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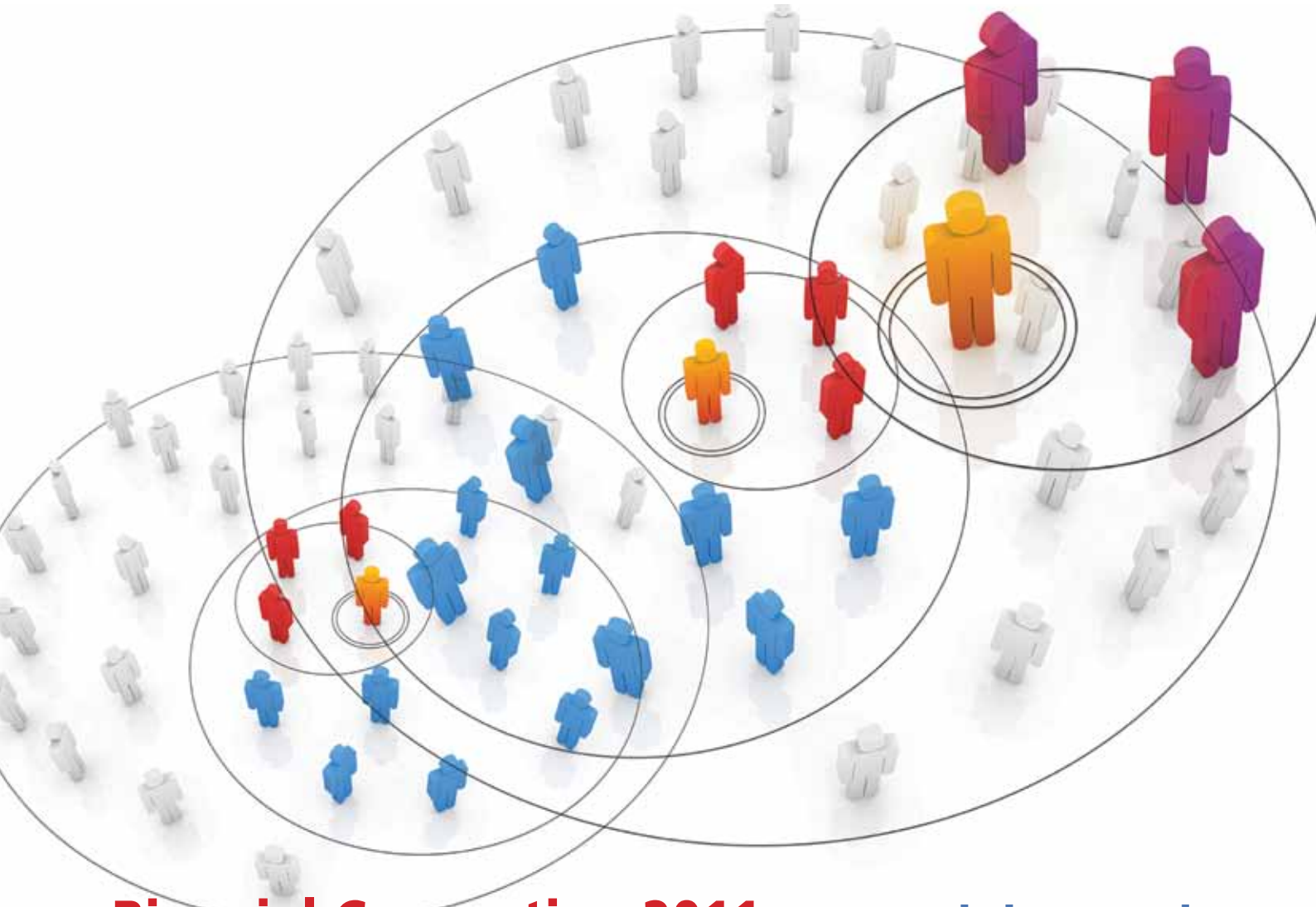
Actuary Australia



Biennial Convention 2011 – Beyond the Mandate

Grameen Bank and Microfinance

Unique to New Zealand – Personal Injury Cover

The Falling Apple – Solar Physics and Our Future

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A H Pollard Scholarship 2011

Deadline for submitting applications is **1 April 2011.**

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A CPD compliance audit will be carried out in the coming weeks.

Further information is available at:
http://www.actuaries.asn.au/TechnicalResources/Professional/CPDCode.aspx

Diary Dates 2011

Sun 10 April	Sydney, Little Bay	**RGA Golf Day** St Michael's Golf Course
Sun 10 April	Sydney, Luna Park	**Biennial Convention** Welcome Dinner
Sun 10 April – Wed 13 April	Sydney, Hilton	**Biennial Convention**
Tues 12 April	Sydney, Town Hall	**Biennial Convention** Gala Dinner (PwC Masked Ball)
Wed 13 April	Sydney, Hilton	**TAP (UK) Graduation Afternoon**
Wed 4 May	Sydney, Institute	**Insights: An Overview of Consumer Credit**

contents

With a new year and a new cohort of qualified actuaries, it's worth pausing to reflect on how Gen Y will take the profession successfully forward, and what may change with Gen Z around the corner. At this year's presidential dinners, our new President Barry Rafe, recounted sage tips for his success in the actuarial field (including how a bushy beard can hold more pens). Will things come full circle? Will Gen Z champion the brown suit? Will reports be replaced by Facebook comments? Will we all be outsourced to India? Will Australia ever win back the Ashes or the Bledisloe?

At a time of considering opportunities and change, a question in last month's *Pulse* regarding Melbourne, designed to garner a positive reflection on Melbourne, generated some opposite results and led to negative comments from some Melbourne members, to whom we apologise. See page 12 for an overview of the responses to this question.

Many years ago as a new graduate, I worked for one of the two Auckland life companies. After a takeover by a company based in Wellington, I took the opportunity to move to Sydney. In my very narrow view at the time, it seemed like the best option. Did I think about what else I could do in Auckland (the home of all my family)? I didn't have the imagination. Did I think of moving to Wellington? Yes, but it seemed like an opportunity to try somewhere different. The punishment for me – two sons who support the Wallabies – oh the shame!!!

From our feedback in the *Pulse* last year there is a definite appetite to hear what is happening in non-traditional fields. Phil Everett and Nick Scott talked about the opportunities in banking at an Insights Networking Session in September 2010 (see *Banking Insights* by Jules Gribble in the October 2010 edition); and this month Josh Ling discusses microfinance (page 5). However, there is a significant number of actuarial students coming out of our accredited universities – where do you all go? Let us know! ▲

James Collier
editor@actuaries.asn.au

Catherine Robertson-Hodder
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Actuary Australia

Contributions
Contributions should be sent to The Institute of Actuaries of Australia, marked to the attention of Katrina McFadyen (Publications Manager) at:
katrina.mcfadyen@actuaries.asn.au
All contributions must conform to our submission guidelines which are available from the Publications Manager.

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Grameen Bank and Microfinance

I know the walk from Wynyard Station in Sydney to my workplace like the back of my hand. I know that an 8.54am train arrival gets me to my desk at 9.00am and that when the Grosvenor Street traffic light turns red, I can sneak across the road on a red signal and make it to my desk a minute early. This is my comfort zone.

On one recent Monday morning, I found my walk to work had transformed into Mirpur Road in Dhaka, a road where long strides count for nothing as you weave through masses of people, and the only way to cross the road is by stepping out in front of cars. A mere 10 minute stroll would take me past numerous beggars, children curled up asleep on a street corner and traffic crazy enough to make even a Mumbai or Cairo resident slightly nervous on the footpath.

I was in Bangladesh and ready to undertake three weeks of microfinance training at Grameen Bank, the organisation that in 2006 shared the Nobel Peace Prize with its founder, Professor Muhammad Yunus, for contributions to economic and social development. The training sought to teach the participants all about the microfinance products and model of Grameen Bank that, since 1976, has inspired countless replications around the world.

The global financial crisis gave the world a small insight into what life without credit might look like. For two-thirds of the world's population, having no access to credit is a way of life. Microfinance offers financial services such as savings, credit and insurance to those that do not have access through conventional financial institutions. Priority is given to the poorest of the poor with bank branches operating in remote rural areas, often without computers and even electricity.

Village borrowers at their weekly centre meeting

A small loan can be enough for a borrower to purchase a few inputs and make a simple product, such as a woven basket, to sell for a modest profit. When one loan is repaid, access to a larger loan often follows and the borrower begins to climb up the development ladder. Without the access to credit, the borrower cannot even reach for the first rung.

Loans and Savings Products

Microfinance products require a simplicity that allows uneducated and illiterate people to understand and use them. It is not uncommon to teach a borrower to understand the difference between principal and interest repayments, only to find they need to learn how to sign their own name. In the case of Grameen Bank, the principal amount of a basic loan typically starts between $50-100 with repayments made weekly over a term of one year. No collateral is required, but an individual can only borrow as a part of a group of five to seven borrowers of a similar socio-economic status and from the same community.

Loan repayments are made as a group, creating a positive peer pressure that results in the group helping with each other's businesses. Under some microfinance models, group loans are disbursed to randomly selected members of the group one-by-one. Each subsequent borrower only receives a loan when earlier borrowers have made a certain level of repayments. In the absence of collateral, bad credit must be quickly identified and managed.

As loans are paid back, borrowers have access to larger principal amounts based on their own repayment history and that of their group. Borrowers struggling to make their repayments are given the option to pay interest only until their circumstances improve or extend their loan duration, in turn reducing their weekly instalment.

Each week, the local Grameen branch office will run a borrower meeting in every village that it has bank members. All borrowers are expected to attend and group by group, loan instalments are made to the village bank manager, along with savings to be deposited into individual savings accounts. When a loan is taken out, each borrower is required to set up a regular savings plan. These funds can be withdrawn at any time but create good savings habits among borrowers, as well as a fallback for loan repayments in the event of a family member falling sick or a business hitting hardship.

Insurance at Grameen Bank and Actuaries in Bangladesh

In 2003, a few borrowers suggested introducing an insurance product that covered the outstanding loan amount if the borrower, or borrower's spouse, were to die. In the years since introduction, trial and error pricing has led to the development of an interesting product.

Upon taking out a loan, a borrower is required to deposit 3% of the loan outstanding into a loan insurance savings account (6% to cover both borrower and spouse). This balance does not earn interest, cannot be withdrawn and must be topped up (or can be drawn-down) as the loan outstanding changes. For each branch (~4000 borrowers), the savings are pooled together and credited with 12% interest per annum by the head office.

The interest is kept in a special 'Loan Insurance Fund' (LIF) and used to pay all claims. If claims in a given year exceed the balance of the LIF, the branch's operating revenue is used. Anybody currently thinking about ways to improve this design has identified an area of work for actuaries in microfinance. The LIF is not subject to regulation, nor a minimum capital requirement. In the case of a natural disaster, funds from a head office 'catastrophe fund' may be accessed.

Despite the presence of numerous insurance companies in Bangladesh, actuarial jobs are close to non-existent with work often outsourced or done offshore. President of the Actuarial Society of Bangladesh, Mr Elias Hussain, says that is difficult for young Bangladeshis wanting to join the profession when there are a lack of jobs to move into and a lack of qualified actuaries from whom they can learn. It seems clear in my mind that the profession can and will be utilised more in the developing world when places like Grameen Bank better understand the uses of our skills. Conversely, it is also up to us as actuaries to show the uses of our skills.

Structuring Microfinance Institutions

Running microfinance as a profit making business has the ability to create problems. Indian microfinance institution, SKS, was heavily criticised during its IPO last year when it raised over USD $350 million in equity capital. Although the capital will allow more micro-loans to be disbursed, the institution is now answerable to shareholders. When a particular region of India suffers a poor repayment rate, shareholders will (presumably) question why decisions were made to expand operations to reach those borrowers. If the aim of microfinance is to prioritise lending to the poorest of poor then Grameen maintains this goal by retaining company ownership in the hands of the borrowers.

Microfinance has often received bad publicity surrounding high interest rates and the exploitation of borrowers, most recently in India.

Whilst it is important to remember that high interest rates will be necessitated by the high inflationary countries in which microfinance operates, the Grameen model completely avoids such exploitation by resting ownership of the bank with the borrowers. The first 100 taka of savings (around $1.50) each borrower deposits, is used to purchase one share in the bank. Each borrower is entitled to any dividends distributed by the board and nine elected borrowers sit on the board of directors. Since 2006, dividends have varied between 30 to 100 taka, a return of 30 to 100% per annum.

Well-run microfinance institutions can produce profits that are the envy of their commercial and investment bank counterparts. High expenses are covered by high interest margins, with the main difficulty in starting operations being the need to achieve scale as quickly as possible. Many investors now see microfinance as a source of solid and stable returns that are largely uncorrelated to mainstream financial assets.

According to a 2007 Deutsche Bank report, institutional and individual investments in microfinance are projected to increase at a rate of over 25% per annum to reach USD $20 billion by 2015. An estimated 1 billion borrowers remain unreached, representing a funding gap of over USD $250 billion. The market is huge and largely untapped.

