

Actuary

Australia

Biennial Convention Report

Superannuation Benefits Projections / Forecasts

From Aeroplane Jelly to Jelly Donuts – Generational Changes

Living Within Our Means



GAAPS Actuarial

Specialist Worldwide
Actuarial Recruiters



GAAPS Australia

Specialist Worldwide
Actuarial Recruiters



**The
GAAPS
Group**

Specialist Worldwide
Actuarial Recruiters



We are truly international and have consultants from Europe, South Africa, China, Middle East, India and Australia



Our Australian subsidiary covers both the Australasia and Asia Pacific markets



GAAPS Europe

Specialist Worldwide
Actuarial Recruiters



InterimGAAPS

Management Solutions
for Financial Services



Our office in France is the centre of our European operation



Our subsidiary covers the gamut of the financial services sector, but biased by its parentage, can satisfy all your actuarial needs

For the most up to date global and Australian positions, **register today**

www.gaaps.com

Call: +61 2 8216 0771 or email: tsnoyman@gaaps.com

Association of
**Executive
Recruiters**

Level 34, 50 Bridge Street, Sydney, NSW 2000, Australia

All CV's are treated in the strictest confidence and are not sent to prospective employers without prior permission. Please remember there is no charge to candidates.



What's New on the Web

Searching – it's so much better now

We've been working very hard to fix the search function on the website. Visit www.actuaries.asn.au and take a look.

Financial Condition Reports for Private Health Insurers: Second Exposure Draft of PS 600 released

The second Exposure Draft of Professional Standard 600 (Financial Condition Reports for Private Health Insurers) has been released for comment. Submissions on the second Exposure Draft close on **25 May 2011** and should be sent to anne.peters@actuaries.asn.au

Asymmetric Risks: Draft Information Note

The Life Financial Reporting Sub-committee, on behalf of the Life Insurance & Wealth Management Practice Committee, has prepared a proposed update to the April 2008 Information Note on Asymmetric Risks. The note has been prepared for the purposes of providing information and generating discussion on aspects of asymmetric risk that may lead to divergent practices (for financial reporting and other purposes) within the Institute's membership.

Members are invited to provide comments on the proposed Information Note to the Life Financial Reporting Sub-committee or to the Institute at anne.peters@actuaries.asn.au

Diary Dates 2011

Thurs 2 June	Sydney, Sofitel Sydney Wentworth 61-101 Phillip St	APRA – Insurance Capital Review Seminar
Wed 22 June	Sydney, Westin Hotel 1 Martin Place	Business Luncheon – Dennis Wilkinson APRA's View on the Diversified Institutions Market

contents

5	Superannuation Benefit Projections / Forecasts COMMENT – Richard Starkey
8	President's Column Barry Rafe
9	Actuary Unearthed EXPOSÉ – Richard Lyon
10	The Actuarial Pulse SURVEY – Genevieve Hayes
13	Biennial Convention 2011 REPORT – Lesley Traverso / John Killick
18	From Aeroplane Jelly to Jelly Donuts – From Lucky Generation to Not-So-Lucky Generations COMMENT – Patricia Berry
20	Aftershock – by Robert B Reich BOOK REVIEW – David McNeice
21	Accident Compensation Seminar – Call for Papers NOTICE
22	In the Margin PUZZLES – Genevieve Hayes
23	More than Maths COMMUNICATIONS – Martin Mulcare
24	Ask Gae ADVICE – Gae Robinson
25	Living Within Our Means REVIEW – Geoff Rashbrooke
28	Insurance Capital Review Seminar EVENTS NOTICE APRA's View on Diversified Institutions Market – Business Luncheon EVENTS NOTICE
29	Moral Hazard STUDENT COLUMN – Hanbo Li
30	CEO's Column Melinda Howes

I was recently at the Institute's Biennial Convention. What a great chance to catch up with friends I haven't seen in a while and broaden my thinking.

Three topics that came up at the conference were leadership, communication and ethics. These resonated with me, given Melinda's column last month and some conversations I've been having with non-actuarial business people.

It was instilled in me early on that we, as actuaries, have a duty to look out for the little guy/girl and I relish that ethical duty. However, other feedback I have heard about "actuarial areas" is that they can be in the "ivory tower". So how do we find that middle ground? How do we be commercial but ethical? How do we provide insights without coming across as arrogant? Or confounding people with detail? Or seeming as though we are trying to prove how smart we are?

Is it that we need to change our thinking and not just assume we have a seat at the table? Has it been too easy for us, historically, due to our legislated roles? Do we need to earn (or act like we need to earn) the seat at the table first and foremost through communication, leadership and

influencing skills, and then get our message across regarding the numbers?

How do we develop those skills? Are we naturally excluding people with those skills through our education process? What happens if we aren't relevant, able to communicate and commercial? Will we be marginalised as a profession?

Do we need to work on toning down the "because I said so" attitude and increasing the level of discussion around our assumptions? I wonder if results are more robust with a common sense overlay? And does that increase the level of buy-in we get to our results?

I challenge everyone this month, to look at the message you are trying to get across and think about how it will land. Arrogant? Commercial? Sitting on the fence? You decide. ▲

James Collier

editor@actuaries.asn.au

Catherine Robertson-Hodder

editor@actuaries.asn.au



Actuary Australia

Contributions

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

Magazine Design

Kirk Palmer Design, Sydney Email: kpdesign@bigpond.net.au

Next Edition

AA160 June 2011

AA161 July 2011 Deadline for contributions: **1 June 2011**

Actuary Australia Editorial Committee

James Collier Editor: editor@actuaries.asn.au

Catherine Robertson-Hodder Editor: editor@actuaries.asn.au

Katrina McFadyen Publications Manager

Genevieve Hayes Assisting Editor

Kitty Ho Assisting Editor

Ruth Lisha Assisting Editor

David Millar Assisting Editor

The Institute of Actuaries of Australia

ABN 69 000 423 656

Level 7, Challis House, 4 Martin Place

Sydney NSW 2000 Australia

Tel (02) 9233 3466

Fax (02) 9233 3446

Email actuaries@actuaries.asn.au

Web www.actuaries.asn.au



Institute of Actuaries of Australia

Published by The Institute of Actuaries of Australia

© The Institute of Actuaries of Australia ISSN 1035-6673

Advertising Policy

Please refer to the Institute's website for our advertising policy, and rates: www.actuaries.com.au or email: actuaries@actuaries.asn.au

Disclaimer Opinions expressed in this publication do not necessarily represent those of either The Institute of Actuaries of Australia (the 'Institute'), its officers, employees or agents. The Institute accepts no responsibility for, nor liability for any action taken in respect of, such opinions. Visit: <http://www.actuaries.asn.au/TechnicalResources/ActuaryMagazine.aspx> for full details of our disclaimer notice.

Superannuation Benefit Projections / Forecasts

Superannuation benefit projection guidelines have been under consideration by regulators for a number of years now, and it seems inevitable they will appear in some form in the next couple of years. The Cooper Review recommended mandatory retirement forecasts for *MySuper* products. However the government's Stronger Super response did not support mandatory forecasts. Instead ASIC has been asked to continue to develop standards for (we presume) voluntary forecasts having regard to the Future of Financial Advice reforms.

In fact ASIC had been working in the background for a couple of years prior to Stronger Super. *ASIC Consultation Paper 122 (CP122)* outlines a suggested approach for preparing benefit projections for super fund members. It advocates the use of standard assumptions for investment returns, insurance premiums and administration fees. This article investigates the impact of differences between likely standard assumptions and the actual circumstances many members may be in, using a series of case studies.

The Institute's Benefit Projections Working Group supports retirement forecasts and the use of standard assumptions. However it is concerned that the application of such a highly standardised set of assumptions (as envisaged in CP122) to benefit projections for all superannuation funds may mislead some members. This may result in these members making incorrect decisions regarding their retirement plans.

These case studies illustrate our concerns with the standardised approach proposed by CP122. We are particularly concerned at the impact of variations in investment returns and asset-based fees over the longer term.

Member details

For these case studies we have considered a 'typical new member', with details as shown below.

Age	25
Salary	\$65,000
Initial balance	\$0
Member contribution	Nil
Employer contribution	9% of salary
Retirement age	65

All projected balances are in today's dollars, using a wage inflation rate of 3.5% p.a.

Standard assumptions

We have selected a set of standard assumptions regarding investment return, insurance premiums and administration fees. We believe the assumptions we have chosen are close to industry averages on which the proposed regulatory guide assumptions might be based. They are:

Net Investment return 7% p.a.

An investment return of 7% p.a. on a balanced fund (70% growth assets), after tax and investment fees is consistent with the following underlying assumptions.

- 1) Growth assets: gross returns 9.5% p.a. , investment fees 0.9% p.a., tax 8.6%
- 2) Defensive assets: gross returns 6.5% p.a. , investment fees 0.7% p.a., tax 15%
That is, $70\% \times (9.5 - 0.9) \times 0.914 + 30\% \times (6.5 - 0.7) \times 0.85 = 7.0\%$

Insurance premium \$150.00 p.a.

This is equivalent to \$3.00 per week, paid by many industry fund members.

Administration \$78.00 p.a.

This is equivalent to \$1.50 per week, paid by many industry fund members (*Superfunds*, March 2010).

Administration 0.20% of assets

This is an average administration fee, paid by many industry fund members (*Superfunds*, March 2010).

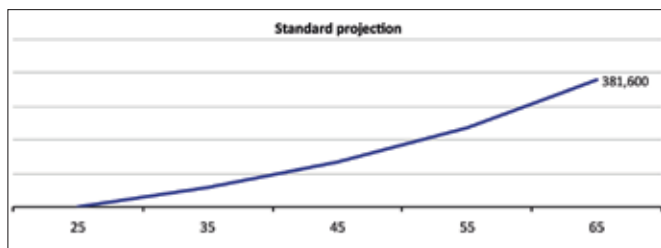
Variations to assumptions

We have also selected some plausible variations to the standard assumptions which might represent the situations of different members. The standard assumptions, along with the variations are shown in the table:

Factor	Standard Assumption	Variation 1	Variation 2
Investment return	7% p.a.	5.8% p.a.	7.9% p.a.
Insurance premium	\$150.00 p.a.	\$450 p.a.	Based on benefit of 7x salary
Admin fee \$	\$78.00 p.a.	\$300 p.a.	
Admin fee %	0.2% p.a.		2.0% p.a.

Standard projection

The chart below shows the accumulation of the member's superannuation benefit (before benefits tax) under the standard assumptions. For all our projections we use numbers generated by an Excel version of the ASIC MoneySmart <http://www.moneysmart.gov.au/tools-and-resources/calculators-and-tools/superannuation-calculator>.



Under CP122, all members (across all super funds) with details as above could expect this same projected outcome on a benefit projection statement. In the remainder of this article, the base case outcome is shown in dark blue.

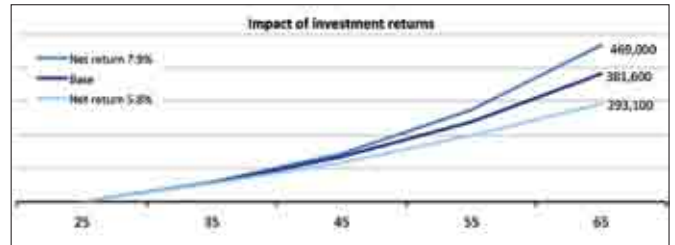
Impact of varying circumstances

We now consider the impact of varying these standard assumptions to represent the potential range of a member's actual circumstances.

