being furloughed, consumer spending will take a hit. If the shutdown prolongs, it will slow down the recovery of the US economy. According to Mark Zandi, chief economist at Moody’s Analytics, a shutdown could cause a 1.4% reduction in GDP growth.

The US government shutdown is expected to have minimal impact on the insurance industry. This is because the industry is largely regulated by the states, not the federal government. However, in the long term, it is a cause for concern for insurance agents whose customers are federal employees or contractors as they worry that they will not be able to pay their insurance premiums.

The future

While negotiations in the US Congress are ongoing, no end is in sight. The longer the crisis continues, the more uncertainty it adds to the economy. Moreover, as the October 17th debt ceiling deadline approaches, it is even more urgent that politicians come to an agreement. The standoff has raised the possibility of a default, which will have disastrous consequences on the global economy. As Democrats and Republicans continue to play the blame game, the fate of the world’s largest economy and the rest of the world hang in the balance.

AUTO-ENROLMENT

BY XIN YUNG LEE

Last October, the implementation of a new policy heralded one of the most significant changes in the pensions industry. It states that every employer must automatically enroll workers into a workplace pension scheme, a saving scheme for retirement through an employer, unless the workers opt out of the system. Employees are eligible for this scheme if they are aged between 22 and the state pension age, working in the United Kingdom and earning more than £9,440 a year. This new policy, which is known as auto-enrolment, is intended to encourage more people to save for retirement, so as to reduce the pension burden on the state.

Automatic enrolment into a workplace pension scheme allows workers to save for their retirement while they are earning. Saving into a workplace pension can also help individuals to build up pension savings more quickly as they are not saving on their own. Their employer and the government contribute to the workplace pension as well. Therefore, an individual’s contributions are effectively doubled by the employer contribution and tax relief.

On the other hand, some people argue that the amount of money that goes into the pension savings is not adequate. The pension savings may not even make a substantial difference. In addition, some older workers with low income may find that by agreeing to be auto enrolled, the sums that they manage to save up will deter them from receiving means-tested benefits, which may be more important to them.

After the implementation of auto enrolment, pension providers have moved the goalposts in order to respond to the growing number of clients. For instance, Scottish Life has quite openly declared that without a minimum of six months’ notice ahead of company staging dates, they will not accept any auto-enrolment business from new or existing customers, unless stringent criteria are met. Legal & General has also declared a similar position, although it is coyer about the cut-off date. Even the likes of auto-enrolment guru and founder of cloud based Jargon Free Benefits, Steve Bee, has stated that it will not be able to deal with new business without at least four months' notice. As there are a limited number of expert resources in the United Kingdom, it is evident that these resources are coming under pressure to help businesses deal with auto enrolment.

Over the last year, the largest businesses in the United Kingdom- with more than 120,000 staff- started the ball rolling by actively participating in the auto enrolment process. The results have surpassed expectations. Recently, pensions minister Steve Webb said, 'Already 1.6 million people have been automatically enrolled and the early signs are that this is an enormously successful scheme with nine out of ten workers choosing to stay in a pension.' Malcolm McLean, a consultant at actuaries Barnett Waddingham, also agreed that a 9% opt-out rate was 'very encouraging'.

Auto enrolment may be one of the most important pension policies to date, impacting the entire workforce in the United Kingdom. In the long run, it will slowly ease the pension burden on the state, and improve the people's welfare at the same time. However, in order for that to happen, pressing concerns such as the lack of pension experts have to be addressed.

UPCOMING EVENTS

"My experience as an Actuary" by Angus Macdonald & "Actuarial Exemptions" by Gavin Reid

- Date: Wednesday 6th November 2013
- Time: 2:15pm
- Venue: TBC
- Arranged by SAS Careers & Seminar Directors

This event will consist of two talks: one by Angus Macdonald on his experience as an actuary in the financial world, and another by Gavin Reid on the exemptions system for the actuarial examinations. This is highly recommended for students who would like to broaden their knowledge of the actuarial examinations as well as for those curious about the working life of an actuary.

The FASS Annual Dinner

- Date: Friday 22nd November 2013
- Time: Bar opens at 6.30pm - Dinner at 7.30pm
- Venue: The George Hotel, 19-21 George Street, Edinburgh
- Formal Dress Code

This is a reminder about the FASS annual dinner for all those who have booked tickets.

SAS Peer Mentoring Sub-Committee

This is an important reminder for students that there are still plenty of opportunities to get involved in SAS and one of the best ways to do this is to join one of our sub-committees. In particular, you can easily get involved in the peer mentoring sub-committee where you can not only help younger students with their course work (a rewarding experience) but you yourself can also receive valuable help & advice from older students about your own coursework through a buddy system. Just send an email to gm232@hw.ac.uk to get started.

There are also lots of other sub-committees which you can join (including current affairs - just send me an email at jap12@hw.ac.uk if you are interested!) Once again, I'll emphasise that you can email any member of SAS any questions you may have about any respective sub-committee and can get involved at any time!

BRAIN TEASER

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Complete the puzzle above and stand a chance to win a £10 iTunes voucher! Just scan or take a picture of the completed puzzle (make sure it's readable) and send it to jap12@hw.ac.uk. We'll select one lucky winner from all the correct submissions and will inform you via email if you have won the £10 iTunes voucher. **Contest ends 31st October 2013.**