Borrower demonstrating her bamboo-weaving business

The model of 'Social Business'

Grameen Bank currently has more than eight million borrowers and total of loans outstanding of approximately USD$800 million. Interestingly, total dollar savings is around 150% of dollar loans outstanding. The typical loan product has an interest rate of 20% with savings products offering 8 to 12%; a healthy interest margin for a lending business completely financed by deposits. Grameen's deposit rates are higher than those of commercial banks and hence have the ability to attract funds from wealthier non-borrowers. Repayment rates on loans are over 97%.

Deposits continue to rise at Grameen resulting in the bank seeking new and inventive ways to use the money in its goals to alleviate poverty. Grameen Bank is what Yunus labels a 'social business'. That is, a business that is run to achieve an objective other than to maximise profit.

Each year, Grameen expands its poverty alleviation operations as much as its profit allows. Grameen now lends interest-free money to the children of borrowers to finance their university studies. It provides loans to beggars with no obligation to repay, only the incentive to pay it off and take out a larger amount the second time. Many of these beggars have now joined groups as regular Grameen borrowers.

The idea of social business is not limited to financial services either. Grameen-Danone produces yoghurts rich in the nutrients that under-privileged children lack. Grameen-Veolia provides access to pure water for remote villages. All these services are paid for by the end users but the result is a business in which profits are completely re-invested towards achieving the initial goal. Unlike many NGOs, however, the initial capital is paid back by the social business with no further injections required.

A number of large European companies have had dialogues with Grameen around how they can utilise the idea of social business in order to solve problems such as the high unemployment rates faced by the eurozone. According to Professor Yunus, social business will have a large role to play in the future of capitalism.

"Microfinance is an idea whose time has come" - *Kofi Annan*

The beauty of microfinance is that it is not financial aid. Microfinance is a means to empower an individual to reach their potential. Micro-loans provide the opportunity for an individual to take control of their future and take full credit (no pun intended) for each step they take up the development ladder.

There are countless opportunities to help the developing world, whether for those with financial skills or simply and more importantly, for those with a passion to help. Grameen Bank is but one of the organisations doing amazing things in this space and Bangladesh is but one country crying out for helpers.

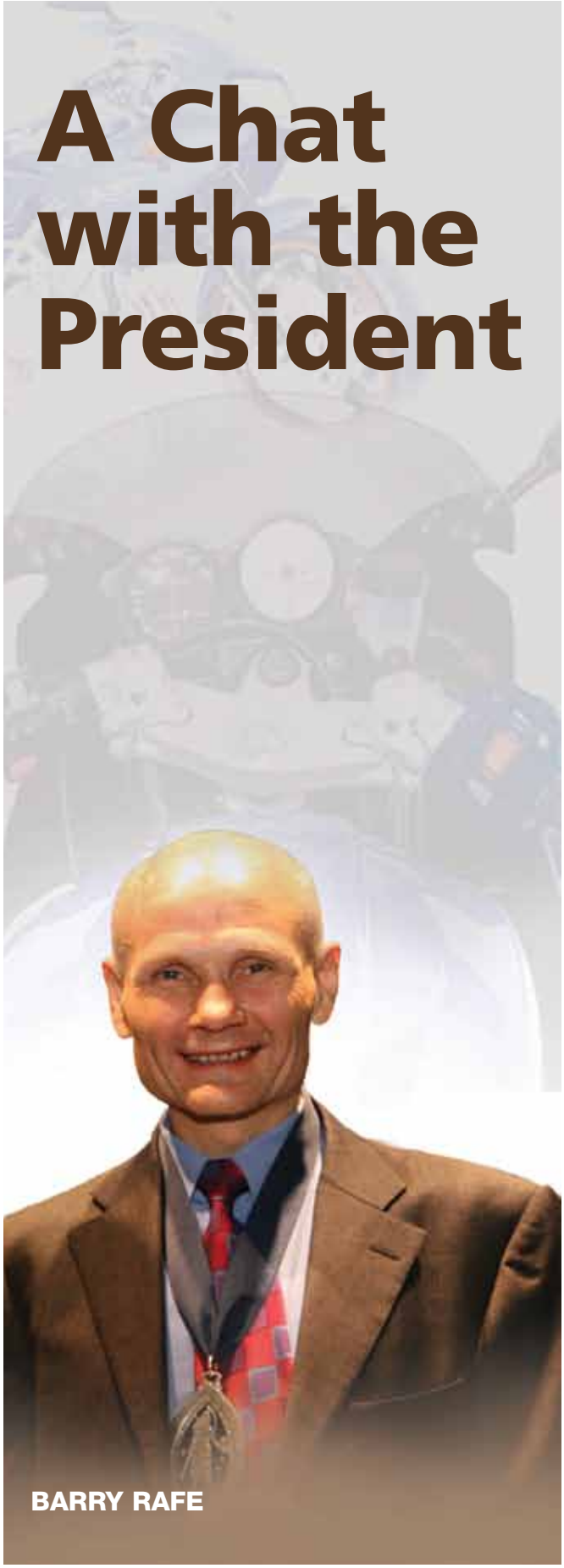
I would like to thank Grameen Bank for hosting my program. Running a microfinance bank is not about gaining market share for the organisation, but rather market share for the microfinance concept. I learned a lot in my three weeks and left with a buzzing sensation to get further involved.

On behalf of Bangladesh, thanks to my employer Deloitte, for the stationery "redistributed" from the level 7 cupboard to the Bangladeshi villagers. Just like the micro-loans, the receiving smiles far out-weighed the monetary value. I hope in the future to hear and read more about others that have had similar experiences. ▲

Josh Ling
josh_ling@hotmail.com

Nobel Laureate Professor Muhammad Yunus and Josh Ling

A Chat with the President



BARRY RAFE

When I first commenced my actuarial career as a graduate with National Mutual in Brisbane, Mr Barry Rafe, then with a full head of hair, was well known in the Brisbane actuarial community and was working at AMP. While his early training in New Zealand was as an actuary, Barry was a frustrated manager and found himself heading up the Queensland AMP branch in the early 90's. This was followed by more than 20 years in various senior managerial roles - including heading up the Employee Benefits Consulting business of AMP in Sydney, the Financial Services division of Trowbridge and Strategy and Management at Accenture before he started his own consulting business.

For those who haven't met Barry, he is relaxed, confident and approachable. Barry paints a picture of himself at the beginning of his career as an introverted nerd drawn to a profession that supported his love for maths as well as his preference for avoiding eye contact – or so he thought. He was soon to meet an actuary who abruptly changed his view of who he could be. Barry described the character of this person as the antithesis of his own and hence began his crusade to improve his communication skills (his hair cut and his daggy dress sense as well).

From that day forward, he has pushed himself to speak up and to speak in front of groups. Barry participated in various speaking courses and never dismissed an invitation to present in front of a crowd. As part of this transformation, Barry has also been actively involved in the organising committees for several Biennial Conventions as well as Convenor of the Institute's Public Policy Council Committee. His journey has culminated itself in his stand up comedy gigs in recent times. If you had hoped to catch one of Barry's shows, it is unfortunately too late, as he has decided to retire 'while at the top of his career'.

While he has had a few burnout periods in his career, Barry seems to have now found that wonderful balance between work, life and personal fulfilment. I noted from his Actuary Unearthed article last year that he is on his way to becoming a Doctor of Philosophy. Barry admits this has been quite confronting – it is one thing studying the beliefs and values of others, but another to be able to develop, hold and express your own firm views. Whether as a product of his recent studies, or through his own experience, he has a strong belief that culture is everything.

So what is the culture of the actuarial profession? Barry observes that his career has been less the technical Actuary and more the Strategist and Manager. Yet, being an Actuary is a big part of his identity. A theme central to this actuarial identity or culture is that what we do should be in the public interest. When we sign up into this profession, that's the deal – setting aside the conflicts of interest and ultimately being accountable to the public. Barry considers that the processes the Institute has in place to monitor and protect our professional veracity are reasonable, but reiterated the need for continuing transparency and questioned whether, in addition to being assessed by our peers in matters of discipline, perhaps a review by an external party would add an extra dimension.

Themes that have been ongoing with past presidents will continue this year – relevance and identity, public policy, governance and

transparency. The relevance relates not only to our external relevance but also the relevance of the Institute to members and the value of being a member. In relation to the latter point, member services will continue to be reviewed and improved.

A big change that occurred recently was the introduction of the Actuary designation. Barry spoke positively of this development and has observed the increase in engagement of members granted this new level of qualification. I raised the question of whether the experience requirements were sufficient to protect our brand particularly given the importance of business judgment in most of our roles. This led us to a discussion on education, CPD and the Professionalism Course.

Education: We discussed the role of the universities in the qualification process. Given the universities are professional educators, and forgetting for the moment that their motivation may be different, should they play a greater role in the education of our student actuaries? While undecided on this, one thing that is certain is that we need to manage our own pipeline of future members and ensure there is the right professional overlay.

CPD: It should be more targeted and more relevant to actuaries working in non-traditional fields or those not working in an actuarial capacity.

Professionalism Course: Barry mentioned the potential for refresher courses for Fellows and Actuaries. Expect some healthy debate on these topics over the coming year.

On the matter of public policy, representatives of the Institute will continue to provide commentary and advice in areas that we have traditionally been involved. Barry is enjoying his time on the Public Policy Council Committee and he believes that, whilst it is important that actuaries develop clear policies on significant issues for the profession, he also believes that actuaries can contribute to the public debate on issues where we do not have the answers but where we think the public would benefit from our opinions. This is consistent with his view that what we do should be in the public interest. We have already achieved a good profile from an opinion piece on floods and others are in the pipeline.

Another focus for Barry is to ensure that Council remains focused on strategy, leaving operational issues to the CEO. With a relatively new Council, Barry's year will be busy. The role of the President over the last few years has been refined so that it represents a smaller proportion of the individual's time. The aim at the moment is for a time commitment of around 30%. Having travelled extensively for business throughout his working life, Barry is quite happy to hand the representation on the International Council Committee and the associated travel to David Goodsall, the Senior Vice President. Hopefully this flexibility in the role will attract Presidents from a wider audience. We wrapped up our conversation with Barry advising that he doesn't mind a bit of controversy – so keep an eye on the President's monthly column. ▲

Ruth Lisha
rlisha@gio.com

Marketing the Profession and the Institute...

The Institute is pleased to announce the appointment of **Andrew Jones** as Head of Marketing and Member Experience. After running his own retail businesses for several years in Sydney, Andrew studied Design and Marketing at the Fashion Institute of Technology (FIT) in New York from 1989-1992.

On his return to Australia, some of Andrew's most significant enterprises included the rebranding and repositioning of the Oxford retail chain. His role as Head of Design and Marketing extended beyond the apparel design to art direction and production of all visual and marketing communications, including logos, websites, catalogues, advertising campaigns, events and public relations. Andrew also established Oxford's first customer loyalty program.

Most recently, Andrew operated his own marketing company, Andrew Jones Brand Management, which played a significant role in marketing and strategy development for several high profile businesses, including nearly 12 months as consulting Head of Brand for Marcs retail chain.

Andrew is confident that his marketing background working with companies that placed major emphasis on delivering an exceptional customer experience will serve him well in promoting the actuary brand and enhancing members' experience.

He can be contacted via: Tel +61 (0) 2 9239 6114, or via email at: andrew.jones@actuaries.asn.au ▲

David Millington Goodsall

Title…
Director in my day job and Senior Vice President of the Institute

Organisation...
Synge & Noble Pty Ltd (Pronounced 'Sing'; Google 'Synge Henry VIII' to find out why). I am also a Director of ClearView Wealth Ltd

My favourite energetic pursuit…
Walking with my wife. I have other energetic pursuits but that's my favourite

The sport I most like to watch...
AFL live but I rarely do it as sport is for playing not watching. Sorry Australia

The last book I read (and when)...
Life & Laughing. My Story, Michael McIntyre's autobiography (two weeks ago)

My favourite artist/album...
Meatloaf and Bat out of Hell. I'm also a fan of Baroque music

My favourite film...
Moulin Rouge

My interesting / quirky hobbies...
I'm fond of electronic gadgets but my hobby is making or building things. I build a good bathroom and I recently made a rather fine rocking horse

What gets my goat...
Hypocrisy. I have a few other goats as well, but that's for another time

What I wanted to be when I grew up...
A pilot, then I worked out there were a lot of boring hours between taking off and landing

Why I decided to become an actuary...
In year 12 a couple of friends who had left school and were at Macquarie showed my maths class some tricks with finite differences (I don't think they teach them anymore because computers can do the sums) and it looked like fun, also I could get a scholarship and be paid to go to uni near home. Luckily for me I liked it

Where I studied to become an actuary...
Macquarie University then many long nights at home

Qualifications obtained...
BA in Actuarial Studies, FIAA, AIA, ASA and CERA

My work history...
I started off in 1977 at Prudential in superannuation then moved to SBU Life, then AETNA then in 1989 moved into consulting with Mercer Campbell Cook & Knight. Two years later I joined the brand new actuarial practice at Ernst & Young and led it for many years before starting my own firm in 2009

What's most interesting about my role...
The constant variety and challenges as well as the interesting people I meet. During my consulting career I have consulted to many life companies, helped set up seven life companies both in Australia and overseas, had 13 appointed actuary roles, travelled to 18 countries, been involved with many major deals and run a consulting practice. I have also dealt with a couple of people who have ended up in jail. Being an actuary can be a lot of fun if you try