Impact of investment returns

The 7% p.a. assumed for our base case is a reasonable long-term net return for a member in a balanced portfolio with 70% growth assets. A member in a typical defensive portfolio (30% growth assets) could reasonably expect a long-term net return of more

like 5.8% pa¹, or 1.2% p.a. lower. Conversely, a member in an aggressive portfolio (100% growth assets) could expect a long term return of around 7.9% pa². The ASIC model gives the following outcomes:



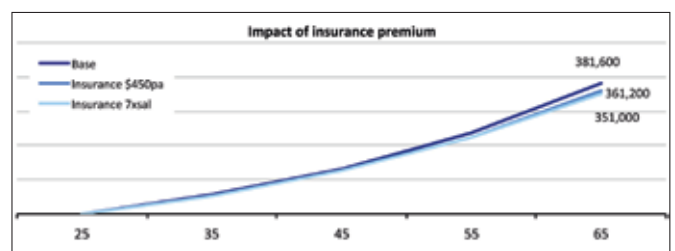
That is, the CP122 projection could mis-state the member's benefit by around \$88,000 (30%) in today's dollars.

Clearly the choice of expected investment return (which should be driven by the investment strategy) can have a potentially significant impact on the result.

Impact of insurance

The \$150 p.a. (\$3 per week) used for our base case would buy a reasonable amount of death and TPD insurance for a typical member. However, many members have the option of purchasing much more insurance (including salary continuance), or none at all. Above average insurance premium rates apply for members of some plans because of health or occupational risks. The next case study considers insurance charges of \$450 pa.

Some members may have multiple-of-salary based insurance cover. We also consider a member with a death and TPD benefit of seven times salary (the calculations are based on typical 'white collar' premium rates and assume that after age 60 the insurance cover will linearly reduce to zero by age 65).



The variation in outcomes as a result of insurance premiums is clearly lower than for investment returns, even in the reasonably extreme case where the death and TPD benefit is seven x salary.

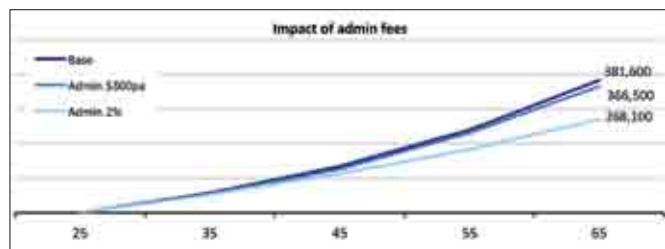
Impact of administration fees

Our standard case uses a typical \$78.00 p.a. (\$1.50 per week) administration fee in addition to 0.2% of assets.

As a dollar fee, many funds would charge up to four times that. For the next case study we consider a member paying \$6.00 per week.

Some retail funds can charge up to 2% of assets. We also consider the case where the asset-based fee is 2% instead of 0.2%.

A member could use the ASIC calculator to give the following outcomes:



The variation in the dollar-based administration fee was relatively small. However the variation in the asset based fees means the standard assumptions would overstate the benefit by well over \$100,000. Clearly asset-based administration fees can have a large impact on super benefits.

Conclusion

The following table summarises the findings from our case studies. The outcome at retirement is relative to the CP122 projection.

Item varied	Variation	Outcome at retirement
Investment return	-1.2%	-88,500 (-23%)
Investment return	+0.9%	+87,400 (+23%)
Insurance premium	+\$300 pa	-20,400 (-5%)
Insurance premium	Salary based	-30,600 (-8%)
Administration fee \$	+\$222 pa	-15,100 (-4%)
Administration fee %	+1.8%	-113,500 (-30%)

We conclude that variations in investment returns and asset-based fees have the greatest impact on benefit projections.

We are concerned that the introduction of benefit projections under a highly standardised approach would be of little assistance to many super fund members, and could be detrimental to the interests of some members. Benefit projections using the proposed standardised assumptions:

- could wrongly assure some members that their retirement benefit will be adequate when it will not be;
- could wrongly convince some members that their benefit will be inadequate when a more realistic projection would show it to be sufficient.

Our main concern is that a member may rely on the projections provided by their superannuation fund where these projections indicate that the member is adequately provided for in retirement. Where the projection does not correctly reflect the actual circumstances of the member, the member may not find out that they need to review their retirement plans until it is too late.

Further, we see little justification for using standard assumptions that are known to be inappropriate to the member. For example a fund that charges a \$3.00 per week administration fee might be required to use say \$1.50 per week in a standard benefit projection. The projection for a member with no insurance would be required

to include insurance premiums of say \$150.00 p.a. Such situations would severely detract from the credibility of what could be a very useful member engagement tool.

We recommend that funds be given a measure of flexibility in the assumptions used to prepare benefit projections, and that the assumptions used be adequately disclosed. In this way, benefit projections can better represent a member's actual circumstances, but with the key elements of the assumptions remaining standardised (for simplicity, ease of implementation and to avoid abuse). Specific recommendations to achieve this were detailed in the Institute of Actuaries of Australia submission of 16 December 2009 in response to ASIC *Consultation Paper 122*.

In summary, this submission recommended that the investment return assumption be flexible with a standard maximum return, that investment fees be standard, and that other fees and costs and insurance premiums be applied according to the actual fund provisions. ▲



Richard Starkey
Benefit Projections Working Group
Richard.Starkey@mercer.com

¹ $30\% \times (9.5 - 0.9) \times 0.914 + 70\% \times (6.5 - 0.7) \times 0.85 = 5.8\%$

² $100\% \times (9.5 - 0.9) \times 0.914 = 7.9\%$

We are concerned that the introduction of benefit projections under a highly standardised approach would be of little assistance to many super fund members.

We recommend that funds be given a measure of flexibility in the assumptions used to prepare benefit projections, and that the assumptions used be adequately disclosed.



Barry Rafe

Should actuaries have a public voice?

My presidential medallion got a good work out in April. We hosted the International Actuarial Association for a week followed by our Biennial Convention. The international actuaries meetings are intense! There were around 200 actuaries from all around the world working hard to achieve a global profession that, whilst respecting local differences, was committed to a strong profession working in the broader public interest.

Our Convention (see report on p13) as always, was a fantastic event. Thanks to Lesley Traverso and the organising committee for the year of diligent effort that it takes to organise it. There were two plenary sessions that particularly struck a chord with me, one on broader social issues with Bernard Salt and Simon Longstaff and the other on public policy issues, which, as it happens, was facilitated by me. I will discuss the public policy discussion now and Simon Longstaff's session next month. Both are available in audio on the website.

The objective of the public policy discussion was to determine why and how our profession should handle public policy. The panellists included media and government representatives as well as leaders of some of our practice committees. A key question is, why do we bother with getting involved in any public debate? The danger, of course, being that we are seen as simply promoting our own or our employer's commercial interests.

If we accept that as a profession we have a responsibility to the public interest, then there are times when things need to be said, either in the public arena, or behind the scenes and discretely to Government. It is also clear that, if we accept that politicians and bureaucrats drive and ultimately implement policy, then it is important that we influence them. Given the nature of our political system it is also apparent that public policy is not necessarily based on logical propositions but on public opinion and the influence that this may have on politicians. Being involved in the public debate is therefore critical because we do have skills, frameworks and access to certain facts that can positively influence the public debate.

Council has agreed that we should be taking a proactive approach to developing and promoting public policy. We are currently active in a number of debates and are taking very different approaches because of the nature of the issue. In retirement

incomes for example we are strongly supporting the increase in the compulsory superannuation contribution from 9% to 12%. We are also promoting the idea that the Government should remove the age-based barriers to people working and should facilitate the development of the lifetime annuity market and allow for a proper deferral of the age pension. Our retirement incomes policy is clear and has been developed over a number of years and tested with the broader membership.

In the case of the current debate on flood insurance we have taken a very different approach. It is unlikely that we, i.e. the Institute, will be able to agree a policy on the best approach to flood and other catastrophe insurance coverage because of the ideological issues rather than the actuarial issues. In this debate, we do have an important role to play in facilitating the public deliberations and making sure that people are aware of the implications of the various options being discussed. Clearly individual actuaries can have a personal view and can present this to the various reviews and to the public generally, but the Institute is not able to develop policy.

To recognise different approaches we are becoming more active in providing editorial 'opinion piece' type comments which provide an opinion endorsed by the Institute but not a policy recommendation. Actuaries have an important contribution to make in key public policy issues without the need for us, behind closed doors, to develop a specific policy. I believe that we should focus less on developing policy and more on providing a strong disciplined process by which the public and the various stakeholder groups can discuss issues related to managing long term financial risk. ▲

Barry Rafe

barry.rafe@actuaries.asn.au



The Golden Pimpernel? ...

Who was that masked man at the ball?

Richard Lyon



Title...

Portfolio Actuary

Organisation...

Chief Financial Officer, Invivo Medical Pty Ltd; Principal, Professional Financial Solutions Pty Ltd

My favourite energetic pursuit...

Football – the real one, with the round ball. Over-45 football takes place in one form or another almost all year round. I'm also happy to play golf when I can fit it in

The sport I most like to watch...

Football again and anything that my children are playing – if they'll risk letting me come and watch. (After all, it's hard not to get involved and they have VERY strong ideas about what it's like when Dad referees or otherwise interferes...)

The last book I read (and when)...

Towers of Midnight, the thirteenth book of *The Wheel of Time*, a fantasy series written on a very large canvas by Robert Jordan (and being finished by Brandon Sanderson)

My favourite artist/album...

Sheer Heart Attack (Queen) or *The Jazz Album*, which is music by Dmitri Shostakovich, including his *Jazz Suite No.2* (which, in turn, features a Waltz used by Stanley Kubrick in a strange movie called *Eyes Wide Shut*)

My favourite film...

A Fish Called Wanda purely because it's the first time that I laughed out loud while watching a movie on a plane. The best movie I've seen recently – also on a plane – is *Toy Story 3*

What gets my goat...

How long have you got? I suppose my absolute number one would be sloppy use of language, but there's a very long list!

What I wanted to be when I grew up...

Sadly, I can remember the decision, at the age of twelve, that I wanted to be an actuary

Why I decided to become an actuary...

My dad is an actuary and I grew up in a big house. What more motivation is required at age twelve?

Where I studied to become an actuary...

The school of hard knocks, sometimes known as AMP. Definitely NOT at university, where my primary subject was rowing

What's most interesting about my role...

Invivo is a small company, so my two-day-a-week CFO role extends to whatever needs to be done. However, it's hard to beat the interaction with our advisory panel of highly-respected doctors. My life consulting practice is even smaller (just me, albeit with the support of PFS)

My role's greatest challenges...

One significant challenge has been acting as an expert witness in a major court case. The witness box can be a very exposed place under sustained cross-examination

Who has been the biggest influence on my career (and why)...

Probably my Dad, although it took me a long time to realise it. I have a huge amount of respect for anyone who will do what is right ahead of what is in their own best interests

My proudest career achievement to date is...

It's hard to pick out a single achievement, but I am very proud of my contribution to actuarial education, including my role in the textbook *Understanding actuarial management: the actuarial control cycle*

The most valuable characteristic an actuary can possess is...

Integrity. Everything else is shallow in comparison

If I were President of the Institute, I would...

Immediately resign. Or try to wake up from the nightmare

At least once in their life, every actuary should...

Breathe. Both literally and figuratively

Four words that sum me up...

Annoying, funny, complex and loyal. (That's what you get when you "ask the audience" at home) ▲

Richard Lyon

richard.lyon@bigpond.com

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 June 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 14 April 2011, 341 responses.

In January of this year, several prominent Australian business figures unsuccessfully campaigned to have the GST applied to all purchases made from overseas websites (as opposed to just purchases of over \$1000, which is currently the case) on the basis that local stores were finding it increasingly difficult to compete against their online counterparts.

In February, it was announced that RedGroup, the owners of Angus & Robertson and Borders, had gone into receivership. One reason cited for this was the existence of online bookstores, such as Amazon and Book Depository. These two events have, therefore, raised the question: is this the beginning of the end for traditional, bricks and mortar shops? The aim of this survey is to explore this question further.

Q1: What is your gender?

Gender	No.	%
Female	81	23.8%
Male	260	76.2%

Q2: What is your age

Age range	No.	%
< 30	94	27.6%
30 – 39	102	30.0%
40 – 49	81	23.8%
50 – 59	41	12.1%
60 – 69	17	5.0%
70+	5	1.5%

The purpose of the first two questions is to establish the demographic profile of the respondents to the survey. This information is used to assist in the analysis of the remaining questions.

Q3: On average, how often do you shop online?

Frequency	No.	%
At least once a week	35	10.2%
2 – 3 times a month	79	23.2%
Once a month	77	22.6%
2 – 11 times a year	127	37.2%
Once a year	15	4.4%
Less than once a year	7	2.1%
Never	1	0.3%

Not surprisingly, given that the Actuarial Pulse is a web-based survey, the majority of respondents are not averse to shopping online. Over 50% of respondents make at least one online purchase each month, on average, and only 6.8% of respondents shop online once a year or less frequently. Among those 191 respondents who make at least one online purchase per month, 77.0% are males and 23.0% females, which is consistent with the gender distribution of the group of respondents as a whole.

However, there is a slightly greater proportion of respondents in the 40 – 49 year age band represented in this group (31.4%) than in the overall group of respondents (23.8%), and slightly lower proportions of respondents in the < 30 (24.6% compared to 27.6% in the overall group) and 30 – 39 (26.2% compared to 30.0%) year age bands.

Q4: For each of the following items, please indicate whether you are more likely to purchase the item online or in a local store?

Item	More likely to buy online	Indifferent	More likely to buy from local store
Clothing	7.1%	10.1%	82.8%
Groceries	3.6%	6.0%	90.5%
Books or magazines	44.1%	34.3%	21.6%
DVDs, CDs, Blu Rays, etc	36.9%	39.0%	24.0%
Travel (airfares, hotels, etc)	92.0%	5.9%	2.1%
Software	62.1%	29.3%	8.7%
Tickets (movies, theatre, etc)	67.4%	24.6%	8.0%
Appliances (TVs, etc)	7.7%	18.1%	74.2%
Computer hardware	27.5%	28.7%	43.9%
Other electronic items	21.7%	36.1%	42.2%

From this question, it can be seen that respondents have a strong preference for purchasing clothing, groceries and major appliances in bricks and mortar stores, but prefer to purchase travel, tickets and software online. The items that respondents prefer to purchase in bricks and mortar stores tend to be items where there is a greater benefit in being able to see the item before purchasing it (for example, in the case of clothing, there is a benefit in being able to try items on to make sure they fit). As this benefit diminishes (such as in the case of airfares and concert tickets, where what you are buying is essentially a known quantity), respondents are more likely to be prepared to purchase the item online.

Further insight into why people might choose to buy an item online or in a local store is provided in the responses to the next two questions.

Q5: Why would you choose to purchase an item online? (Multiple selections allowed)

Reason	No.	%
Shopping online is more convenient	269	80.1%
Items are cheaper online than in local stores	276	82.1%
Items are unavailable in local stores	202	60.1%
Sales staff in local stores are unhelpful or impolite	44	13.1%
Enjoy receiving items in the post	22	6.5%

The two main reasons cited by respondents as to why they might choose to buy an item online, instead of in a local store, are because some items are cheaper online and because online shopping is more convenient. Most of the comments made in response to this question elaborate on these two points. For example, a number of respondents pointed out that it is easier to compare prices online, and that it is quicker to go online than to physically travel to a shop. One respondent commented that “if the product that you’re purchasing is known and is quality undifferentiated (like a book, for example), then I would purchase online to access a cheaper price.” This comment is consistent with what was observed in the responses to Question 4.

Other reasons why people might choose to purchase an item online include: ● It is easier to buy second hand; ● Shopping online allows me to browse in peace – in stores, I sometimes feel like I’m being impolite if I look at something for too long without buying it! ● More control when purchasing airline tickets and tickets to events; and ● The probability of running into someone who I don’t want to talk / socialise / have unwanted encounters with is nil in online shopping.

Q6: Why would you choose to purchase an item in a local store? (Multiple selections allowed)

Reason	No.	%
Shopping in local stores is more convenient	100	29.9%
Items are cheaper in local stores than online	28	8.4%
Items are unavailable online	55	16.5%
Sales staff in local stores are helpful and friendly	78	23.4%
Prefer to see an item in person before buying	314	94.0%
Don’t want to give out my credit card details online	36	10.8%
Don’t like having to wait for items to arrive in the mail	128	38.3%
Fear that item may be lost or damaged in the post	77	23.1%

As was suggested by the responses to Question 4, the overwhelming reason cited as to why respondents would purchase an item in a local store is because they prefer to see the item first before buying it. Comments made in response to this question suggest that respondents like to choose their own groceries to ensure freshness,

and that sizing differences between different clothing brands make buying clothes online problematic. Warranty considerations were also important to respondents, as well as the ability to return faulty goods, which further explains respondents’ preference for purchasing major appliances in local stores.

Q7: Approximately what proportion of your online purchases are made from overseas websites?

Proportion	No.	%
All	13	3.8%
75% - 99%	63	18.6%
50% - 74%	65	19.2%
25% - 49%	57	16.8%
1% - 24%	118	34.8%
None	23	6.8%

Although the majority of respondents (58.4%) make less than 50% of their online purchases from overseas websites, there is still a very large proportion of respondents who make most of their online purchases from these sites. Younger respondents tend to be more inclined to purchase from overseas websites than their older counterparts. Of those respondents who make 75% or more of their online purchases from overseas websites, 68.4% are under 40 years old (as compared to 57.6% of the entire sample group). By contrast, of those respondents who make less than 25% of their purchases from local websites, 23.4% are 50 or above (compared to 18.6% of the sample group). Gender does not appear to have a significant influence on whether a respondent prefers to buy from local or overseas websites.

Q8: Do you believe that the GST should be applied to purchases made from overseas websites?

Applied GST	No.	%
Yes	111	33.3%
No	222	66.7%

The majority of respondents do not believe that the GST should be applied to purchases made from overseas websites. Even among those who did answer ‘Yes’ to this question, the accompanying comments show that many believe that the existing threshold of \$1000, whereby purchases below this amount do not have GST applied, should remain and that it would be impossible to efficiently administer such an arrangement otherwise.

Comparing the results to this question with those to Question 7, it appears that those who make a greater proportion of their online purchases from overseas websites are less likely to think that the

GST should apply to these purchases than those who favour local websites. 84% of those who make at least 75% of their online purchases from overseas websites answered 'No' to this question, as opposed to 51% of those who make less than 25% of their online purchases from overseas websites.

Q9: What impact did the recent campaign by some of Australia's biggest retail figures to have the GST applied to purchases made from overseas websites have on your shopping behaviour?

Impact	No.	%
More inclined to shop at a local store	5	1.5%
More inclined to buy online	98	29.3%
No impact	232	69.3%

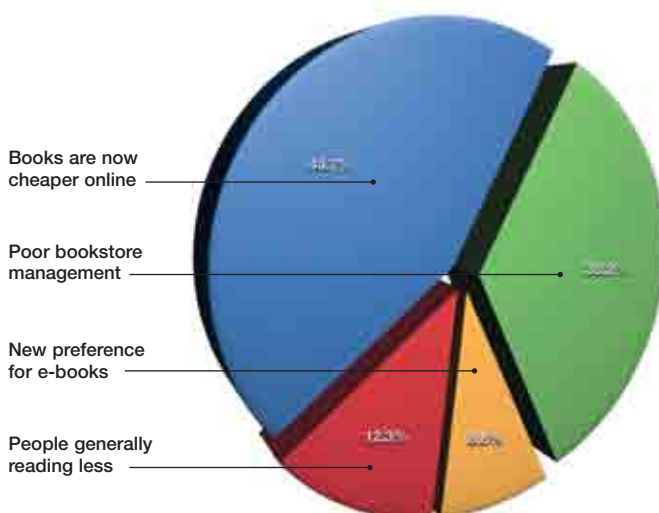
It appears that the campaign to have GST applied to online purchases made from overseas websites has done a disservice to the instigators rather than helping them to increase sales. Although 69.3% of respondents claim that the campaign had no impact on their shopping behaviour, 29.3% of respondents say that it made them more inclined to buy online and a large number of respondents commented that they would never buy from any of the stores involved in the campaign ever again.

Many respondents also commented that the campaign simply served to advertise the fact that many items could be purchased cheaper online and that "in making their case, the local retailers simply highlighted that they are expensive and out of touch".

Q10: What do you believe is the main reason for the recent failure of Borders and Angus and Robertson in Australia?

Reason	No	%
Books are available cheaper online	139	43.7%
Poor bookstore management	112	35.2%
Shift away from books to e-books	28	8.8%
People are reading fewer books than in the past	39	12.3%

Q10 – Main reasons for book store failures



The two most popular reasons cited by respondents as the main reason for the recent failure of Borders and Angus and Robertson are poor management and the availability of books online. This is consistent with what has been reported in the media on this topic.

Some other reasons suggested by respondents include: ● Parallel importation rules; ● The GST on books; ● Not holding the comprehensive range needed to ensure the customer will walk away having purchased something; ● Unable to adapt to a changing environment; ● People have cut their discretionary spending because of the recession, so are making more of an effort to go to the library etc; ● Borders is a free library with a cafe, and ● I don't like buying books that have been read and damaged.

Many of the reasons given also apply to other Australian booksellers, such as Dymocks, so it will be of interest to see whether these stores also succumb to the same factors in the future or manage to find a way to overcome them.

Q11: What impact did the news of Borders and Angus and Robertson's troubles have on your shopping behaviour?

Impact	No	%
More inclined to buy books at a local store	13	3.9%
More inclined to buy books online	41	12.2%
No impact	283	84.0%

Most respondents were not impacted by the news of Borders and Angus and Robertson's troubles, but based on the comments received, the main reason for this is because many respondents were already doing the majority of their book shopping online to begin with.