My role's greatest challenges...
Work / Life balance is the greatest challenge and one that is hard to win although I'm doing a lot better now

Who has been the biggest influence on my career (and why)...
My training encouraged me to be conservative if not pessimistic. I have been fortunate to work with many top business men and women and learned that you succeed in business by having a 'can do' attitude and persevering until you succeed or there are no options left. If I had to name one, it would be Mike Wilkins who was my first client

My proudest career achievement to date is…
Building a successful large actuarial practice, providing employment and opportunities for many actuaries and other professionals

The most valuable skill an actuary can possess is…
A commercial approach to make their advice relevant and understood

If I were President of the Institute, I would…
We are a small but influential profession facing competition for jobs and members from many areas. My focus next year will be to continue the focus on value to all members, including the transformation of the profession from a traditional statutory role focus to also being a sought after profession contributing to the financial success of a wide range of companies. This means attracting and training more commercial actuaries who can demonstrate the value of our skills and promoting the actuarial brand to employers. Of course we need to continue to recognise and embrace our core areas that have helped build the profession

My most important decision…
To marry my wife

I'm most passionate about…
The potential for the actuarial profession in Australia

I'd like to be brave enough to…
Bungy jump

In my life I'm planning to change…
In my new role I meet so many people doing interesting things, in business I want to explore a few new areas and learn new skills

At least once in their life, every actuary should…
Talk to an adviser and go out on a sales call

If I won the lottery, I would…
Work less and give more to the Exodus Foundation Literacy Program

People say I look like…
Ben Elton

I should publish a video of myself on YouTube doing …
Let's be realistic. It isn't going to happen

My most embarrassing moment…
That would be telling

My best advice for my children…
Do your best and be passionate about whatever you do

Four words that sum me up…
Commercial, flexible, experienced, ethical
▲

David Millington Goodsall
dgoodsall@syngeandnoble.com

New Fellows and Actuaries

Professionalism Course attendees – February 2011

Congratulations to our new Fellows and Actuaries – February 2011

Fellows

Li Wen Beh
Matthew Rodney Carle
Shijia Chen
Jack Cheng
Gigi Wai Chi Cheung
Soon Nyean Chin
Joo Beng Choo
Alina Fainshraiber
Lucy Julia Hammerman
Thuan Dang Ho
Jeremy George Holmes
Iwan Nugroho Juwono
Muhammad Nadeem Korim
Sohila Ka Yee Kwan
Andrew Tin-Yau Kwok
Doan Ba Nguyen Le
Simon Pek Huan Lim
Wei Yin Lim
Stephen Kee Leong Lum
Philip Terry Mullins
Paul Junior Ng
Ronald Say-Jing Ng
Siang Chin Ng
Andrew Kevin Parker
Alana Elizabeth Paterson
Mary Kar-Yan Poon
Kamal Sattar
Jacob Sharff
Jaan Emmett Simpson
Nanthini Skandakumar
Wei (Zoe) Song
Aris Stavrou
Robert Street
Sonia Maree Tripolitano
Alice Truong
Qian (Nina) Xiao
Chen Qi Xue
Calvin Yap
Vivian Tze Ying Yeung
Zheng Vicky Zhou

Actuaries

Abhijit Apte
Karolina Bowler
Chris Leonardi Chan
Wei (Kylie) Chen
Nikola Genevieve Coristine
Matthew Dunne
Meray El-Khoury
Jennie Jiayi Fu
Yujin Ge
Michelle Harrison
Robert Leslie Johnson
Esther Nduta Kahumburu
Stephen Michael Long
Judson Judah Lorkin
Jonathan Lowe
Alan Ng
Mae Rai
Angat Sandhu
Shamindra Shrotriya
Alexander John Alfred Smith
Ye Tao
Mark Bruce Thackham
Anna Vetski
Mike Wang
Peter Wienand
Mitchell Clyde Wills
Li-Te Leon Yan
Tian Zhi Yang
Meng Yuan
Christopher Yu
Han Fei Zhang

The Actuarial Pulse

The Actuarial Pulse is an anonymous, web-based survey of Institute members, run on a monthly basis, giving members an opportunity to express their opinions on a mixture of serious and not-so-serious issues.

Next Survey New questions will be available in April 2011.

What would you like to know? If you have a question you would like to put to the membership, email it to editor@actuaries.asn.au

Results Report generated on 12 February 2011, 490 responses received.

This first pulse survey of 2011 has received a huge number of responses, with many people coming out in strong support of our Melbourne actuarial community.

Q1: Since the closing of the Institute's Melbourne office, the purchase of Aviva, AXA being taken over, AIG's GI business in run-off, is the actuarial community in Melbourne becoming redundant?

This particular question in this survey highlighted the shrinking opportunities for actuaries to work in traditional fields, especially life insurance. Whilst this question targeted Melbourne, it could have easily been directed at Sydney, Brisbane or anywhere else in Australia – and probably around the globe. This question was sent in by a member of the Institute and many respondents immediately jumped to the conclusion that it was "Sydney-centric arrogance" at play and some responses were clouded in a red mist. However, this question could have come from anybody, as it was intended to provoke thought and meant for the whole actuarial community to sit up and take notice. It certainly was not this author's view, nor that of the submitter.

The skills of the actuarial community are sought after by many clients "outside life insurance head offices" and we as a profession and individuals need to promote these skills outside of the 'traditional areas'.

Many may read that statement and say "but we are already practising in non-traditional areas." However, by the number of responses received that suggested "additional areas of financial risk management that we could offer our services to", I challenge you to continue to stretch our perceived 'boundaries'.

Moreover, whilst responses like "it is very narrow-minded to think that actuaries only work for private sector insurers" were directed specifically at the question, many potential employers of actuarial services may actually have this narrow-minded viewpoint. We must actively challenge this belief and market our very valuable actuarial training and thought-processes to the wider financial services industry and beyond.

Many of the respondents provided a list of financial services employers based in Melbourne to show just how vibrant a community we have here in Melbourne. The list is long and includes two banking conglomerates, NAB and ANZ, numerous superannuation companies, health insurers, general insurers, a long list of government agencies and a myriad of consulting firms. In fact, "both Quantium and Ernst & Young have both actively invested in Melbourne over the past few years."

More specifically to the question, members have also proffered that ● Sydney-based MLC has just set up its 'Retirement Solutions' team in Melbourne (in the old Aviva HQ) ● AMP have indicated that they intend to maintain a "significant and ongoing presence in Melbourne" ● AIG's GI business is not in run-off but rebranded as Chartis.

In addition to this, there is a belief that the "significant resources at Melbourne University to teach actuarial subjects" will continue to produce fantastic graduates whose actuarial training will be widely sought after in the wider financial services field.

People have also pointed to "internet and email often making locations irrelevant" as well as "actuarial colleagues in Sydney still having to travel to Melbourne regularly", indicating the need for actuarial skills in Melbourne.

When members turned their thoughts to the "Institute more generally", then they tended to believe that "it does have a lower profile here in Melbourne" and that the "closure of the Institute's office is still a sore point with many Melbourne-based members." There was also concern expressed by members that "the Institute was initially planning not to host Fellowship dinners in Melbourne and that they've reportedly stopped hosting tutorials in Melbourne for Investment students."

Other responses about the Institute included:

- It seems that whether by design or accident the Institute is doing its best to kill the natural camaraderie of the Melbourne actuarial community.
- Being an actuary from Melbourne I do want to feel part of an Actuarial community. Unfortunately the Institute seems to schedule more and more events in Sydney only.

Whilst I am aware that the Institute has been working closely with many of its members in Melbourne, it seems from these responses that more could be done to include them and other locations within the Institute.

Having said this, and acknowledging the opinions of the respondents, change does take time and it is clear from the responses of some members that the "recent efforts to connect banking and finance actuaries are quite promising" especially "over the last year as the initiative has got traction."

To round this section out, in the often tongue-in-cheek responses that the Pulse survey receives, some of our members have suggested that ● Melbourne has the Formula 1 Grand Prix, so ex-actuaries could always become racing car drivers ● (to the tune of "There'll always be an England") There'll always be an act-ry, In Melbourne don't you see? 'Cos Melbourne needs its actu-ries, To balance Syd-en-ney." After all "Melbourne is where all the cool kids play."

Reflections on the new 'actuary' designation

Q2: Do you really think the Actuary designation has value and meaning, or is it just a name?

	No	Yes	Total
Student	18%	82%	33
Actuary	29%	71%	31
Affiliate	33%	67%	6
Associate (AIAA)	54%	46%	52
Fellow (FIAA)	24%	76%	280

Let me start by acknowledging that not only was the first question a little confusing, but this whole section caused confusion amongst the respondents. However, ironically or otherwise, this is actually what is at the crux of the new designation – confusion and ambiguity.

Confusion and ambiguity

The responses from the membership included ● The fact that even this survey incorrectly capitalises the first 'a' in it is evidence of how confusing and meaningless it is ● Outside of the profession, I don't think anyone would appreciate the difference between 'actuary' and 'Fellow.' It's all actuaries! ● Actuary is a respected term, although I don't think the Institute meddling does much more than raise Institute fees ● I haven't met anyone "senior" with the Actuary designation ● The designation doesn't seem to carry much weight ● It's just a name – they are treated/perceived as students nonetheless. Perhaps it's the lack of work experience.

Following on from that last comment, many members have suggested that they "haven't seen any difference in what the new 'Actuary' can do or a change in how they are 'valued' by their firm or clients. People are generally judged by their abilities rather than their title." This is especially the case as seeing that there is a general scepticism that "the Part II exams are not rigorous enough to justify calling those who pass them an actuary." Admittedly that isn't all they need to do, however the scepticism is nevertheless there.

Some people expressed the same concerns that were originally voiced by members (especially Fellows), that we are lowering standards "because you allow people who have only completed a university degree and professional course to call themselves actuaries" and "few in the real world know what it means".

The following response from a newly designated actuary shows it may simply be a stepping-stone for many members in their progression to Fellowship: "(It is) hard to be satisfied with being able to call yourself an Actuary when you have not completed all the required 'Technical' modules".

Members tended to draw a distinction between the beliefs of those within the profession and those outside, suggesting that "for those inside the profession, the designation probably does not have much meaning." Whilst for many, the 'muddying of the waters' could be seen as "the perfect designation for the growth and expansion of the profession in the modern marketplace."

The continued development of this designation could be the perfect tonic for those that share the view that "the Institute has not done enough to push the actuarial designations and the skills that actuaries can bring to the table in the areas of investments and funds management." This topic was discussed in the section above and my belief is that this 'pushing' can be done from the members on the inside even more effectively.

One member, with apparently more intricate knowledge of the situation, suggests that "the response from associates to gain the designation, including re-joining the Institute, has been spectacular. It also recognises the talent and hard work of those who haven't been able or chose not to gain the Fellowship. It is making the Institute more relevant to members."

Others have felt that it is almost liberating as "AIAAs couldn't call themselves actuaries or give actuarial advice, even if they'd been working in their industry for decades. They were defined by what they couldn't do, not what they could, it felt like the profession only valued them for their fees. No wonder all those experienced people left the profession in droves. The actuary designation recognises the fact that they 'almost got there' and have volumes of experience to contribute to the profession." "Its introduction has had a positive impact on some previously disenfranchised Associates."

The final word on this topic has been reserved for one reader who is looking forward: "Historically the profession has built a great reputation. It is up to all 'Actuaries' (including those newly designated) to ensure that this is maintained."

Q3: If you are an eligible Associate, do you plan to attend a professionalism course to attain the designation of Actuary?

	Already Have	Yes	No	Total
Actuary	100%	0%	0%	31
Associate	10%	40%	50%	48
Student	0%	70%	30%	10

From the small number of associates and students, it appears that around 50% of them have completed, or intend to complete, the final requirements to become an actuary.

Q4: Who should pay for eligible Associates to attend the professionalism course and investment bridging course to attain the Actuary designation?

	Employer	Self	Total
Student	82%	18%	34
Actuary	94%	6%	31
Affiliate	60%	40%	5
Associate (AIAA)	88%	12%	51
Fellow (FIAA)	71%	29%	251

Whilst almost all of the actuaries who have completed the course and many of the Associates believe that the employer should pay for the required courses, there are far less Fellows who believe this is the case.

The resounding response given for this was that these Fellows believed that there was a lack of perceived 'value' from their staff gaining this accreditation. Some Fellows, most likely in the consulting business, referred to the 'value' as "the increase in charge-out rates for these staff members." As such, they were willing to pay for these fees.

Q5: If you have been awarded the designation of Actuary, have you received any benefits, financial or otherwise, as a result?

Following on directly from the question before, the responses to this question have been mixed, with one member being told by their employer that "we had paid your professionalism course and it has added very little value to the course of works (you are) doing." Whilst other firms have "a clear recognition of the value of the designation."

Others see it as providing them with "greater opportunities, and an easy "tick" for recruiters looking for someone as the term actuary carries with it a number of perceived traits – numerate, hardworking, professional etc."