A number of respondents were, however, impacted by the announcement that Borders and Angus and Robertson would not honour their gift vouchers on the terms under which they were issued (made shortly after the announcement of their troubles) and commented that they would be "less likely to buy people book vouchers in the future".


In summary, it appears that the traditional bricks and mortar store is not dead yet, but that if retailers wish to survive in the future, they will need to adapt to the changing retail environment.

This survey has demonstrated that people are still prepared to buy from local stores, but they are more likely to keep coming back if there is a tangible benefit to shopping there, for example, being able to see the item in person (particularly in the case of clothes and groceries); being able to browse through a wide range of products; or superior service, particularly when it comes to returning faulty goods.

If there is nothing to differentiate the physical shopping experience from the online experience, then consumers will simply go where they can find the item cheapest, and as Borders and Angus and Robertson have recently discovered, more often than not, that place is online. ▲

Genevieve Hayes

inthemargin@actuaries.asn.au



“The Gala Dinner was superb, the best yet, I don’t think the committee could have done any better – it is going to be a hard act to follow next time.” Eddy Fabrizio

So that was the finale, what of the symphony? The Biennial Convention this year was orchestrated to try and provide something for everyone. With the spotlight on broad, thought provoking topics from around the world; the plenary sessions provided plenty of input for the concurrent presenters to focus on the detail and the formulae. With a hangover of delegates (is that a new collective noun?) from the International Actuarial Association meetings the week before, an interesting mix of views and feedback was foreshadowed.

Biennial Convention 2011

Martin Mulcare was an excellent conductor, wielding his imaginary baton with panache and firmness when needed, picking his way carefully through the SMS questions to ensure lively, interesting and relevant debate for each session.

The first social event was a chance to catch up with friends, review each other's grey hair and find out who has a picture in the attic they are hiding away. There were some who were keen to play on the rides at Luna Park, others who were happy just to congregate by the doorway.

The first full day opened with the indomitable **Barry Rafe** as President setting the scene and preparing the delegates for a fun and lively few days. The first plenary opened on the theme of 'international influences' with contributions from **Desmond Smith**, **Seamus Creedon** and **Hazel McNeilage**. They provided us with a collective view from each corner of the globe (how does a round object have corners?). Wouldn't it be great to have some 'behind the scenes memoirs' from them?

The focus returned like a boomerang to Australian plenary two. Three different perspectives, but each provided a rich picture of the symbiotic process that encompasses the Australian insurance and financial services professions' interaction with the rest of the world. **Pauline Blight-Johnson** was a great role model for all women who aspire to be 'on Boards' as discussed at **Jenny Lyon's** concurrent session earlier in the day.

Day two began with the **Simon Longstaff** and **Bernard Salt** 'social issues' double act; these two needed a day all to themselves, what a treat! The energy, enthusiasm and knowledge that flowed from the stage held the audience in spellbound admiration for every second.

Our responsibility to the human community in which we live was further developed by the carefully crafted ensemble of panel members discussing "Actuaries in the Public Space", ably whipped into shape by our illustrious President, himself a leading commentator on the topic.

Given the preceding varied discussions on the nature of the actuarial remit, it was appropriate that the final plenary gave the opportunity for us to hear about some of the more unusual work that actuaries find themselves doing. It proved that quality communicators and actuaries can exist in the one person. However, I don't think anyone quite expected to hear **Kirsten Armstrong** talk about actuarial work and dog poo in the same sentence!

As mentioned above, the plenary sessions gave the big picture view; it was up to the concurrent presenters to drill down to some of the key issues in a more detailed way. A note for anyone planning to present at a concurrent session in the future – did you know the way to ensure a good turnout is to choose a non actuarial title? How about "The man who ate himself"?

Or, how about "Strategic Disinformation"? Not only was the title intriguing but the content was too. **Shauna Ferris** ably demonstrated again that regulators and governments don't learn lessons from what went before.



Martin Mulcare



Luna Park and Harbour Bridge



Welcome, Day 1, Barry Rafe



Melinda Howes



Barry Rafe



Seamus Creedon



Hazel McNeilage



Desmond Smith



Plenary 2: Curt Zuber, Pauline Blight-Johnson, Martin Mulcare, John Maroney



Plenary 3: Bernard Salt, Martin Mulcare, Simon Longstaff



John Trowbridge



Lesley Traverso, Bob Morand



Vox Pop



IAA President, Cecil Bykerk



Jo Anne Morgan, Tim Higgins



Bridget Browne, Catherine Robertson-Hodder



Andrew Gale, Ben Ooi, David Watson



Saffron Sweeney, Jenny Dean, Ronnie Bowie



Mark Young, Wendy Yip



Michael O'Neill, Geoff Warren, Andrew Francis



Donna Walker, John De Ravin, Andrew Smith



Ian Laughlin



Ralph Stevens



Plenary 4 – Back L to R: Kent Griffin, Melinda Howes, Barry Rafe, Peter Broadhead
Front: Yolanda Beattie, Andrew Boal, Peter McCarthy

“We have a real live-wire here. His sound level was so high that the first few minutes may not be usable!”

Sound engineer commenting on Rick Shaw’s initial Vox Pop takes.

Let’s not forget the more familiar actuarial topics, **Mark Young** proved to be a tremendous speaker in his Basel III regime comparison, and got a ‘best presenter’ vote from one member of the committee.

A key testament to the quality of the concurrent sessions provided this year was the lack of people ‘hanging out’ in the corridors like skiving schoolies when they were taking place. 48 sessions gave a huge choice with something for everyone.

This year the Committee was keen to encourage an audience-centric approach to the concurrent sessions, from the coding of sessions according to their degree of prior knowledge required, to providing help with structuring a non ‘chalk and talk’ approach, and an extra ‘enthusiasm’ to get feedback forms filled in straight away.

Monday and Tuesday both started with an early breakfast for the enthusiastic communicators, where cheese wheels, clowns and naughty secrets were presented in style. Want to know the secret? Come along next time.

Lunch breaks had treats of their own, and not just the creative food choices. Monday and Tuesday provided the opportunity to find out more about the International Actuarial Association courtesy of its President and Tuesday was definitely a treat for everyone, with the always illuminating **John Trowbridge** sharing his views and answering questions.

The social program ensured plenty of networking opportunities, with coloured balloons denoting practice area gatherings at the Monday evening Community Happy Hour to the grand finale, the PwC Masked Ball. Barry took it all literally in a white wig, and some very handsome Leading Men providing quality entertainment. Or was that Barry in a dark wig and one of the Leading Men too? Guess we’ll never know...

Events like these are only possible with the support of our sponsors. The organising committee would like to thank **PwC, Towers Watson, GenRe, DW Simpson, RGA, Acumen Resources, Deloitte, Swiss Re, Milliman, Aon Benfield, KPMG** and **Matt Noyce** for their support of this event. ▲



Lesley Traverso
lesley.traverso@dwsimpson.com



John Killick
john@acumen-resources.com



Plenary 5 L to R: Tony Coleman, Mike Barker, Kirsten Armstrong, Martin Mulcare, Adam Druissi, Zac Roberts



Institute Booth



Briallen Cummings (2nd from left) with KPMG Prizewinners Jenny Gibson, Linda Page, Sanchit Maini



Melinda Howes, Darren Wickham, Andrew Boal, Brad Jeffrey



Andrew Linfoot, Lindsay Smart



RGA Golf Day



Welcome Dinner entertainer



Sydney Town Hall, Gala Dinner venue



Greetings fair maiden...



Barry Rafe, Cathy Nance *PwC Gold Sponsor*



Gala Dinner entertainment



A grand reception



Barry Rafe, Anton Kapel *Towers Watson, Silver Sponsor*



Gala Dinner entertainment



Eddie Fabrizio *GenRe Silver Sponsor*, Barry Rafe



Gala Dinner entertainment



Gala Dinner musicians



Barry Rafe, RGA prize winner Richard Cornwell, Andre Dreyer



Eddie Fabrizio, GenRe prizewinner Cary Helenius



Organising Committee – Standing L to R: Stephen Woods, Sarah Hodgkinson, John Killick, Andre Dreyer – Seated: John Bayliss, Lesley Traverso and Emma Simonson (Absent: Jo-Anne Morgan, Wei Lin)

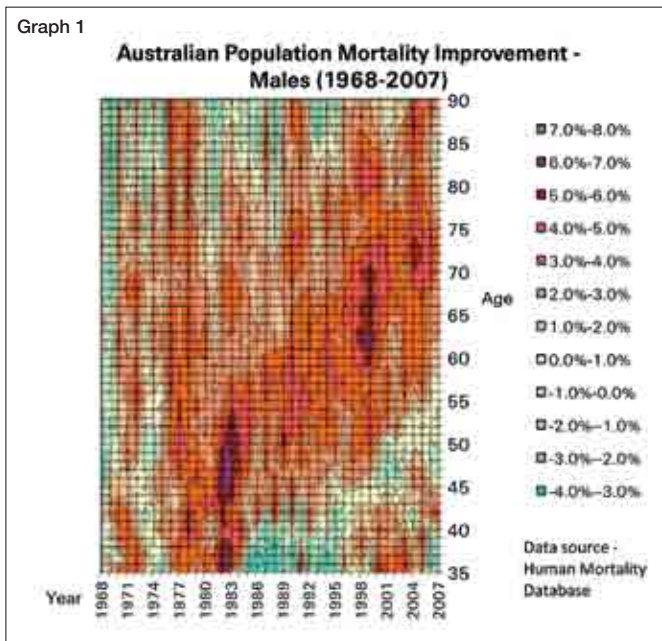


There have been plenty of talks about the longevity risk of Australian retirees. While the risk is real, the current retirees may belong to a lucky generation of rapidly improving health. The Baby Boomers, Gens X & Y may not be so lucky. So how strong is the mortality 'cohort effect' in Australia?

The cohort effect

Australian actuaries traditionally examine mortality by age and period. A third dimension that tends to be overlooked is by birth cohort – the possibility that a particular cohort by birth year exhibit a distinct pattern of mortality improvements over time relative to the cohorts before and after. It may be a manifestation of how early life experience of a generation may have an impact on the ongoing health and thus the unfolding mortality experience of that group.

Any cohort effect can be easily detected visually by examining a 'heat map', which is a surface graph of the mortality improvement rates by attained age and year. Graph 1 below represents the smoothed mortality improvement rates of the Australian male population from 1968 to 2007. One can easily see the diagonal pattern going from bottom left to upper right, demonstrating the cohort effect (orange/



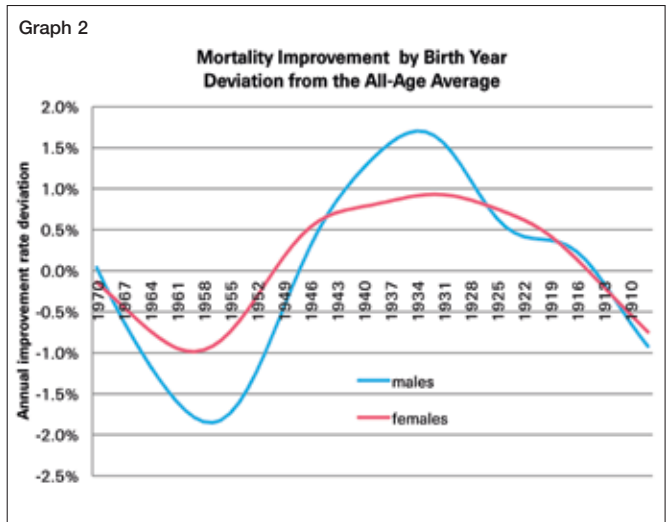
red colours representing strong improvements, yellow/green colours weak or negative improvements). The birth cohort of around 1920-1945 (aged 62-87 in 2007, let's call them the Super Cohort) have consistently shown the highest mortality improvement rates relative to the cohorts before and after. On a relative basis the birth cohort of around 1950-1970 (aged 57-37 in 2007) have fared worse.

The cohort pattern for Australian females is less pronounced but still visible (graph not shown here due to space limit). Again the same cohort representing the current retirees have demonstrated strong mortality improvements relative to cohorts on either side.

The lucky and not-so-lucky generations

The cohort effect can be thought of in relative terms. The Super Cohort stands out as having greater mortality improvements than the generations before and after it. In other words, the generation born after the Super Cohort has relatively worse mortality improvements.

One way to measure this is to compare mortality improvements by birth year against average improvements across all ages, in a single calendar year. Graph 2 shows the smoothed mortality improvement by birth year in excess of average improvement across all ages for each calendar year since 1990. Then by definition these deviations must sum across ages (and therefore birth years) to zero which means that the Super Cohort must lead to a negative cohort term for other birth years.



We can see the definite cohort effects in the graph, stronger for males than for females. For the cohort with birth years centred around 1935, the male mortality improvements have been on average 1.5 percentage point p.a. in excess of the all-age average. This seems to be at the expense of the younger cohort with birth years centred around 1960, with the latter showing on average as much as 1.8 percentage point p.a. less improvement compared with the all-age average.

So why?

It is intuitive that one's early life experience shapes one's lifelong health prospect. This could take the form of peri natal development, diet and environmental exposures in early life. For example, sun protection in childhood is expected to reduce the incidence of melanoma later on in life.

For the Super Cohort (cohort of birth years 1920-1945), there are the following possible explanations for higher relative mortality improvement:

- 1) **World War II** – The majority of this generation were too young to go to war during 1939-1945, thereby escaping the harsh experiences of the war including death of the healthy, that the earlier cohort would have faced.
- 2) **Smoking** – The smoking prevalence of Australian males dropped drastically in the late 1960's and again in the 1980's. The Super Cohort would have been the first group to have received the full lifelong benefits of quitting smoking. This directly would have led to a marked reduction in the incidence of smoking related diseases such as lung cancer. The reduction in smoking prevalence is thought to be one of the major factors contributing to rapid mortality improvements in recent decades.
- 3) **Diet** – The Super Cohort benefitted most from the relatively more healthy diet in the post-war years (and before fast food became popular).
- 4) **Improvements in cardiovascular diseases** – A sustained decline in cardiovascular diseases occurred from 1970 for both sexes, in time for the Super Cohort to be the first group to benefit most from the positive developments. Since cardiovascular diseases contribute more proportionately to male deaths than to female deaths, their improvements and the decline in smoking may have explained why the male cohort effect has been stronger than the female equivalent.

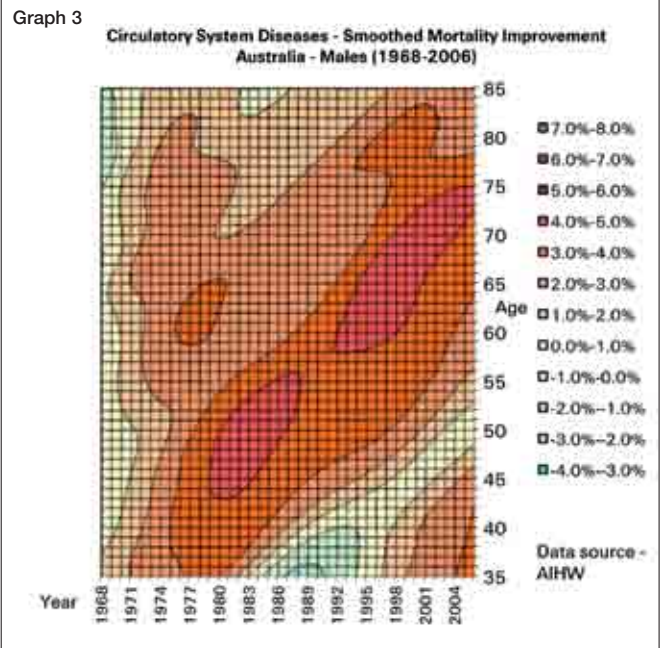
Potential other reasons include changes in education standards and the Depression in the 1930's adversely affecting the earlier cohort.

Is the party over for the younger generations?

Like the Super Cohort, the younger cohorts also benefit from the same mortality improvements but no further. The prime suspects for the slowing down in mortality improvements would have to be the obesity epidemic and the associated lifestyle, which in turn lead to adverse trends in diabetes, high blood pressure and cholesterol – key risk factors for cardiovascular disease. Reducing improvements in cardiovascular disease have been studied in the epidemiological literature.¹ Childhood obesity is even more worrying because of its lifelong implications, potentially leading to a poor cohort if left unchecked.

Mortality rates by cause of death, age and calendar year can be obtained from the Australian Institute of Health and Welfare (AIHW). Using mortality data for circulatory system diseases as the cause of death and applying P-Spline fit to reduce the noise, a male heat map, but for circulatory system diseases only, has been produced in Graph 3.

The cohort effect for circulatory system mortality looks similar to the general cohort effect. This is consistent with the view that improvement in cardiovascular diseases has been the major contributor to mortality improvement for the Super Cohort. The decline in improvement for cardiovascular diseases for the younger cohorts is also consistent



with the adverse developments in our society regarding weight, diet and thereby the heart disease risk factors. A similar cohort pattern is also visible for the females.

Overseas experience

The cohort effect with the UK population has been very strong and there has been much discussion on the subject². Interestingly the US don't seem to have a strong cohort effect (more heterogeneous?). Japan's leading longevity has also produced a strong cohort effect, even proving the point that such a positive effect could continue into the very old ages.

Double whammy

The Super Cohort happens to be the typical age for the current annuitants and pensioners. The less lucky younger cohorts happen to be the insured life ages. The divergent trends of the two could mean bad news for life companies holding both annuities and life insurance portfolios, dampening any offsetting effect between longevity risk and mortality risk. It is unfortunately an example of how the two risks may not work in tandem.

Relative to the impact of ageing and time period, the cohort effect may be minor. However, for the past three decades reducing cardiovascular risk has been the motor of mortality improvement. Now at younger ages the motor may be starting to run in reverse with significant implications for life insurers, in the same way that annuity and pension writers are grappling with the ever-increasing life expectancy of the Super Cohort. ▲

Patricia Berry

Patricia_Berry@swissre.com



1 O'Flaherty M, et al (2011), *The decline in coronary heart disease mortality is slowing in young adults* (Australia 1976-2006): A time trend analysis, International Journal of Cardiology

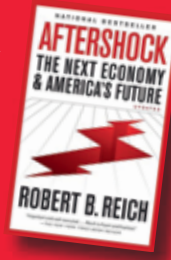
2 Example – Willets R, (2003), *The Cohort Effect: Insights and Explanations*, Willets Consulting Limited

Aftershock

The next economy
and America's future

By Robert B Reich

Published by Alfred A Knopf, 2010



Aftershock by Robert Reich, is a book about the economic crisis in America that emerged in 2008. It is a short book, easily read in a day and readily accessible to a wide audience, which is exactly what Reich says he intended to achieve. Before you say "Not another book on the economic crisis", consider that this book differs from many others on this subject. For reasons that become clear as he progresses, Reich skips relatively lightly over the well understood problems of excessive indebtedness, poor lending standards, the banking crisis and the other "America has been living beyond its means" symptoms and instead explains why, in his view, income inequality is the real problem in America and, if not fixed, will have serious implications long after the recent financial crisis is forgotten.

Reich is an influential political economist and commentator. He has written extensively and he served three US Federal Government administrations, including as labor secretary for the Clinton administration. He is currently Chancellor's Professor of Public Policy at the University of California.

He has divided *Aftershock* into three parts. The first is devoted to explaining why the state of income inequality in America caused the crisis and continues to prevent the country getting out of the Great Recession. Reich's central thesis is that the very wealthy have too much income. As a result, the great majority of Americans do not have enough income such that aggregate expenditure is less than what the economy produces. Hence, the country is in a period of weak aggregate demand, unemployment is high and the recession cannot be turned around.

Reich spends some time in the book explaining that excessively wealthy people are physically unable to spend enough money on consumption. To illustrate, he helpfully calculates just how much money former Bank of America CEO, Kenneth Lewis would have had to spend every hour, working on a 12 hour day, 365 days per year to spend all his income (\$22,831 is the result for the year 2007). Reich explains that few wealthy people have the "time, energy or stamina" to be able to keep that rate of spending up. Even Warren Buffett is mildly chastised for hoarding his wealth, still living in "the same gray stucco house he bought in 1958" and because his "children attended public schools and shared the family car." Tut tut. Meanwhile, the rest of America spends all it has (or more than it has) just getting by, but according to Reich, that is not enough to consume all that the country has produced.

All this is described on the book jacket as "a brilliant new reading of the economic crisis". Despite that claim, the book appears to be something of a re-run of the Keynesian view that weak aggregate demand causes unemployment and requires Government stimulus expenditure to restore equilibrium. Keynes, too, worried about hoarding and the depressing effects on the economy. The "new reading" of Reich appears to be limited to a willingness to say that the

rich are too rich and that is how demand weakens. The attention to the earning power of the wealthy is perhaps designed to fly the envy flag and to give the average consumer who ended up with too much debt an alibi. Unfortunately for Reich's argument, the US has been running a trade deficit for decades. Imports have exceeded exports by a substantial margin. This data would then imply that Americans are spending and consuming. It is just that they prefer more of the overseas stuff than the stuff produced at home. This inconvenient truth is not mentioned by Reich and it would have helped his argument if he had confronted the data and explained why his view about the weak demand stemming from the satiated rich is still correct.

In the second part of the book, Reich describes what may happen if no structural changes are made in the economy. Since the three "coping mechanisms" have all been used to their full extent, something will have to give. The coping mechanisms that allowed the falling share of income of the majority of Americans over the last 30 or so years to be mitigated are: firstly, more women entered the labour market to bolster family incomes; secondly, more people simply worked more hours; and thirdly, people borrowed to finance current expenditure. With these coping mechanisms fully used, the next stage is the politics of anger. Resentment and social unrest build to the point of a disturbing conclusion. Reich uses an effective and interesting technique to look ahead at the 2020 Presidential election to illustrate the possibility.