"It might not be any financial benefit, but it gives some of us an opportunity to celebrate our achievement and courage to keep going to achieve future goals." Which is fortunate given another member's opinion that "title inflation is fine, but everyone still knows deep-down that only FIAAs are 'qualified' actuaries."

Reflections on the Queensland floods

Q6: Have you, or has someone close to you, been directly affected by the floods in Queensland?

No	321
Yes – myself	5
Yes – someone close to me	69

Q7: Have you donated (money or 'in kind') to the Premier's Flood Appeal?

Q8: Do you think that those people without insurance coverage should receive financial aid from the government to rebuild their houses/lives?

As for the responses, they were wide ranging, and the most common themes are brought out in these comments below.

In the "No" corner ● It creates a moral hazard that will discourage people from insuring if they believe the government will bail them out ● It is unfair to those that have insurance cover ● People, governments and businesses should not be compensated for building or buying properties in flood prone areas ● Adequate information exists for them to understand their risk. If they choose to sit by with no insurance or not make the effort to understand whether the cover they have meets their needs then they should learn the lesson.

And in the "Yes" corner: ● This is not the time to lord it over people who have made a mistake. Perhaps help could be contingent on the people demonstrating that they will buy insurance in the future ● Payments should also be accompanied by education campaigns to promote understanding of the importance of insurance ● Whole people's lives are impacted – it would be very heartless of us to let them suffer ● Destitution will cost society as a whole, so should be avoided. However, the financial aid should not aim to provide full restitution as, if this was desired, insurance should have been sought. ▲

Dave Millar
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BIENNIAL CONVENTION 2011

BEYOND THE MANDATE

The Institute of Actuaries of Australia's **Biennial Convention** will be held in Sydney, Australia from Sunday 10 to Wednesday 13 April 2011. The theme is **Beyond the Mandate**.

As international financial markets are still recovering from the global economic crisis, Australia is well on the road to recovery on the back of our resource exports and extraordinary growth in Asia. The disastrous floods across Australia continue to challenge the insurance industry and the broader economy, however a global economic shift is occurring and Australia is well placed to capitalise on the opportunities this presents.

With around 0.3% of the world's population, the 13th largest national economy by nominal GDP and the fifth largest pension system in the world, Australia already punches above its weight on the international stage.

The five plenary sessions feature an exceptional selection of speakers from South Africa, United Kingdom, Europe, USA and Australasia. Presentations will include a wide range of topics covering global activities in risk and regulation, their impact on Australia, the challenges and opportunities they present and how Australian actuaries are making a difference interacting on social issues and influencing public policy. We also have over 40 'graded' concurrent sessions covering a wide range of business and non-technical topics.

Some 400 professionals from Australia and overseas are expected to attend to discuss and debate issues on general, life and health insurance, risk management, wealth management, banking, finance and investments, superannuation and other areas of practice beyond the mandate, such as energy and the environment.

This is a great time to be an actuary in Australia. Come and network with your colleagues at the premier professional event designed specifically for you.

WHO ATTENDS

The Biennial Convention attracts high level industry leaders, regulators, researchers and academics as well as risk managers, senior consultants, heads of actuarial placement firms and industry colleagues working across a wide variety of sectors. We encourage a global outlook and extend this invitation to all interested parties from around the world, but in particular we believe our regional partners in China, Hong Kong, India, Indonesia, Malaysia, New Zealand, Philippines, Taiwan and Thailand would benefit greatly by attending.

A LOW CARBON EVENT

A small portion of each registration fee will be used to purchase renewable energy to offset the carbon emissions generated by delegate flights to Sydney and electricity usage at the hotel.

THE MELVILLE BIENNIAL CONVENTION PRIZE

The Melville Biennial Convention Prize was initiated by the late Mr Tig Melville (1926-2010). Valued at $4,200.00, the prize may be awarded to the author of a paper considered by the judging panel to be sufficiently meritorious.

Full details at **www.actuaries.asn.au/Con2011**

TOPIC SNAPSHOT

General Insurance

- Modelling Dependence in Insurance Claims Processes with Lévy Copulas
- An Optimisation Perspective on Clustering with Applications to Premium Rating
- An Economic Model to Evaluate Extreme Events for Lenders' Mortgage Insurers
- The Involvement of Actuaries in General Insurance – Past, Present and Future

Health

- Risk Equalisation 2020 – Is the Current System Sustainable?
- Long Term Care: What Can We Learn From the International Experience?
- Does it Hurt When I do This? The Likely Cost of Catastrophic Medical Injuries Under a National Disability Insurance Scheme
- When Too Much is Not Enough: Capital in a Mutual Health Fund
- Health Financial Condition Reports – The First Five Years
- Growing Pains: Measuring Selection Effects in Private Health Insurance
- Contemporary Issues in Private Health Insurance
- What is the 'Appropriate' Price for a Community Rated Product? A Case Study of Private Health Insurance in Australia
- Seven Up: The Appointed Actuary in Australian Health Insurance Seven Years On

Investments

- Securitise This – SPVs Post GFC
- Approaches to Setting Capital for Investment Guarantees
- A House or a Home? Finding Value in Australian Residential Property
- Beyond the Benchmark: Perspectives on Adding Value to the Investment Process
- Unlocking the Equity in Your Home: Just How Risky Is It?

Life Insurance

- Feasibility of Inflation Guaranteed Products
- Global Developments in the Modelling and Application of Risk for Life Companies
- FSC – KPMG Experience Analyses Update – Lump Sum Risk and Disability Income
- Modelling Mortality with a Bayesian Vector Autoregression
- Managing Systematic Mortality Risk with Group Pooling and Annuitization Schemes
- Replicating Portfolios & Risk Management – An Australian Perspective
- Heterogeneity of Australian Population Mortality and Implications for a Viable Life Annuity Market
- Comparison of Basel III Regulatory Regimes Between UK, Australia and Canada
- Overview of Singapore Insured Lives' Experience Study

Risk Management

- Beyond Financial Institutions: How Well Do Actuaries Understand Companies' Risk Concerns?
- Actuaries and Non-Financial Business Risks: Operational, Project and Strategic Risk
- Risk Appetite – What the CEO and Board Should Be Doing
- Risk Margins: An Education Session

Superannuation

- New Treasury Stochastic Modelling of Australian Retirement Incomes
- Savings and Dissaving Behaviour During Retirement: Risk Preferences, and Demographic and Economic Drivers – Preliminary Findings from a Survey of Elderly Australians
- Retirement Consumption Plans
- Sustainable Full Retirement Age Policies in an Ageing Society: The Impact of Uncertain Longevity Increases on Retirement Age, Remaining Life Expectancy at Retirement, and Pension Liabilities
- Reducing Retirement Income Costs
- Managing Liquidity in Superannuation
- FCRs in Super – What is the Customer Value Proposition?

Additional Topics

- Women on Boards and in Senior Management
- Using Data and Analytics to Drive Strategy Outside of Traditional Fields
- Towards a Carbon Neutral Actuarial Profession
- Shaking Down Financial Services Regulation
- Evaluation of Public Policy Initiatives
- Essence of Actuary: Skills + Practices + Capabilities = Value
- Strategic Disinformation: How Well Does it Work?
- Graduates' Use of Technical Software in Financial Services
- The Man Who Ate Himself – Why Over Population and Over Use of Resources Will Lead to Humanity's Demise
- Valuing ESOs Using the Exercise Multiple Approach and Binary P-options
- Energy Pricing and Sustainability

SPEAKERS

Kirsten Armstrong

Kirsten is a freelance consultant with over 15 years experience providing strategic and policy advice to the health and social insurance sectors. She advises clients, particularly governments, on long-term sustainable solutions for the health system – health financing, resource allocation, future health demand, and the right workforce to meet future health needs. Kirsten was previously a Partner with PwC Australia and a Director at Callund Consulting in the UK, advising governments in Russia, Eastern Europe, the Middle East and the Caribbean on major pension system reforms.

Michael Barker

Michael Barker operates principally as a non-executive director, including MetLife and the ISPT property trust group. He is also an independent member approving products for NAB's financial planning dealerships. Michael was a Director of NatWest Investment Management in London from 1994 to 1996, and prior to this spent eight years as head of the Sydney office of County NatWest Australia Investment Management, designing and implementing quantitative solutions for clients. Michael was elected to life membership of the Institute of Actuaries of Australia in 2007.

Pauline Blight-Johnston

Pauline Blight-Johnston is the Managing Director of RGA Australia and New Zealand, and Chairman of RGA Japan. In this role she is responsible for growing RGA's business sustainably and profitably in Australia, New Zealand and Japan. Pauline has over 15 years of actuarial and financial management experience in the life insurance industry in Australia and internationally. Before joining RGA, she worked at Asteron Life as Chief Financial Officer and Appointed Actuary. Prior to Asteron, she held positions at Tillinghast and Morgan Stanley Dean Witter.

Andrew Boal

Andrew is the Managing Director of Towers Watson in Australia and is responsible for the management and growth of all lines of business. With over 27 years consulting experience in the superannuation and employee benefits industries, Andrew plays an important role in the development of Towers Watson's thought leadership in Australia and has co-authored numerous submissions to the government and regulatory authorities on a variety of superannuation matters. He also continues to be involved in managing key client relationships and developing strategic solutions for several major clients.

Peter Broadhead

Peter is the acting First Assistant Secretary of the Health Reform Transition Office, which has been established within the Commonwealth Health and Ageing portfolio to oversee the implementation of the National Health and Hospitals Network reforms agreed by COAG (with the exception of WA) in April last year. Peter has been a senior executive responsible for a wide range of policy and program areas within the Commonwealth Department of Health and Ageing since 1995, including at various times aspects of Medicare, activity based funding development, coordinated care trials, health services for Aboriginal and Torres Strait Islander people, and aged care policy and programs.

Cecil Bykerk

Cecil is currently President of the International Association of Actuaries and President of CDBykerk Consulting. He also serves as Executive Director of three state high risk pools, Montana, Alaska and Iowa. In addition, he serves on the Board of Directors of the Senior Health Insurance Company of Pennsylvania. Cecil was Executive Vice President and Chief Actuary at Mutual of Omaha Insurance Company, prior to starting his consulting career in 2004. Prior to his 25-year tenure at Mutual of Omaha, he was Director of the Actuarial Science Program at the University of Nebraska from 1975 to 1979.

Tony Coleman

Tony Coleman is a company director and adviser. Amongst other roles he is currently a Non-Executive Director with AMP Life Limited, Australian Carbon Trust and Max Bupa Health Insurance (in India). He is also a Director of Lonergan Edwards & Associates Limited, and a Member of the Advisory Board of the Macquarie University Business & Economics Faculty and the International Accounting Standards Board Insurance Working Group. From 2000 until 2008 he was Chief Risk Officer and Group Actuary of Insurance Australia Group (IAG). Tony is a past President of the Institute of Actuaries of Australia and was awarded Actuary of the Year in 2004.

Seamus Creedon

Seamus is current manager of the Solvency II project of *Groupe Consultatif Actuariel Europeen* (representing all European actuarial associations), leading the contribution of more than 50 actuaries from throughout the European Union to establishing the new supervisory and accounting framework. He is affiliated with KPMG Europe, having been a partner in the firm until 2003, and is a non-executive director of a number of UK and Irish insurers. In addition to full membership of the Institute of Actuaries and the Society of Actuaries in Ireland, he is also a member of North American actuarial bodies and is Vice-Chair of the Enterprise and Financial Risks Committee of the International Actuarial Association.

Adam Driussi

Adam Driussi co-founded Quantium in 2002 where he now employs over 80 staff across consulting, software development and media planning. Adam advises clients in industries such as insurance, banking, retail, telecommunications, media and gaming on using data to help inform pricing, marketing and customer strategy.

Kent Griffin

Kent is a Partner with Ernst & Young's advisory practice. He has over 20 years experience in the insurance and wealth management sectors. Prior to joining Ernst & Young, Kent was the Regional Chief Financial Officer for AXA Asia Life. Based in Hong Kong, he was part of the Regional Executive Committee with oversight of operations across eight countries. Kent has also held positions as a Director of ALM & Economic Capital for the global AXA Group, Chief Actuary, Treasurer and Investor Relations. He is currently Convenor of the Risk Management Practice Committee of the Institute of Actuaries of Australia.

Simon Longstaff

Dr Simon Longstaff has been Executive Director of St James Ethics Centre since 1991. Established in 1989, the Centre is an independent not-for-profit organisation which provides a non-judgmental forum for the promotion and exploration of ethics. One of the Executive Director's roles is to encourage the process of integrating ethical considerations into the strategic thinking of the management community. Simon encourages and contributes to the active discussion of ethical issues amongst the widest possible audience.

John Maroney

John Maroney is a member of the Secretariat of the International Association of Insurance Supervisors (IAIS) in Basel and supports the Financial Stability Committee and the Solvency and Actuarial Issues Subcommittee. He is also the IAIS's representative to the International Actuarial Association (IAA) and the Vice Chair of the IAA's Enterprise and Financial Risks Committee. Prior to joining the IAIS, John gained 30 years of experience in the Australian financial sector, including CEO of the Institute of Actuaries of Australia, Principal of Professional Financial Solutions, Partner at Trowbridge Deloitte, CEO of the Life, Investment and Superannuation Association, Australian Government Actuary and various senior management roles at AMP.