The book's final part contains Reich's suggested policy amendments to restore the balance and prevent social upheaval. Readers will not be surprised to see a shopping list of redistributive policies and increased Government expenditure in the usual various forms (free public transport, healthcare etc) financed by an increase in the taxes levied on rich people plus a carbon tax (which popped up out of nowhere and surprised me. How many countries are considering carbon taxes as a means of income redistribution?). Reich argues for increasing tax rates on the wealthy and much reduced tax rates on lower income earners, including an increase in the extent of negative tax, i.e. Government hand-outs to exceed tax paid for a widening group of people. He ignores the possibility that creating incentives for people to earn less money and be less self-reliant would emerge in the economy.

The book is well written and easy to read. However, Reich fails to convince that aggregate demand is too weak because the wealthy have proportionately too much income. He does not deal with the economic data that conflict with his views. He appears to view the economy as static and that policy adjustments can be made without any consequences: how would the various agents in the economy respond to weak demand? What consequential adjustments are currently underway and to what effect? Nowhere does he use the examples of other countries to demonstrate the validity of his thesis. Can it be that the problems of Ireland, Iceland, Portugal, Spain, Greece, UK and so on are all really caused by the rich having too much money so that each economy is producing more than it can consume? I was left with the distinct impression that the real purpose of the book was to publish another call to tax the rich. It is an old-fashioned call, with purported elements of class divide and social injustice wrapped up as a Keynesian revival but one that ends up sounding like a re-run of Marxian theory. ▲

David McNeice

dmcneice.mel@gmail.com



ACCIDENT COMPENSATION SEMINAR



Institute of Actuaries of Australia



CHANGING TIMES – CONTINUING NEEDS 20 – 22 NOVEMBER 2011 • SOFITEL BRISBANE

CALL FOR PAPERS

The Institute's 2011 Accident Compensation Seminar will be held in Brisbane from Sunday 20 to Tuesday 22 November. The Seminar theme **Changing Times – Continuing Needs** is a theme that captures the commitment of accident compensation schemes to meet the ongoing needs of injured people in an environment which is ever changing. While the economy begins to emerge from a gloomy few years of diminishing investment returns, trends in claims costs are ringing alarm bells for some.

The recent proposal to introduce a no-fault National Injury Insurance Scheme for people with a catastrophic injury could change the face of accident compensation schemes in some jurisdictions. How will it work and what is the expected impact on the existing schemes?

PLAN AHEAD

If you wish to present a paper at the 2011 Accident Compensation Seminar please email a synopsis using the Accident Compensation Synopsis Template, together with a completed Submission Form to events@actuaries.asn.au by close of business, **Friday 27 May 2011**.

For more information, visit www.actuaries.asn.au/ACS2011

Contact the following members of the Seminar Organising Committee if you wish to discuss the content of your paper.

Andrew Smith

E: andrew.james.smith@au.pwc.com
T: 61 (0) 2 8266 4928

Sue Freeman

E: Sfreeman@maa.nsw.gov.au
T: +61 (0) 2 8267 1913

Taylor Fry Prize

This prize may be awarded to the author of a paper considered to have either effected a significant advance in the profession's understanding or knowledge of a specific subject or sphere of knowledge or, collected or presented existing material in such a way as to raise the awareness of the profession regarding an important contemporary issue.

Key Deadlines for Presenters

Friday 27 May 2011	Lodgement of Synopsis and Submission Form to the Institute
Friday 8 July 2011	Authors advised if paper is accepted or not
Friday 9 September 2011	Draft paper to Peer Reviewers
Friday 21 October 2011	Final paper to the Institute
Friday 28 October 2011	Final PowerPoint Presentation to the Institute
20 – 22 November 2011	Accident Compensation Seminar

"I have discovered a truly marvellous proof of this, which this margin is too narrow to contain" – Fermat



Mr. Mendeleev's Map (AA157 Solution)

The trick to solving the puzzle presented in AA157 is to first recognise that the map in question is the periodic table of the elements (we are told that the map belonged to Dmitri Mendeleev, which is the name of the chemist who created the first periodic table). The map instructions tell you to start at the point marked with an X. The only X on the periodic table is in the symbol for Xenon, so this must be it. Its row and column numbers also match the co-ordinate numbers given. From here, the remaining instructions describe a journey around the table, based on the assumptions that up is north; adjacent elements are one mile apart; the "chasm" is the gap between the main part of the periodic table and the Lanthanides and Actinides; and the northwest and northeast peaks are Hydrogen and Helium. The map location at the end of each step is then: 1. Xenon; 2. Sulfur; 3. Protactinium; 4. Nickel; 5. Sulfur; 6. Hydrogen; 7. Boron; 8. Arsenic; 9. Potassium; 10. Tellurium; 11. Carbon. The final stop is the location of the mines, the co-ordinates of which are (2, 14).

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

Military Tactics

"Quatermain! Haven't seen you in ages!"

"Colonel Manville! What are you doing here, in the middle of nowhere?" replied Allan Quatermain, the great African hunter and explorer.

"Well, it's not quite the middle of nowhere anymore, old chap," said the Colonel. *"I was posted here two years ago and since then my troops and I have established 64 outposts in this area, including this one."*

"That's very impressive," said Quatermain.

"Here, let me show you." The Colonel pulled out a piece of paper and divided it into 64 squares, then numbered each of the squares and shaded one of them in with his pencil. *"The 64 outposts are arranged in an eight by eight grid, with roads connecting them horizontally and vertically, but not diagonally. That is, except for Outposts 60 and 61, as the land between them is impassable."*

*"We're situated here, in the shaded area, Outpost 51, otherwise known as HQ, and the men who aren't stationed here are divided into 27 platoons, designated by the letters A to Z and *, with each platoon having men stationed at two or three outposts."*

1	2	3	4	5	6	7	8
9	10	11	12	13	14	15	16
17	18	19	20	21	22	23	24
25	26	27	28	29	30	31	32
33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48
49	50	51	52	53	54	55	56
57	58	59	60	61	62	63	64

"Here's a list that tells you which outposts each platoon is in charge of." The Colonel handed Allan a piece of paper, which he glanced at before handing back.

A: 56, 64; B: 35, 36; C: 13, 21; D: 37, 45; E: 31, 32, 39; F: 16, 24; G: 1, 2; H: 11, 19, 20; I: 58, 59; J: 43, 44; K: 23, 30; L: 25, 26, 27; M: 41, 49; N: 52, 60; O: 22, 28; P: 6, 15; Q: 5, 12, 14; R: 7, 8; S: 54, 61, 63; T: 29, 38, 47; U: 55, 62; V: 33, 34, 42; W: 3, 4; X: 9, 17, 18; Y: 40, 48; Z: 46, 53; *: 10, 50, 57.

"That reminds me, Quatermain," said the Colonel. *"If memory serves me correctly, you used to be very good at solving problems. Here's one that I've been thinking about for the last couple of weeks and I still can't solve it. Next week I will be commencing my quarterly tour of all of the outposts. I intend to start here at HQ and finish at Outpost 50, and as I will be travelling by car, I will need to travel by road between each of the outposts."*

To be as efficient as possible, I intend to visit each outpost exactly once, no more, no less. I also have a preference for travelling in straight lines, so I wish to make as few 90 degree turns as possible. What's my best plan of attack?"

For your chance to win a \$50 book voucher, email your solution to the General's problem to: inthemargin@actuaries.asn.au ▲

More Than Maths

I think it is obvious that very few people are completely self-sufficient and almost all of us will require some type of help at some stage. I have recently noticed, however, that many people find it difficult to ask for help and I thought it may be worth exploring this challenge this month. This is a particularly relevant issue for actuaries given the profession's high dependence on volunteers. At the same time, asking for help may be even more problematic outside the workplace so let's approach this from a broad perspective.



It seems to me that the question of **how** to ask for help boils down to one of two distinct paths:

1. Appealing to the other person's altruism or duty; or
2. Appealing to the other person's self interest.

The first path requires practising the four most powerful words in the English language: "I need your help". It looks pretty simple but many of us struggle to enunciate those four words. Perhaps it is ego or independence or embarrassment. In any event, many of us experience some serious barriers in choosing this path. And yet many people we encounter are generous and happy to assist. The aftermath of every disaster is lit up with great stories of support and assistance, well beyond the call of duty. How many people descended on Brisbane to help in the clean-up operations after the floods?

The second path is more tempting but fraught with risk. It requires an open mind to consider the possible benefits to the "helper" and it also requires honesty not to over-sell or misrepresent them. A great example is the search for a mentor. I have spoken to a number of people recently who have been worried about asking

another person to mentor them. They could only see the benefits for themselves and took some time to recognise the potential benefits to the mentor. The recent *Pulse* survey revealed that 80% of those surveyed would consider becoming a mentor if asked. I suspect that this is not so much through altruism but through the benefits they recognise or have experienced in the past. However, I would caution anyone who is inviting someone else to mentor them not to explicitly list the potential benefits to the mentor as the sales pitch may fall flat.

More generally, therefore, do not underestimate the power of identifying "what's in it for me" ("WIIFM"), if only for your own mindset. However, be careful of talking up the WIIFM lest you inadvertently misrepresent it!

What are the success factors that will improve the probability that the other person will help you on **this** occasion?

- Be clear on what you are asking for so the scope is clear to the other person – very few people are willing to offer "blank cheque" support.
- Be willing to explain why you are asking them for help – if their talents are real and your rationale is pure, why not treat them with a compliment?
- Be open and honest about your needs – it may combat the ego factor.

What are the success factors that will improve the probability that the other person will help you on **the next** occasion?

- Remain within the scope of your original request – increasing your expectations beyond your "ask" will erode your good will.
- Be cheerful about the task – if their experience is pleasant they may be more open for a repeat involvement.
- Be appreciative – think about interesting and varied ways of saying "thank you".

It takes more than maths to be willing and able to ask for help – and to receive it. ▲

Martin Mulcare
martin@etiam.com.au



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

gae.robinson@finity.com.au

Performance Review Anxiety

I'm having my annual performance review next week. How should I prepare?

Performance reviews can be a cause of angst in prospect (and sometimes in retrospect), and it's a great idea to go in well prepared. If you've critically evaluated your own performance beforehand, you'll be able to talk sensibly about the things you've done well. You'll also minimise the chance of getting taken by surprise by negative feedback – which can be difficult to handle maturely when you're 'on the spot'.

So take time and assess yourself – achievements, qualities, failures, flaws, stuff-ups and all. Be 'cruel but fair'. Make sure you refer to the company's expectations for your role, and/or your defined objectives for the year.

Give yourself credit where you deserve it. And do some analysis of the successes too. What was it that enabled you to achieve – what qualities, what approach, what ideas? Thinking about the things you're good at, which are often the things you enjoy, is useful because you want to look for opportunities to do more of them.

Now examine the areas where you haven't done so well. Did you make poor decisions? Did you communicate poorly, or not enough? Did you just not find time for the job you were meant to do? Did you lack confidence? Were there 'system' or workload problems that made your job hard? Team issues? This analysis will give you ideas about how to do better next time.

Now when the day of the review comes, you will be set up to lead the conversation. Open with "Can I tell you how I think I've been doing?" and give a summary of your self-assessment. Don't be overly modest. And don't shy away from talking about the disappointments.

From there the meeting should be fairly easy, because you've done the hard work. Your reviewer will have some different perspectives to add, and some additional feedback. If there are criticisms, you won't be taken aback and find yourself on the defensive, because you've taken control.