Peter McCarthy

Peter is a Partner at Ernst & Young and is a Fellow of the Institute of Actuaries of Australia and Convenor of the General Insurance Practice Committee. Peter has 25 years experience in the general insurance industry and has advised governments and insurers on a range of matters including actuarial, strategic and operational issues. In addition Peter worked as a senior executive in insurers for over nine years including chief actuary, head of underwriting, product and claims management.

Hazel McNeilage

Hazel is the Head of Funds Management at QIC. She is responsible for QIC's investment management boutiques and client-facing activities. Hazel also participates in the development and implementation of QIC's overall business strategy. Before joining QIC in January 2010, Hazel spent eight years with Principal Global Investors (PGI) in a variety of roles, including most recently Global Head of Sales, Relationship Management and Client Service, based in New York, and, before that, Head of PGI's Asia ex Japan business, based in Singapore.

Barry Rafe

Barry is an actuary who has spent most of his career as a Management Consultant. In 2005 he was appointed Managing Director of Mellon Human Resources & Investor Solutions. Barry worked with Mellon for two years to restructure and divest the business. He is currently President of the Institute of Actuaries of Australia and Convenor of the Institute's Public Policy Council Committee. He now works as an independent consultant and is currently completing his PhD in philosophy at Sydney University. He is a member of the AAS Advisory Council.

Zac Roberts

Zac spent eight years working as an actuarial consultant with Tillinghast throughout Asia, and then three years in the insurance and pensions team at Deutsche Bank. In 2010 Zac started SouthPeak Investment Management. SouthPeak focuses on the drivers behind investment returns and combines the best alternative return sources to target consistent returns with low risk.

Bernard Salt

Bernard is a compelling and entertaining speaker engaged by both the private and public sectors to present a perspective of how social, cultural and demographic change might shape the future business environment. He is a best-selling author of three popular books on demographic change and a columnist with The Australian and Melbourne Herald Sun newspapers. Bernard is a Partner with KPMG and heads a group of researchers providing demographic advice to business.

Desmond Smith

Desmond qualified as a Fellow of the Institute of Actuaries (London) in 1973 and completed the International Senior Management Program at Harvard Business School in 1992. He joined Sanlam in 1968, where he became Managing Director in 1993. Desmond retired from Sanlam at the end of 1997 and served as Managing Director of the Reinsurance Group of America (South Africa) (RGA) from 1999 until 2005. He is currently Chairman of RGA and Sanlam and holds several company directorships. Desmond serves on a number of the committees of the Actuarial Society of South Africa and the International Actuarial Association (IAA) and is currently the President-Elect of the IAA.

Curt Zuber

Curt joined Westpac Banking Corporation in 1995 and was appointed as Group Treasurer in October 2004. He is responsible for Westpac's treasury operations including securitisation, group liquidity, global wholesale funding, capital management and all on balance sheet risk management. Before joining Westpac, Curt spent seven years at Household International in Chicago and Sydney in various treasury-related roles, including risk management, funding and asset liability management. ▲

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Unique to New Zealand

– ACC's Coverage of Non-work Personal Injuries

The Accident Compensation Corporation (ACC) is a Crown Entity of the New Zealand Government commissioned to manage New Zealand's comprehensive, no fault personal injury scheme. The scheme provides personal injury insurance coverage to all New Zealanders and visitors to New Zealand. Coverage includes the cost of medical treatment and rehabilitation support. In addition, compensation support is provided to wage earners and their dependents. As at 30 June 2010, the financials of the ACC scheme were broken down into five accounts:

1) **Work Account** – funded by levies paid by employers and self-employed persons to cover employees and self-employed persons who experience work-related personal injuries.
2) **Motor Vehicle Account** – funded by levies paid by motor vehicle owners and petrol users to cover most injuries involving motor vehicles on public roads.
3) **Earners' Account** – funded by levies paid by earners to cover earners' non-work personal injuries.
4) **Non-Earners' Account** – funded by other taxes paid to the New Zealand Government to cover personal injuries occurring to non-earners and visitors to New Zealand.
5) **Treatment Injury Account** – funded by levies paid by earners and other taxes paid to the New Zealand Government to cover injuries resulting from medical treatment.

Coverages provided in the Work and Motor Vehicle accounts are similar to workers' compensation and no fault or third party motor vehicle insurance provided in other jurisdictions.

However, unique to New Zealand is the no fault insurance coverage provided for non-work related injuries and treatment injuries. This article provides an introduction to the Earners' Account. Further detail on any of the accounts is available upon request from ACC.

Account Basics

The Earners' Account covers the cost of non-work related injuries that occur to wage earners. The breadth of exposure is wide, covering all non-work related injuries including, but not limited to, those that occur in the home, during sport, while in/on the water, and in public/commercial environments (e.g. shopping areas).

The Earners' Account covers injuries that would be covered under a combination of first party personal injury insurance, first party health insurance, third party general liability insurance and third party products liability insurance sold in the commercial marketplace in other jurisdictions. The no fault concept reduces the cost of legal fees associated with third party insurance and the direct funding through personal income removes the burden of liability on municipalities and businesses operating in New Zealand.

On average, two out of every seven earners in New Zealand experience a non-work related injury that results in an ACC claim each year. Roughly 92% of earners' claims are medical only, which merely require medical treatment and recovery usually occurs within a short period of time. The number of earners' injuries resulting in significant and serious impairment falls in the range of 60 to 65 each year. The estimated number of injuries eventually resulting in a fatality falls in the range of 500 to 550 per annum.

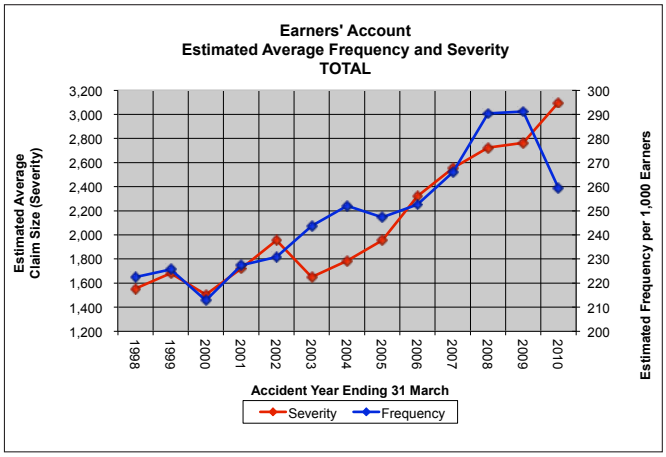
The remaining claims, in recent years ranging from 50,000 to 60,000 in number, are recovery support claims. Recovery support claims require some form of compensation or rehabilitation support while the person is recovering, with the aim of returning the claimant back to work and/or independent living as efficiently and effectively as possible. Roughly one third of recovery support claimants receive elective surgery, usually orthopaedic. The recovery support claims are the largest driver of uncertainty in the actuarial estimates associated with the Earners' Account.

Based on current risk-free (sovereign bond) returns and under the assumption of adequate levy rates, it is estimated approximately 55% to 60% of the account is funded by the levies, with the remainder funded by investment income earned on the levies.

Historical and Recent Statistical Patterns

Graph 1 below displays the estimated annual claim frequency and nominal claim severity in the Earners' Account for accident years ending 31 March 1998 to 2010.

Graph 1 – Estimated Average Claim Frequency and Severity



Injury rates in the Earners' Account have been on a steady rise for the past decade. However during 2010, the upward trend in injury rates reversed. Overall claim frequency dropped by over 10%, while the number of claims requiring support beyond medical treatment dropped by over 15%. The significant changes in the account have been attributable to a number of things acting simultaneously including:

- increased media attention regarding the scheme's financial sustainability may be causing a perceived shift in use;
- operational management of claims has resulted in marked efficiencies in the use of scheme funds and acceptance of claims;
- a moderate recession may be causing earners to take fewer risks that would lead to time off work; and
- there has been an overall heightened attention on injury prevention, especially the impact of alcohol consumption.

The change in claim severity during the period from 2003 to 2010 shows an estimated annual rate of growth of 10%. This is attributable to a number of factors including:

- inflationary pressures on the cost of medical and rehabilitation services have been much greater than normal inflation, as measured by the labour cost index. This is not unique to New Zealand; globally, medical inflation has been high, driven by the costs associated with improved medical technology and sector labour supply shortages not keeping pace with demand; and
- claim durations have lengthened and the use of scheme services has expanded over the years.

Both of these factors have put upward pressure on the funding required to deliver the scheme services. The levies in the Earners' Account have risen over the past few years from a levy rate of $1.40 per $100 of liable earnings in 2009 to the current rate of $2.00. This is an average annual rate increase of roughly 20%. At the current levy, $1,000 per $50,000 of personal income is paid to cover the personal injury insurance offered under the Earners' Account.

Exposure

The exposures used in analysing the Earners' Account data are the number and distribution of wage earners and their liable earnings. The levy is charged as a multiple of the latter. The exposures are affected by the unemployment rate, immigration and migration patterns, changes in the average weekly wage, changes in the proportion of the working age population seeking employment, distribution of earners by industry, and distribution of earners by age.

Unique to this account has been a shift in the exposure to older ages. Table 1 (opposite page) shows the historical and projected distribution of the number of earners by year.

The shift in the exposure toward older ages is important as the rate of injury (frequency) and recovery periods (severity) vary by age. The younger age groups are typically involved in higher risk sporting activity and have less caution, leading to more frequent claims. As a person ages, they appear to become more prudent in taking on risk, or apply more caution when risk is present. However, once a claim does occur, excluding serious injuries, claims made by older people tend to be more costly as recovery rates are slower and compensation payments are higher due to higher wages.

Based on the most recent pricing exercise, Table 2 (opposite page) shows the estimated claim frequency rates for the year ending 31 March 2012 (2011/12), while Table 3 (opposite page) shows the projected nominal claim severities. Entitlement claims include serious injuries, recovery support claims and fatalities. They are all other claims excluding Medical Only.

Long Term Claims

Claim duration is the governing factor on recovery support claims, which are the driving cost of the Earners' Account. In mid 2009, ACC established the Recover to Independence Service (RIS) to assist clients that had been receiving compensation support from the scheme for more than two and a half years to return to work and independent living. This was done because of the significant growth in the duration of claimants receiving weekly compensation support. Over the course of the past year, RIS has assisted over 500 earners who were in the long term claims pool to return to work. This has begun to reverse the increasing pattern in claim duration and has helped to reduce the need to request more funding from earner levy payers in the future.

Account Financials

Given the users and funders of each account differ, each of the ACC accounts is financed and accounted for separately. As at 30 June 2010, the Earner's Account had approximately $5.0 billion in assets and $5.9 billion in liabilities. The account carried a deficit of $0.9 billion. Over 60% of the $3.4 billion invested assets were in domestic fixed income securities. The outstanding claims liability provision of $4.6 billion was accrued at a 75% confidence level.

During the year ending 30 June 2010, the deficit in the Earners'

Table 1 – Number of Wage Earners' (000's) / Frequency and Severity by Age and Claim Type

Year Ending 31 March	Estimated Number of Wage Earners' (000)					Indicated Distribution			
	<= 25	25 to <40	40 to <55	>=55	All	<= 25	25 to <40	40 to <55	>=55
1995	313	623	532	164	1,632	19%	38%	33%	10%
1996	324	649	553	175	1,702	19%	38%	33%	10%
1997	320	662	574	190	1,746	18%	38%	33%	11%
1998	308	662	587	194	1,751	18%	38%	34%	11%
1999	289	648	599	205	1,741	17%	37%	34%	12%
2000	285	654	622	214	1,774	16%	37%	35%	12%
2001	285	651	644	230	1,810	16%	36%	36%	13%
2002	300	644	664	255	1,863	16%	35%	36%	14%
2003	309	645	683	278	1,915	16%	34%	36%	15%
2004	322	652	699	298	1,971	16%	33%	35%	15%
2005	327	664	722	329	2,042	16%	33%	35%	16%
2006	340	671	741	347	2,099	16%	32%	35%	17%
2007	349	677	751	368	2,145	16%	32%	35%	17%
2008	349	673	752	388	2,163	16%	31%	35%	18%
2009	343	678	764	408	2,192	16%	31%	35%	19%
2010	330	662	772	400	2,164	15%	31%	36%	18%
2011	330	660	779	413	2,182	15%	30%	36%	19%
2012	341	664	792	428	2,226	15%	30%	36%	19%

Table 2 – Projected 2011/12 Claim Frequency per 1,000 Earners / By Claim Type and Age Group

Claim Type	Age of Claimant				
	< 25	25 to <40	40 to <55	>=55	Total
Fatal	0.33	0.25	0.19	0.20	0.23
Serious Injury	0.04	0.03	0.02	0.02	0.03
Elective Surgery, No Weekly Compensation	2.50	3.19	3.71	3.30	3.28
Elective Surgery & Weekly Compensation	6.48	4.90	4.40	3.81	4.77
Weekly Compensation, No Elective Surgery	23.25	12.32	9.16	8.11	12.12
Other Entitlement	1.80	2.32	2.07	2.30	2.15
TOTAL Entitlement	34.39	23.00	19.55	17.75	22.58
Relative to Average	1.52	1.02	0.87	0.79	1.00
TOTAL Entitlement	34	23	20	18	23
Medical Only	283	288	254	210	261
TOTAL	317	335	294	246	307
Relative to Average	1.03	1.09	0.96	0.80	1.00

Table 3 – Projected 2011/12 Nominal Claim Severity / By Claim Type and Age Group

Claim Type	Age of Claimant				
	< 25	25 to <40	40 to <55	>=55	Total
Fatal	40,200	174,900	172,600	82,700	129,300
Serious Injury	6,095,400	5,506,500	5,604,800	4,541,300	5,506,400
Elective Surgery, No Weekly Compensation	25,000	19,100	21,800	23,100	21,601
Elective Surgery & Weekly Compensation	58,400	71,300	73,800	71,100	69,300
Weekly Compensation, No Elective Surgery	12,800	20,400	25,100	25,700	20,100
Other Entitlement	9,700	7,300	8,800	12,300	9,100
TOTAL Entitlement	29,100	38,100	42,000	40,000	37,400
TOTAL Entitlement	29,100	38,100	42,000	40,000	37,400
Medical Only	140	610	660	750	570
TOTAL	3,300	3,400	3,600	3,800	3,500
Relative to Average	0.94	0.97	1.03	1.09	1.00

Account reduced $1 billion from $1.9 billion as at 30 June 2009. This positive movement was due to the combination of:

- favourable investment returns;
- reduction in the outstanding claim liability associated with prior year claims as a result of the reduction in the long term claims pool;
- reduction in injury rates in 2010 compared to prior years; and
- increased levy rates.