I'll see you down the pub later.

Building Teams

I read that a prominent software firm breaks at 1pm every Friday for a poker tournament. Do you think these 'team-building' events boost productivity / teamwork / wellbeing? From the employer's perspective, do these events pay for themselves / make employees think more highly of the company/promote a 'cool' image to future employees?

Bring on the team-building activities, I say. They can be a great way for people to get to know each other, to break down the generation and cultural gaps, and to give everyone a break from the stresses and seriousness of the working day. And they are a fruitful source of humorous anecdotes which can keep the office chortling for months. So – wellbeing and office morale, tick.

But don't assume that out-of-the-office activities can provide direct value to your daily work. When my team-building group builds a catapult from a stick, a hanky, a lolly wrapper and a ball bearing and successfully launches a rotten egg across an imaginary river, it won't make us better actuaries. And I remain unconvinced that we'll work better as a team in the office because we solved the catapult problem together. There may even be simmering catapult-induced tensions ("Why did he have to sit on the stick, the idiot?" "Did she mean to break the egg over my head?", "I'll never take orders from him again", etc.).

As an employer, be sensitive about the choice of activities. We're not all keen on the musical challenges (fancy a bit of tribal dancing in front of your workmates?). Some people are intimidated by being asked to produce art (You...want me to make a Lego model which represents the way our workplace treats people? Give me a break!). And we're not all excited by the idea of running around the CBD wearing pink commando bandanas trying to get our photo taken with a policeman. My pet hate is the flaky 'trust-building' exercises – you know, the ones where the group stands in a circle around your blindfolded colleague who weighs twice as much as you do, and you sprain your back trying to catch him as he falls trustingly into your arms.

If you vary the activities, you'll keep most people happy most of the time. And if it's possible for an actuarial employer to seem cool, you might even achieve that. ▲

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

Living Within Our Means

This is a shortened version of a paper presented at the NZ Society of Actuaries conference in November 2010.



How well is pay-as-you-go (PAYG) financing of social security age pensions actually understood? In particular, what does PAYG financing mean for intergenerational equity and fiscal sustainability when population ageing is occurring? Much past analysis has been performed in terms of population dependency ratios, or of cost as a percentage of GDP. In the case of NZ Superannuation (NZS) – in essence a flat-rate, universal pension (ie not means-tested), payable from age 65 to normally resident NZ citizens – a more direct approach is possible. Results can, thus, make very clear the relationship between cost and the age of pension eligibility and also identify opportunities for investing in future-proofing.

Theory

The basic equation for PAYG financing of age pensions from taxes on labour incomes in each year (t) is

$$T(t) = (NP(t) \times P(t)) / (NW(t) \times W(t))$$

where at time t :

- $T(t)$ is the rate of tax on income needed for balance
- $NP(t)$ is the number of pensioners
- $P(t)$ is the average pension amount
- $NW(t)$ is the number of workers
- $W(t)$ is the average wage

In the case of NZS, $[P(t)/W(t)]$ is more or less constant, since the pension is indexed to wages. The tax rate $T(t)$ on wage income to support NZS, thus, depends on the ratio of the number of pensioners to the number of workers.

Even allowing for an increasing proportion of older people remaining in the workforce, the population of people aged 65 or over is projected by Statistics NZ to grow at a rate about four times greater than the rate of increase in the number of workers to the end of 2061. Even optimistic assumptions about increased participation don't produce anything like the labour force growth needed to balance the increase in pensioner numbers from age 65. For balance then, if the age of eligibility is unaltered, $T(t)$ must increase until the population age structure stabilises – not expected until after 2051 (although most of the change will have occurred by 2040). Consequently, under PAYG financing, later generations will pay progressively more from their incomes for the same benefits.

To achieve strict intergenerational equity under PAYG, ie to hold $T(t)$

broadly constant for all years t , it is required that $[NP(t)/NW(t)]$ be held constant. The obvious action then is to reduce the number of pensioners by increasing the age of eligibility, with a likely secondary effect of increasing the number of older workers. (There are some important caveats to doing this, though – see *list at end of article*.)

The alternative is, instead, to set T at a higher rate T_C , which would be sustainably constant in the long term. At the extreme, this would require finding a time t beyond which the population structure stabilised and $[NP(t)/NW(t)]$ did not vary. An intermediate option would be to find an “acceptable” value for T_C and agree that the number of pensioners would be lowered by increasing the age of eligibility once T_C began to become insufficient. Excess short term revenue (as the result of T_C being higher than $T(t)$) can be invested in financial assets (eg the NZ Superannuation Fund, an investment fund set up by the Government to smooth future pension funding), and/or in infrastructure for an ageing population, and/or in growing non-wage productivity.

Method

Demographic and economic factors are combined to derive the year-on-year cost of providing NZS per head of the working population (CPHwp), net of income tax and GST recoveries. The CPHwp is expressed in “real wage” terms; that is, a CPHwp of \$3,000 in a future year means the same as a CPHwp of \$3,000 today relative to wage levels. Hence, if \$3,000 is around 6% of the average wage now, the same amount in future years will also be around 6% of the average wage. An increase in CPHwp thus entails, all other things being equal, an increase in the average rate of income tax.

The “working population” is the full-time equivalent (FTE) number of people in the workforce, salaried and self-employed, including those seeking work. The use of FTEs is to allow for differential, age-related, part-time rates.

Holding CPHwp constant for now and the future is equivalent to setting a constant tax rate T_C to balance the PAYG equation. An acceptable fixed CPHwp will be a trade off between what can be maintained as a reasonable impost on the labour income of the working population and the needs of the older population.

Demographic change is also going to impact adversely on health expenditures. As a reminder of these pressures, the additional health costs that arise from ageing of the population are shown, calculated on the same basis.

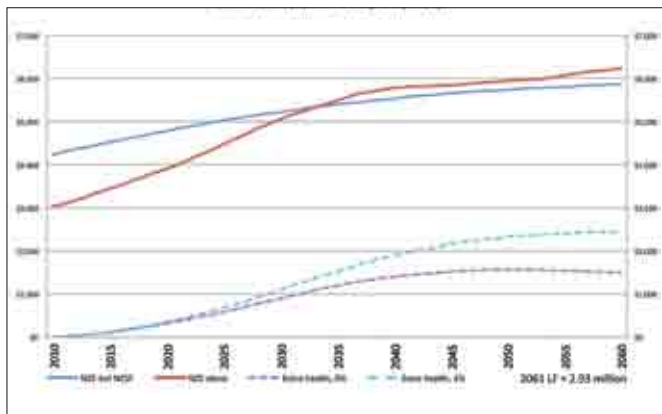
Results

The results for different scenarios are presented in the following graphs. In each case, the figure shows CPHwp in real wage terms over the years 2010 to 2060. The darker line shows the cost in respect of net NZS; the lighter line the cost on the assumption that the 40-year rolling average cost smoothing of the NZ Superannuation Fund is in operation.¹ The dotted lines show the net addition to current health costs on the basis of either no real cost increase (lower line) or a real increase of 1% pa in excess of wage growth (upper line). Where an increase in eligibility age is modelled, the timing of the changes (an increase of one year at a time) shows up as inflection points on the charts. The number of people projected to be in the working population by 2061, as a total before adjustment to FTEs, is given under each relevant chart. For the no-change case, for example, the number is 2.93 million, a little below the Statistics NZ medium projection of 3.00 million.

Figure 1 shows the “business as usual” projection. The CPHpw starts at about \$3,000. Were payments to recommence to the NZ Superannuation Fund, the cost would instead be \$4,200 in 2010, noting the total additional tax needed to do this is of the order of \$2.6 billion. Although this would go some way to evening out the impact on successive generations, the graph makes it clear that in the long term, a CPHpw of something like \$6,000 will be needed just to support NZS and another \$1500-\$2,500 needed to support additional health costs.

A broad estimate of the average tax rate required to produce \$3,000 in 2010 is 6% of income. This is an average – one could have a flat rate payroll tax of 6%, but also a progressive scale that averaged out at 6%. Figure 1 shows the average tax would need to rise to 8% by 2020, 10% by 2030, and 12% by 2050, even with the NZ Superannuation Fund in operation.

Figure 1: No Change in Eligibility Age • Projected labour force 2061: 2.93 million

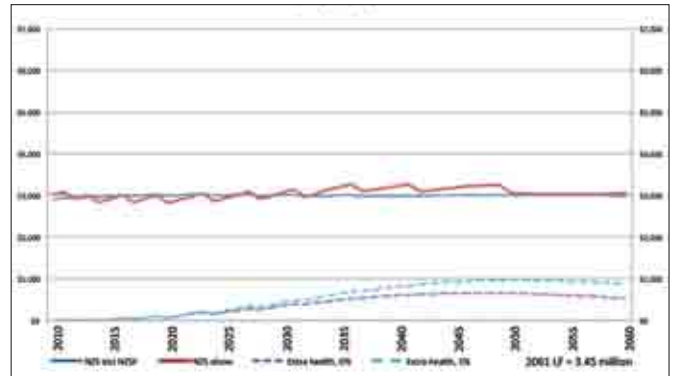


The next figures explore capping costs through reducing pensioner numbers (and, as a second order effect, raising worker numbers) by increasing the age of eligibility.

What adjustment to the age of eligibility would be needed to cap the CPHwp at the current level of around \$3,000? This would confer a number of benefits if achievable: there would be no pressure on tax rates in respect of NZS, and the increase in the

working population that might result from a delayed retirement age – although one should stress the “might” – would have a beneficial effect on the projected increase per head in health costs.

Figure 2: No increase in Cost per Head; Eligibility Age rises to 75 • Projected labour force 2061: 3.45 million

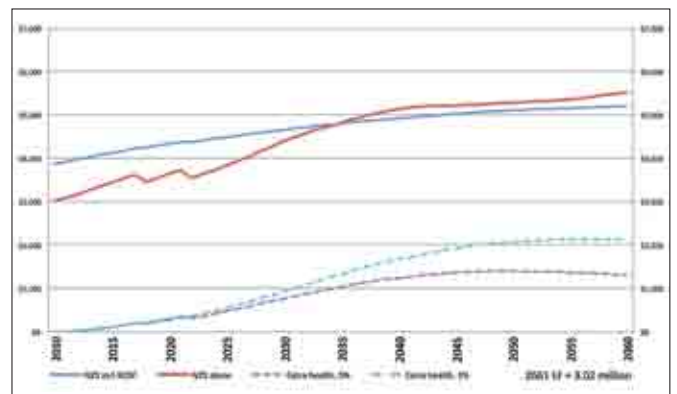


The model requires the first increase by 2012, the second by 2014, and an eligibility age of 70 by 2024. Further increases would be needed, although not quite so rapidly, ending with the age of eligibility being set at 75 by 2050. For people currently under age 56, that means no NZS until they are age 70 at the earliest, and for those under 30, no NZS until age 75. No contributions to the NZ Superannuation Fund would be needed, but the existing Fund would be used to smooth the cost. Under this scenario, 3.45 million people are projected to be in the labour force by 2061 including part-time workers, compared to the 3 million currently projected. The increase in health costs per head of working population decreases due to these additional workers, but is still appreciable.