Conclusion

Insurance coverage provided under the ACC Earners' Account is unique to New Zealand. The coverage provided is broad and would be comparable to a combination of insurance products provided in other jurisdictions. Over the years, claim frequency and severity has grown, resulting in a rise in the levy. Inflationary pressures on the cost of services are expected to continue to rise above normal inflation, therefore improvements in injury rates and the management of claim durations are important to curtail the increase in levy funding requirements and reduce the account's financial deficit.

This article has provided a helicopter view of the nature of recent trends in ACC's Earners' Account. Note that further information or detail on any of ACC's five accounts is available upon request from ACC, including the actuarial pricing and valuation reports. ▲

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The Great Race (AA155 Solution)

Achilles, the hare and the tortoise participated in a race. Given the information provided in AA155, in what order did they finish?

Solution: When two runners exchange places in the race, an odd numbered position becomes even numbered and vice versa (e.g. the first placed runner becomes second and the second, first). Since Achilles starts in first place and changes position an odd number of times, he must finish second, the only even numbered position in a race of three. Since the hare finished ahead of Achilles, he must have finished first, leaving the tortoise to finish in third place.

Six correct answers were submitted. The winner of this month's *In the Margin* prize, selected randomly from among the correct entries, was **Jennifer Wong,** who will receive a $50 book voucher.

King Solomon's Mines – The Actuarial Version

Welcome back to *In the Margin* for 2011. This year we're going to do something different. As in previous years, you will still be presented with a puzzle each month. However, in December you will also be presented with a 'metapuzzle', which will be based on the solutions to the ten regular puzzles. Instructions on how to solve the metapuzzle will be given in December, so you need not worry about it for the present.

The ten puzzles presented this year also form a story. They are the 'challenges' faced by Allan Quatermain on his quest to locate King Solomon's Mines. Pay close attention to the stories and titles accompanying these puzzles. They may mean nothing, but they may also contain hints to the solutions. Best of luck – G

Mr Mendeleev's Map

"Mr Quatermain! A moment of your time!"
Allan turned to the little man who was running up behind him.
"Yes?"
"I have this map that I thought might interest you."
Allan sighed. It was always the same, wherever he went in Africa. Everyone seemed to have a long lost treasure map to sell to him – all of them fakes, no doubt. "I'm sorry, but I'm not interested," he said and started to move off.
"But Mr Quatermain, this is Mr Mendeleev's map!"
"Dmitri Mendeleev? How did you know him?" Allan stopped in his tracks. He had met Mendeleev once, many years ago, when Mendeleev had been about to embark on his quest for some lost diamond mines, but surely he had perished on that journey.
"I nursed him as an old man and he left it to me after he died," said the little man.
"How much do you want for it?"
"Mendeleev spoke of you in his final days. He said that you are a man of honour. I want nothing from you now, but you must give me half of any treasure you find. This is the map to King Solomon's Mines, Mr Quatermain, a place of unimaginable riches."
"I'll do it," said Allan.

The following was written on Mendeleev's map. From this, what are the map co-ordinates of King Solomon's Mines?

1. Start at the point marked with an X. The co-ordinates of this point are (5, 18).
2. Travel two miles north, then two miles west and make your first camp there.
3. Travel due south as far as you can go, crossing the chasm along the way. After this, travel due west until you reach Area 91. Take care in these parts, as the ground is unstable.
4. Travel north, crossing the chasm again at co-ordinates (7,6). When you are across, travel three miles east, two miles north, then one mile northeast.
5. Go east six miles, then north for one.
6. From there, journey to the top of the great peak in the northwest corner of the map (a break will be in order after this).
7. After your break, scale the northeast peak, then go one mile southwest and four miles west.
8. Journey two miles south and two miles east.
9. Follow the setting sun as far as the map will allow.
10. Travel one mile south and fourteen miles east. You need to travel one mile further east, but due to the danger in the area, it may be best to enter this area backwards. Make your final camp here.
11. Finally, journey three miles north and two miles west, and there you will find the mines. ▲

For your chance to win a $50 book voucher, email your solution to this problem (including working) to: inthemargin@actuaries.asn.au

More than maths

Back in the November 2010 issue of *Actuary Australia*, I outlined some ideas for altering your physical state in order to improve your emotional state so as to communicate more effectively. It is time to make good my promise to visit the related topic – altering the physical state of **another** person to improve **their** emotional state so as to communicate more effectively with that person.

Think about a time when you were attempting to speak with someone but they were just not in the right frame of mind to listen to you. This is often the case when someone comes to see you with a problem. The problem may be generating any number of emotional responses for them. For example, anger, frustration, disappointment, anxiousness, fear, sadness, remorse or grief. I suggest that while they are experiencing that emotional state they are not well disposed to conduct a sensible conversation with you, let alone listen to your advice or consider your solutions to their problem. I also suggest that you are less than comfortable in dealing with them while they are consumed by their emotions. What can you do? There are a number of options, but in this article I would like to explore methods to change their physiology with the aim of changing, or at least modifying, their feelings.

Let's say someone approaches you with a matter that they are not happy about. They are keen to "let off steam" and seek some guidance on the matter. They are unlikely to be open to your guidance while they are upset and annoyed so how can you alter their mindset? One simple possibility is to change their physiology by inviting them to sit down if they are standing up. Another approach is to relocate, perhaps to a meeting room or an office. Depending on the person and the circumstances it may be appropriate to invite them to a café, away from the existing environment, to conduct the conversation.

Consider a different scenario. Imagine someone has received some bad news which has distressed them and they have come to see you. Again, they are unlikely to be listening to you if they are immersed in their misery. Depending on the person and the circumstances you could alter their physiology through physical contact – an arm around their shoulder or a gentle hug. More indirectly, a similar result can be achieved by offering a tissue or a glass of water.

The use of "props" to alter physical state can take other forms in a business context. Imagine a person is struggling with a complex problem and they visit you for help. Again, your communication

may not be successful when they are stuck in a confused or rattled state. You can change their focus by directing their attention elsewhere. If they have brought papers or a printout with them you can examine the report with them. If you have a whiteboard handy it may be timely to draw your understanding of the problem on the wall – or even on a blank sheet of paper. Often the introduction of something as simple as a pen can distract them from their internal funk.

Why bother? If you really would like to help the other person in any of these situations (annoyed, distressed or confused) it is critical to modify their emotional state. Only then can you effectively communicate:

- in a rational manner that you are more comfortable with;
- with a greater probability that they will be listening; and
- to leverage your wisdom, skills or experience for their benefit.

It takes more than maths to communicate successfully with people who are emotional. If you don't have the time or patience to wait for them to "calm down", I would encourage you to experiment with your preferred options to shift their physiology – and see what happens. ▲

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The Falling Apple

Sun/Earth Interaction graphic (without apple) – provided by NASA

Why write an article about a falling apple? The apple watched by Sir Isaac Newton when it fell in 1666 led to the theory of universal gravitation. But the learning process has not ended. Now armed with modern satellites, powerful telescopes and extensive computing power, solar physicists are learning how gravitational interactions between the sun and the planets affect climate. So why should actuaries become interested in solar physics? Because our professional reputations are at risk if we do not take into account long-term planetary/sun interactions in climate forecasts that underlie our projections of extreme weather events, population, inflation and much, much more. This article is intended to open up a new field of research and work for actuaries.

Over the next 20 years Sir Isaac reasoned that the sun would not be stationary but would move in orbit around the centre of gravity of the solar system. But as the movement of the planets is not uniform, the centre of gravity of the solar system is in motion. Today this fundamental principle enables astronomers to search for extra-terrestrial life. So far 426 stars have been found to have planets.

A simple demonstration of the fundamental principle of gravity occurs every day with tidal flows. Around the solstices when the sun and moon are aligned these gravitational forces create higher than normal tides. The sun's force of gravity on Earth is around 47% of that of the moon. Other planets will also at times have an effect on tides on Earth but their influences are too weak to be noticed. Like much of astro-physics the mathematics is complicated because of the elliptical orbits of the Earth and moon and also because it is not actually gravity that causes the tides but the change in gravitational force across the surface of the Earth. That is why there are two high and low tides for each daily rotation.

The exact position of the planets at any point in time is important to space exploration. In the 1970's the Jet Propulsion Laboratory (California Institute of Technology) produced the first ephemeris which is a computerised map providing the exact location of the sun and planets at any moment in the recent past, present and future. This is continually refined. Studies of the ephemeris have indicated that in the past similar conjunctions of planets have heralded similar climatic changes.

The sun is a gaseous body comprised primarily of hydrogen (71%) and helium (27.1%) and it comprises of more than 99.86% of the mass of the solar system. The sun's tremendous gravitational forces cause most of it to be in the form of plasma, which is subject to magnetic and gravitational influences. It has a thermo-nuclear core exploding the equivalent of 700,000 hydrogen bombs per second. Though extremely hot at the core, the surface is only approx 5,500°C. (Its diameter is 1,391,000 kilometres). The sun revolves at up to 34 days near the poles and around 25 days at the equator. Apparently, its radioactive core does spin evenly. The differences in spin together with solar storms and sunspots create turbulent magnetic forces. The sun's magnetic field extends to well beyond Pluto.

Sun – taken March 30, 2010, Solar Dynamics Observatory

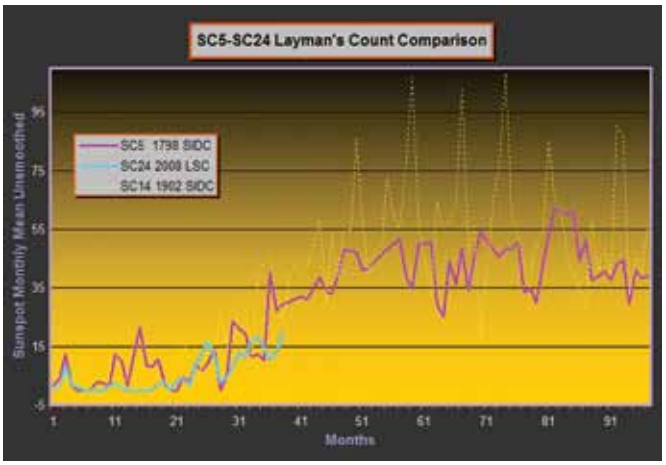
Since 1755, sunspot activity has been routinely measured and solar cycles determined. Its various outputs are now measured. These include the extreme ultraviolet light, various types of radiation, the solar wind (mainly electrons, protons and helium atoms), etc. A lot of the new data about the sun is being obtained from the Solar Dynamics Observatory satellite, which was launched by NASA in February 2010. This information helps to determine how the sun behaves and how it influences Earth's climate.

Past estimates of the sun's activity have been obtained from measurements of Carbon 14 and Beryllium 10 (14C and 10Be) in such things as ice cores, plants, rocks etc. 14C and 10Be are produced in the atmosphere from interaction of nitrogen or nitrogen and oxygen with neutrons arriving with cosmic rays from elsewhere in the galaxy. The sun's magnetic field and the solar

NASA Photo of Sun

wind normally shield Earth from most cosmic rays. Therefore higher levels of 14C and 10Be are generated when the sun's solar wind is reduced. The half-life properties of 14C enable radiocarbon dating. The results of measurements of 14C and 10Be from ice cores, rocks, etc indicate that the sun has previously changed after specific conjunctions of planets.

The current, very quiet solar cycle 24 has got solar scientists very interested as they are witnessing events that will significantly expand scientific knowledge as to what happens to the sun after a recent planetary conjunction similar to the one that occurred in the late 1780's. These scientists believe that the Earth's climate is entering a new cool period similar to the one that occurred from 1790 to 1830 (the Dalton Minimum). The past two cold winters in the Northern Hemisphere and the extreme winter of 2010/11 are indicative of this theory.



Comparison of sunspot activity between solar cycles 5, 14 and 24 (current)

Solar cycle 24 began on January 10, 2008 after a relatively weak ending to solar cycle 23. Solar cycle 24 has continued to be very weak indeed. Adjusted for changes in technology and recording equipment it shows less sunspot activity than solar cycle 5, which commenced in May 1798 and ended in December 1810. Observers are also noticing that many sunspots are unipolar spots that can act as negative sunspots further reducing extreme ultraviolet emissions, the solar wind and hence reducing the magnetosphere. At this stage in the solar cycle the extreme ultraviolet output of the sun is at least 15% below normal and the solar wind is 40% to 50% slower than normal. This means less northern and southern auroras and more 14C and 10Be being created in Earth's upper atmosphere.

There are many theories as to what causes the sun to go into quieter periods and what kick starts higher activity like there was in the last three decades of the 20th Century. There is no doubt that planet gravities do cause the sun to change direction and thus its magnetic fields but how does this happen? Just as the angular momentum of the moon and the sun in conjunction cause king tides on Earth, the angular momentum of great planets (Jupiter, Saturn, Uranus, and Neptune) cause the changes in the sun's plasma particularly when in certain configurations. Solar scientists have taken this theory to a new level by including the angular momentum of the dwarf planets and large asteroids and including amplifying spin orbit coupling forces in their calculations. They have also performed similar calculations at other times of previously occurring similar planetary configurations.

Over the last three years there have been significant changes occurring in Earth's upper atmosphere. The thermosphere (90 to 600 Km above Earth's surface) is affected and this part of the atmosphere helps to determine the strength and direction of jet streams, particularly the polar jet streams. For example the jet stream over Russia and down through Pakistan stayed stationary for so long in the northern summer of 2010 that enormous floods occurred in Pakistan and forest fires in Russia. Low solar outputs directly cool the ozone layer and hence create additional turbulence in the upper atmosphere leading to more common La Nina and extreme weather events such as hurricanes, thunder-snow, blizzards etc. La Nina weather patterns also predominated during previous Grand Minima.

Around the time of the Dalton Grand Minimum, Australia was being settled. Early records suggest Eastern Australia was warmer and wetter for the first 50 – 60 years of settlement even though the Northern Hemisphere was colder. For example, in 1788 the Thames was frozen for seven weeks yet in Sydney a maximum of over 100 degrees Fahrenheit (37.8°C) was recorded by Watkin Tench, the Captain of the Marines on at least one day each week in the summers of 1788/89 and 1789/90. The last Frost Fair was held on the Thames in 1814 but a short El Nino event caused a drought in New South Wales that year. This new Grand Minimum could produce similar climatic conditions.

As the new Grand Minimum progresses, the defining issues for at least the working life of today's actuaries will be population density, food and energy security. There will be strong inflationary forces due to scarcity of food and energy because of mankind's unpreparedness for this climate change. There are significant implications for actuaries. In particular the general insurance industry must use appropriate climate models that are calibrated to planetary effects on the sun using ephemeris data and solar physics research. Otherwise, this industry will become financially compromised during this solar Grand Minimum. Apples fall today just as they did in 1666! ▲

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A shorter version of this article was also published in the March 2011 edition of *The Actuary*.

I am indebted to Geoff Sharp who peer reviewed this article for me. A recent publication of his provides a reference point to many other important scientific works in this area. The paper is 'Are Uranus and Neptune responsible for Solar Grand Minima and Solar Cycle Modulation?' It is published in the Cornell University Library.

Gae answers your serious and not-so-serious questions about life in the office, career, study and coping as an actuary in the real world

Ask Gae with Gae Robinson

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Sounds simple, doesn't it?

Gae, where do you get your hair done? It is so difficult to find a good hairdresser these days.

Some of you will have read this question, snorted and said to yourself "Bah! – what TRIVIA!" If you've never paid more than $15 for a haircut and don't know what all the fuss is about, stop reading now. However, if you have (or have ever had) long hair or curly hair or fine hair or fly-away hair or any kind of 'difficult' hair, you will know that this is one of the crucial questions facing us in modern life. How do you find – and, more importantly, keep – a good hairdresser?

There are many Bad hairdressers in this world. There are hairdressers who will savage your hair until there's virtually none left, when all you asked for was a trim. There are hairdressers who will tell you how lovely your curls are and then try to sell you the latest chemical straightening process in the very next breath. There are hairdressers who will charge you $150 for a 'cut' that is so subtle not one of your friends will notice you've had it.

So you need to find a new hairdresser? You are NOT to walk into the salon nearest your home on a Saturday morning and take the next available. Your hair will be cut by someone who has graduated from hair-washing and floor-sweeping two weeks ago. You will regret it.

Ask your friends where they go. Only ask friends whose hair looks good. Only ask friends you trust. Pay special attention to advice from friends who have 'hair issues' similar to yours. Ask about cost but do not let this heavily influence your decision. Location should also not be a major factor; many sensible people who are otherwise careful about their carbon footprint will travel vast distances across the city for a haircut rather than change hairdressers. If you feel guilty, catch public transport or buy carbon offsets. Or consider moving closer to them. You can find good doctors, butchers and greengrocers anywhere.

Once you have made your decision, phone for an appointment. Do not be perturbed if you can't get in for two months – this is a favourable outcome as they must be a Good hairdresser. If they are Very Good, they may have a 'closed client list' and you will not be able to make an appointment at all. They may have a waiting list.

So you show up for your first appointment. Do not be put off if the hairdresser has purple hair and an asymmetric cut that looks like something out of a Star Trek movie. They didn't cut their own hair, did they? They probably felt sorry for one of the floor-sweepers who needed someone to practise on. Do feel free to ask them about it, though.

Give the hairdresser your instructions. This is one time in life when you are allowed to be forceful, even aggressive. "I want about 3 cm off, NO MORE, and I want a mirror placed so that I can see the back at all times, and can I check your fingernails first?". The hairdresser may have suggestions too. Listen patiently, but you are entitled to reject them completely if they sound dodgy. Make sure you tell them about your hair's idiosyncrasies – including the funny little curly bits underneath that sit up in a clump and DON'T NEED CUTTING thanks.

The next 30 minutes will be the real test of compatibility. If it all goes well, congratulations – you have begun a successful hairdresser relationship. But you can't take it for granted; it will need commitment and effort. Remain loyal. Make regular appointments. Be nice.

Once your relationship has settled in and you are comfortable, you will forget that you are vulnerable. Hairdressers are notoriously flighty and, as soon as your memory of the traumas of finding him or her are fading, your hairdresser is likely to be planning either a move to another city, a change in career or a pregnancy. If nothing else, your hairdresser will retire someday. You will find yourself abandoned. You'll be back at square one. That's just the way it is.

(You know, I had another whole question and answer written for this month's column, but the hair question just expanded and filled all the space. When something as important as this comes up, you can't ignore it.) ▲

Remember to send me your questions! – the more controversial, the better.

Part III Results Semester 2 2010

Semester 2 2010 saw the Part III pass rate remain the same as in Semester 1 2010 at 40%, including the results for non-Fellows in the Course 7A ERM course. The Part III pass rate excluding the C7A ERM course was 42% in Semester 1 2010 and 41% in Semester 2 2010. The pass rates since 2006 (including C7A for non-Fellows in 2010) are as follows:

2010 (2)	2010 (1)	2009 (2)	2009 (1)	2008 (2)	2008 (1)	2007 (2)	2007 (1)	2006 (2)	2006 (1)
40%*	**40%***	**40%**	**44%**	**49%**	**44%**	**41%**	**38%**	**38%**	**37%**

* The pass rates above for Semester 1 2010 and Semester 2 2010 includes non-Fellows only in the Course 7A Enterprise Risk Management Course. This course is both a Part III course and leads to the Chartered Enterprise Risk Actuary (CERA) designation, so it is also attempted by Fellows.

Below are the pass rates for each course in Semester 2 2010 compared with the previous two semesters:

Course and Semester	2010 (2)	2010 (1)	2009 (2)
Course 1 Investments	31%	35%	30%
Course 2A Life Insurance	31%	28%	60%
Course 2B Life Insurance	41%	44%	39%
Course 3A General Insurance	36%	37%	30%
Course 3B General Insurance	40%	35%	29%
Course 5A Investment Management and Finance	53%	n/a	37%
Course 5B Investment Management and Finance	n/a	56%	n/a
Course 6A Global Retirement Income Systems	n/a	25%	n/a
Course 6B Global Retirement Income Systems	54%	n/a	53%
Course 7A Enterprise Risk Management*	34%	19%	n/a
Course 10 Commercial Actuarial Practice	55%	59%	60%

* Pass rates for C7A ERM above are for non-Fellows only. In Semester 1 2010 10 Fellows sat and 6 passed. The overall pass rate (both Fellows and non-Fellows) in Semester 1 2010 for C7A was 25%. In Semester 2 2010 10 Fellows sat and 8 passed. The overall pass rate (both Fellows and non-Fellows) in Semester 2 2010 for C7A was 40%. It was very good to see the big increase in the C7A pass rate for non-Fellows in Semester 2 2010.

Pass rates and exam centres

The pass rates by exam centre categories for Semester 2 2010 were Sydney (42%), Melbourne (45%), Other Australian (26%) and Overseas (31%). This compares with pass rates by exam centre categories in Semester 1 2010 of Sydney (39%), Melbourne (57%), Other Australian (40%), Overseas (37%). It is disappointing to see the Other Australian and Overseas pass rates drop. ▲

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Dear Editor

I write in response to member comments in this month's *Pulse Survey* on the fact that the Institute is no longer offering Course 1 Investments in Melbourne.

In Semester 1 2011 face to face workshops are not being offered in Melbourne for Course 1 Investments for the first time. This decision has been made as a result of negotiations between Access Macquarie and the Institute due to lower than anticipated enrolment numbers, the high costs of delivering the face to face workshops in Melbourne and low attendance at the Melbourne workshops.

The low enrolment numbers have been largely due to the fact that the Course 7A Enterprise Risk Management course was offered as an alternative Module 1 elective to Course 1 Investments from Semester 1 2010. In previous semesters, Course 1 Investments face to face workshops were repeated in Melbourne the week after the Sydney workshops ran. Access Macquarie has been using the Adobe Connect web conferencing software to enable students in locations other than Sydney to participate live in the Sydney workshop. The overall feedback from participants using this web conferencing software has been positive. The web conference sessions are also recorded, so students can access a synchronised recording of the presenter's computer screen with the audio from the session. The Institute sought feedback from students enrolled in Course 1 Investments in Melbourne in Semester 2 2010 on the possibility of the Institute not offering face to face workshops in Melbourne due to the low enrolment numbers and high delivery costs, asking students whether participation via web conference would be acceptable.

While some students who responded stated that they would prefer that face to face workshops in Melbourne continued, others who responded said that they would be satisfied with participating via web conference. Given this, the Institute negotiated different levels of face to face workshop delivery in Melbourne based on different ranges of enrolments numbers for Course 1 Investments in Semester 1 2011. The actual enrolments this semester fell into the lowest level of the range, and so, as agreed with Access Macquarie, face to face workshops in Melbourne would not be delivered this semester. The delivery of face-to-face workshops in Melbourne for Semester 2 2011 will be reviewed when the final enrolment numbers are known. ▲

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Introducing our new Council members

Caroline Bayliss

Qualifications:
FIA (1993), FIAA (2006)
Current employment:
Head of Insurance Risk, CommInsure
Past employment:
MLC (2002-2006); Aon Consulting UK (1988-2001)

Caroline has recently joined the Life Insurance and Wealth Management Practice Committee, and sits on the Board of the Macquarie University Actuarial Foundation. She has also been an Assistant Chair and Chair of the Board of Examiners (2005-2009) and been a member of the Education Council Committee (2006-2009).

Caroline has a keen interest in education and seeks to assist the profession in maintaining its education program to continue to turn out well rounded communicators and thinkers and thereby enhance the brand of actuaries as problem solvers, both in the traditional and newer areas. She is also keen to see that the Institute provides a valuable service to all sections of the membership, and raises the profile and standing of the profession.

Jules Gribble

Qualifications:
FIAA (1996), FSA, FCIA, CERA
Current employment:
Director, Enterprise Metrics
Past employment:
Partner, Ernst & Young (2008-2010); Director, Askit Consulting (2000-2008); Director, John Ford & Associates (1997 – 2000); Consultant, Tillinghast – Towers Perrin (1993 – 1997)

Jules has a long standing interest in actuarial education and, more broadly, developing actuarial professional capabilities. He has taught Part II (at University of Melbourne) since 2000, co-led the development of the new GRIS Part III subject, contributed to ERM education, is a member of the Wealth Management Sub-committee of the Life Insurance and Wealth Management Practice Committee, and has represented the Institute at International Actuarial Association meetings.

Jules believes the profession faces important challenges. While preserving and nurturing the traditional areas of its expertise, as a profession it also needs to step up and out into developing areas and show users how actuaries add value to their businesses. As part of this, the role and importance of CPD needs emphasising.

Living in Melbourne, Jules is one of two Councillors from outside NSW this year. He believes it is important for the Institute to ensure it has the appropriate national and international focus. Jules is always keen to receive comments from members on matters that concern them.

Andrew Huzsczo

Qualification:
FIAA (1997)
Current employment:
Chief Actuary and Chief Risk Officer, Allianz Australia
Past employment:
GIO Australia (1992-2000); MIRA Consultants Ltd (1986-1992); Government Insurance Office of NSW (1984–1986)

Andrew has joined Council after contributing to the Institute in a range of activities. In the past he has been involved in the education process for most years since he qualified in 1997 including presenting tutorials, marking exams and assignments and drafting exam questions. He was also a member of the General Insurance Practice Committee from 2000 to 2005 and participated in the GI Financial Condition Taskforce (2004-2005) and Professionalism Taskforce (2008-2010).

His aim is to ensure that the Institute meets its objectives of enhancing the brand of actuary and expanding the role of the actuary as appropriate. This includes the role of the actuary in risk management where there is still significant work to be done to make the actuary a logical choice for risk management roles, particularly in financial services organisations.

Estelle Pearson

Qualification:
FIAA (1991)
Current employment:
Finity Consulting Pty Limited
Past employment:
Trowbridge Deloitte (2000-2005); Trowbridge Consulting (1989-2000); Mercer Campbell Cook & Knight (1987–1989)

Estelle has previously been an examiner for the general insurance subject, and also an examination marker and guest tutor for this subject. She has contributed to the Institute's General Insurance and Accident Compensation Seminars over the last 20 years, authoring a number of papers and chairing the Tort Reform Working Party. Over the years she has also been involved with and spoken at a large number of conferences organised by insurance industry groups, highlighting the work of actuaries in the general insurance industry.

Estelle believes it is vital for the ongoing vigour and success of the Institute to capture the interest of the growing number of young Actuaries and Fellows and for these members to actively contribute to the development and direction of the profession.

She would also like to play a role in increasing the relevance of the Institute to the broader community through a stronger public voice on issues which affect all Australians and where the actuarial voice should carry weight.

Stephen Woods

Qualifications:
FIAA (2000)
Current employment:
Panther Trust
Past employment:
REST Superannuation (2007 – 2009); National Australia Bank (2005 – 2007); KPMG (2002 – 2005); Watson Wyatt (1994 – 2002);

Stephen already attends all Practice Committee meetings and most Council Committee meetings in his capacity as Practice Committee Liaison Actuary. With his election to Council, this provides a rare opportunity to improve and expand the communications between Council, practitioners and the Institute Secretariat.

Stephen hopes to increase the recognition, value and perception of 'Actuaries' in Australia and the global community, through public policy and targeted promotion; to ensure that the high quality of services provided by the Institute is maintained and where possible improved to align with the needs of all members; and to represent members and give them a clear voice at Council.

Stephen is a long-serving volunteer to the Institute, particularly in the Education faculty and notably his 'much-hyped but often overrated' (Stephen's words!) *Actuary Australia* column *Two Ducks Swimming*. ▲

Congratulations to our 2010 Prize Winners

Research prizes

A M Parker Prize – Jamie Alcock and Anthony Hatherley
– Asymmetric dependence between domestic equity indices and its effect on portfolio construction • Published: *Australian Actuarial Journal,* Volume 15 Issue 1 pp. 143-180

H M Jackson Prize – Jiwook Jang – The Cost of Delay in a Mortgage/Credit Loan Portfolio • Published: *Asia-Pacific Journal of Risk Insurance* Vol 4, Issue 1, Article 5

Melville Health Prize – Andrew Gale – Pennies from Heaven: Health Insurance Demutualisations • Presented: Institute of Actuaries of Australia Biennial Convention 19-22 April 2009

Melville Practitioner Prize – David Schneider and Dennis Sams – UniSuper's Approach to Risk Budgeting • Presented: Institute of Actuaries of Australia Biennial Convention 19-22 April 2009

Education prizes

Andrew Prescott Memorial Prizes: – Best overall performance in completing Part III and best performance in the Commercial Actuarial Practice examination **– Mark McClenahan**

Best performance in the 2010 Investment Management and Finance examination **– Simon Sui-Sang Ho**

Best performance in the 2010 Life Insurance examination **– Lucy Hammerman**

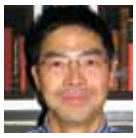
Best performance in the 2010 Investments examination **– Jeanette Palmer**

Katherine Robertson Prize – Best performance in the 2010 General Insurance examination **– Qian Xiao**

No prize was awarded for Global Retirement Income Systems.

Congratulations to **Andrew Gale**, **Garreth Sweeney** and **Peter Weinand** who each won an Apple iPad (Wi-Fi +3G 32GB) in the membership renewal competition. Entrants were required to correctly identify the iPad from a series of clues and provide a creative answer on how the iPad would make them a 'SuperActuary'.


Anthony Hatherley >


< Jiwook Jang


Andrew Gale >


< David Schneider


Dennis Sams >


< Mark McClenahan


Simon Sui-Sang Ho >


< Lucy Hammerman


Jeanette Palmer >


< Quian Xiao

(Andrew Gale pictured above) L to R: Garreth Sweeney and Pater Weinand >

MELINDA HOWES

One of our three strategic goals for 2010-12 is to 'enhance the brand of actuary and the reputation of the Institute'. We have four desired outcomes:

- more members identify themselves as an actuary;
- increased demand for actuaries by boards;
- the Institute is sought after for authoritative comment; and
- the Institute is the professional body of choice for actuaries trained in Australia.

We have just received the results of a survey we commissioned on employers' views of actuaries. This survey was undertaken in the latter part of 2010 by Beaton Consulting, and was an initiative arising from the Member Services & Educator Implementation Group.

The overall objective for this research was to understand ways in which the Institute can enhance the brand of the actuary in Australia. Specific objectives included:

- understand how the actuary is perceived by employers that work with actuaries and those who don't;
- test employers' actual views of actuaries against an actuary stereotype;
- whether the role of the actuary is fully understood by senior management within the big four banks and other major employers of actuaries;
- amongst those who manage actuaries, where they are adding value and what competencies they require to obtain senior management positions; and
- how actuaries' skills can extend to different roles in the big four banks and other major employers of actuaries.

17 in–depth interviews (both face to face and telephone) were conducted with senior level executives within the big four banks in Australia (Commonwealth, Westpac, ANZ, NAB) plus AMP and Mercer.

Two manager segments were included in the research with the aim of highlighting any differences in their views of actuaries;

- current managers of actuaries who are department heads / senior managers and work closely with actuaries on a day to day basis ('Managers'); and
- department heads / senior managers who do not currently work with actuaries, but who work in a business unit where having an actuary would be of benefit ('Non-Managers').

Actuaries working in traditional roles were seen as being integral to the business. These roles included risk management, pricing and claims, general insurance, valuations, underwriting and financial reporting of liabilities.

Actuaries working in non-traditional roles were highly regarded. These roles included: strategy, head of life insurance dealership group, products (development of new ideas), consultants to the business (in a commercial capacity), treasury, business leadership roles, bridging the 'back office' (technical) and 'front office' (business).

Brand actuary – how are we viewed?

Positive associations identified by both Managers and Non-Managers included:

- highly technical;
- problem solvers; and
- intelligent.

Negative associations included:

- introversion;
- poor communicators; and
- not commercial.

That last one is interesting, because the audience was split. When asked for their "top of mind" view of actuaries at the start of the interview, we got results for both "commercial" and "non-commercial" demonstrating the diversity of the actuarial profession. Interestingly, Non-Managers tend to view us as more technical, whereas Managers have a higher awareness of our other skills. This is the perception gap which we would like to close. In particular, Managers have stronger views of actuaries' problem solving abilities and are more likely to see their commercial side.

We do have some challenges to overcome. Both Managers and Non-Managers identify communication and commercial skills as weaknesses, and introversion comes through as a strong theme across both groups.

The actuarial stereotype (both positive and negative) that we presented (see September 2010 CEO Column) was largely agreed with. Most of the positive attributes were agreed with except for the following two:

- "can explain 'what the numbers mean' – distil complex numerical analysis and show the key impacts for the business"; and
- "direct and to the point".

Many respondents thought actuaries were not good at explaining things and were not inclined to say what they thought.

Likewise the negative attributes were largely agreed with except for:

- like to keep things complex – don't accept the 80/20 rule;
- unwilling to give an initial gut feel answer to a time critical problem; and
- prefer to present all the data or arguments for both sides then let others make the final decision.

This does indicate that many actuaries are commercial in their outlook and responsive to business needs.

Thankfully, it was strongly disagreed that actuaries are "brusque to the point of rudeness". Although perhaps given the above picture of meekness being painted, we need to be a little more forceful in our communication! Quite a few respondents said things along the lines of "not free with additional information, you need to extract what you need from them".

Perhaps we are failing in the purpose that we were trained for (as explained to me when I was at university) – that an actuary is the translator between the technical information and the business.

I am going to leave you on that cliff-hanger. Stay tuned for some more results and what we are planning to do next! ▲

Melinda Howes
melinda.howes@actuaries.asn.au

DW SIMPSON
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Market Update

Well the New Year has well and truly started with a bang and not a whimper this year with many organisations deciding to increase the momentum on their hiring needs. The consulting practices are busy winning new assignments and expanding their teams and the insurers are tackling the projects that were previously put on hold. Global activities around Solvency II are also dragging Actuaries away from their home countries, creating new opportunities for those who stay. Asia is already ramping up its Solvency II capability. Asia is also in the news with a recent survey showing that 97% of respondents felt that the China Insurance market was looking at "significant growth" in the coming year, with other Asian countries not far behind. Let's also not forget delightful Australia, one of the strongest economies in the Western world, with fascinating and dynamic work available for Actuaries. So, all in all a great future for everyone!

Contact Lesley Traverso for more information on trends in the global Actuarial market

Sydney – DW Simpson , Recruitment Consultant

As part of our expansion plans for Australia and Asia we are seeking a dedicated and mature individual to join our established recruiting team in Sydney.

Ideally you will have experience within an insurance company with direct exposure or knowledge of actuarial work. Recruitment experience is welcomed but not necessary, it's more important that you understand the environment in which our candidates and clients work. You will also bring professionalism and a confidence to be able to interact with clients, both internal HR and actuaries themselves.

What sets us apart from other search firms is our specialization and the relationships we build with both candidates and clients. We also work closely with our colleagues in Europe and the US bringing a truly global feel to the way in which we work.

Contact Claire Street for more information.

Sydney – Head of Actuarial Services

Working for a leading Workers Compensation organisation, this is a rare opportunity for an experienced Qualified GI actuary to assume responsibility for setting strategic direction as well as leading and developing a team of actuaries and statisticians. Reporting to the CFO and with a key focus on developing new value add tools and processes to enhance the business, the main responsibilities and key requirements of this role are as follows:

- Benchmarking and forecasting future claims performance outcomes
- Identifying opportunities and recommending strategies for performance improvement
- Liaising with the Appointed Actuary
- A minimum of 10 years experience including Workers Compensation or long tail product exposure

Contact Claire Street for more information.

Sydney – Senior General Insurance Consultant, Pricing

Due to growth in the pricing practice of this leading actuarial consulting firm, they are looking for an experienced actuary to join the team. This is a great opportunity to be a senior figure within this fast growing area of the business. The successful candidate will have at least 3 years post qualification experience in either a consulting or company background and extensive pricing experience.

- Comfortable with and experienced in statistical techniques used for pricing esp GLM's
- Ability to develop business so a good profile in the market is an advantage
- Management experience and good communication skills
- Role includes client facing, R&D and business development

Contact James Lecoutre for more information.

Singapore – GI, Risk Management and Actuarial

Working in the regional HQ of this global Insurer you will support the Risk Management Division and provide actuarial support to Group Companies with an initial focus on Non-Life insurance. You will help with the analysis of performance assessment tools and specific projects relating to company performance and business plans.

- Support RM initiatives such as ERM with a focus on conducting Dynamic Financial Analysis with the use of Natural Cat Models and Loss models
- Analyse motor pricing for different Group Co's based on GLM techniques and provide support to project team
- Support analysis for non-life Group Co's on IBNR, Claims and Premium Liability valuation under different regulatory regimes
- Nearly/Newly Qualified with at least 3 years General Insurance experience

Contact James Lecoutre for more information.

Holland – Life Actuary, Group Role

Our Client employs approximately 28,000 people around the world. Group Actuarial covers reporting on embedded value, value of new business and source of IFRS earnings. In addition, you will be involved with capital reporting, market value reporting and particularly the development of Solvency II processes. Reporting to the Group Chief Actuary, you should be a Qualified Life Actuary with 8-10 yrs Reporting/Valuation experience. This is a great location from which to explore the cultural delights of Europe.

- EV, IFRS, Capital analysis
- M&A projects
- Liaison with overseas businesses
- Help drive development of Solvency II
- Strong future career development
- Influence around the business
- Overseas applicants are encouraged to apply

Contact Lesley Traverso for more information.

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