The results assume those older people who have not attained the revised pension age but are not in the working population are all supporting themselves without State assistance. Whether this is all really feasible is doubtful.

How would following the Australians work for NZ? Australia has made changes to the age at which people will become eligible for the means-tested (both income and assets) Age Pension. Figure 3 shows following Australia would help, but is not enough.

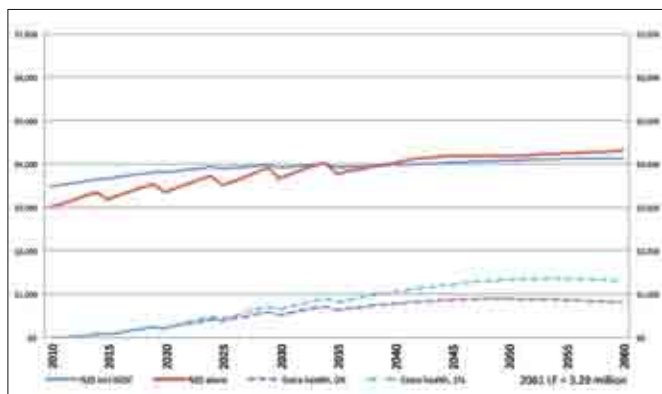
Figure 3: Follow Australia: Eligibility Age increases to 66 by 2018, 67 by 2022 • Projected labour force 2061: 3.02 million



This strategy doesn't adequately address the intergenerational issue, ie that average tax rates will need to rise significantly to continue to support NZS, even if NZSF contributions are reinstated. And there is still the additional cost per head of health expenditure to be financed, limiting other options.

Cap the CPHwp at \$4,000? Were NZSF contributions currently being made, the "actual" current CPHwp would be approximately \$4000. Figure 4 presents the results of increasing the age of eligibility so as to cap the CPHwp at \$4,000.

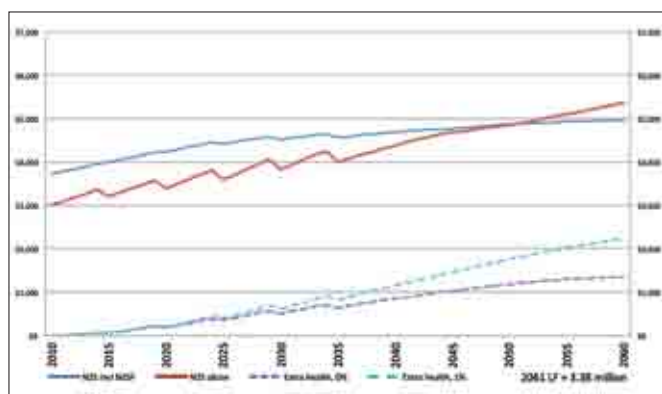
Figure 4: Eligibility Age increases to age 70 by 2040 • Projected labour force 2061: 3.29 million



The adjustments required to the age of eligibility are a one year increase in the age of eligibility every five years to 2030, followed by a final increase to age 70 in 2040. Existing pensioners would not be affected and younger workers have the trade-off of later eligibility against lower taxes. On the other hand, older workers would have their expectations dashed and it would be disproportionately less equitable to those from lower socio-economic groups because of mortality differentials. There also remains the additional health expenditure. So, not the complete solution, but getting there.

Better than expected mortality improvement? All the results presented so far have been based on the Statistics NZ series 5 population projection, which assumes medium rates of mortality improvement. As a final exercise, Figure 5 shows the results for the same changes to eligibility age as above but replacing the medium mortality projection with Statistic NZ's very low mortality projection.

Figure 5: Proposed Figure 4 Increases in Eligibility Age, Very Low Mortality Projection • Projected labour force 2061: 3.38 million



This emphasises the need to keep model results under review and if proceeding on a "best estimate" basis, to have a mechanism to make adjustments if actuality departs from the assumptions.

Caveats re changing the age of eligibility for NZS

Since an increase in the average age of the population is likely, in time, to alter the concept of "retirement age", provided that health improves in a similar fashion, then having a primary focus on reviewing the age of eligibility is not unreasonable. However ...

- Jobs will need to be created by the private sector; public sector jobs require tax revenue. If jobs are not available, unemployment benefits will be incurred instead of pensions, reducing projected savings.
- Some older people may not be able to work, even if jobs are available. Raising the **average** health status is a key requirement of achieving an improved outcome.
- Increasing the age of eligibility has a greater impact on lower socio-economic groups, since there is a clear link between mortality and socio-economic status. Narrowing socio-economic inequality calls for investment in raising levels of educational attainment and social inclusion.
- While an increase in the number of older people in the population will increase the demand for goods and services, the extent to which this will translate into more jobs is uncertain.
- The extent to which more jobs will be created may depend significantly on the additional resources people take with them into retirement, giving them the ability to obtain higher levels of goods and services from the private sector. Retirement savings are, therefore, crucial – the more funds that future NZ retired generations have in their KiwiSaver accounts, the more possibility of jobs being created and the labour force expanded.



Geoff Rashbrooke

Geoff.Rashbrooke@vuw.ac.nz



¹ Note that at present this process has been put in abeyance by the current Government, citing current budget pressures.

Insurance Capital Review Seminar

– Response to Submissions



REGISTER NOW

Thursday, 9 June 2011 • 8.30am – 1.30pm

Cost: \$215.00 per person Sofitel Sydney Wentworth Perth Room, 61-101 Phillip Street, Sydney

The Australian Prudential Regulation Authority (APRA) will give an overview of, and respond to, questions about its revised proposals to update capital standards for general insurers and life insurers at a seminar on 9 June 2011 at the Sofitel Sydney Wentworth. • Featuring joint and concurrent sessions, the Seminar will be of significant interest to all executives involved in capital management, including CEOs, CFOs, CROs, actuaries and other senior executives.

Program

8.30am	Registration
9.00am	WELCOME
9.05am	APRA PRESENTATION + Q & A
10.30am	Morning tea
11.00am	CONCURRENT SESSION – General Insurance
11.00am	CONCURRENT SESSION – Life Insurance
12.30pm	Luncheon
1.30pm	Close

For more information or to **REGISTER ONLINE** please visit: www.actuaries.asn.au

Registrations close: **Thursday 2 June 2011**



Institute of Actuaries of Australia



IN CONJUNCTION WITH



APRA's View on the Diversified Institutions Market

Business Luncheon – REGISTER NOW



– with Guest Speaker Denis Wilkinson

Cost: \$80.00 per person
LIMITED PLACES AVAILABLE

Wednesday, 22 June 2011, 12.00 noon for 12.30pm – 2.00pm

Westin Sydney Heritage Ballroom, Level 6, 1 Martin Place, Sydney

In this luncheon address, APRA's Denis Wilkinson, will cover a range of areas including:

APRA's View on the Diversified Institutions Market:

- Best Practice aspects that APRA sees could be pursued by industry
- Governance Risks of concern to APRA
- APRA Reviews – Lessons from the past

This luncheon will provide an excellent opportunity for members of the Institute and other senior financial services and business professionals to hear the latest views and thinking of the prudential regulator.

SPONSORED BY



REGISTER ONLINE at www.actuaries.asn.au



The case of the *Queen v Dudley* is a famous 1884 English trial which is widely studied by students of philosophy and law. Having been shipwrecked, three crewmates and an orphan cabin-boy faced the prospect of starving to death on the high seas. After numerous days, the crew, who had many dependants, decided to sacrifice the cabin-boy for their own survival. A few days later “after breakfast” as Captain Dudley wrote in his diary, a ship spotted them and they were promptly rescued.

The case raised the debate between categorical and utilitarian morality – whether an act of murder is wrong regardless of the circumstances, or whether it might be justifiable if it maximizes the ‘utility’ of a majority. In extreme cases such as these, the moral issues can be clearer than cases shrouded in the context of business and society, such as insurance.

In the early 18th century, insurance was no more than a gamble and so moral issues were hardly present. As contract law developed, speculation was distinguished from gambling and was popularly held to be somewhat morally corrupt – a belief stemming from the depiction of futures traders, especially when engaged in short-selling. This generalisation was short-lived, however, as the utilitarian morality of insurance began to develop.

Jeremy Bentham, an 18th century philosopher, expounded utilitarianism as “the greatest good for the greatest number”, which can apply to the institution of insurance in that it enables the ‘least bad for the greatest number’. The idea of risk pooling allows substantial losses and uncertainty to be shared amongst a group rather than consigned to individuals.

The practice of pooling relies on lower-risk members covering for higher-risk members, but the problem of adverse-selection can create groups of disproportionately high-risk. In response to this, insurers market policies towards low-risk people by way of incentives. From a libertarian point of view, the coercion of people to cover for the losses of others may be seen as somewhat unjust.

Opponents to social security, essentially the collection of insurance coverages, for example, have raised arguments of inter-generational

equity. John Rawls, a contemporary American political philosopher, would probably contend that this inequality is perfectly justified. Under his theory of the ‘original position’, people may only benefit from their inherent ‘gifts’ (being lower-risks), as long as they help those less well off (those higher-risks). In other words, why should people bear the burden of a high-risk status if it is morally undeserved?

To partially address this claim of unjust coverage, risk classification emerged. However, in attempting to “maintain the integrity of the risk pool, insurers are actually making selections that are adverse to the broader spreading of risk”, as Ericson and Doyle put it in their book *Risk and Morality*. Furthermore, classification can result in the denial of policies to individuals who might need them the most, which can perpetuate social classes and inequality. For instance, the dependants of those who are refused, or cannot afford life insurance will both lose and be further imprisoned in their socio-economic standing.

From a higher perspective, it may be suggested that some types of insurance encourage the prevention of and responsibility for risk and loss, and in this sense, insurance can be seen as a moral agent. If it were only Captain Dudley and the cabin-boy who were shipwrecked, and Captain Dudley had adequate life insurance, perhaps the course of action taken would have been based on categorical morality and more in agreement with the verdict of the original case.

There are, however innate conflicts of interest between the insurer and the insured. Moral hazard may occur whereby the insured engage in morally reprehensible actions. The classic example is burning one’s house down. On the other hand, fraud may occur, where the self-interest of the business may encourage insurers to engage in morally and legally questionable actions. A recent example of this comes from a leak from a former employee at the insurance segment, Balboa of the Bank of America. It reveals practices of Force-Placed insurance, whereby lenders purchase property insurance on behalf of mortgage holders and then charge borrowers for it at much higher rates.

The morality concerning insurance is indeed complex. However, it remains an important issue in the context of legislation and social reform. As actuaries, or aspiring actuaries, this issue can be obscured by the intricacies of the mathematics and may even seem irrelevant or far detached. However, it has been the objectivity offered to insurance by actuarial science which has made the issue of its morality so difficult. Accordingly, even a consideration of these issues may grant greater social perspective and a more holistic appreciation of the practice. ▲

Hanbo Li

hanbo.li@melbourneactuary.com





Did you know? Your secretariat – and what we do.

At the recent Convention in Sydney we had our organisational chart displayed in the Institute Booth. I had a few comments about the number of staff at the Institute. Somebody even asked me *“what do they all do?”*.

Reading one of the exit statements from a member resigning the Institute he said in his feedback that he did not see why we need a CEO and a secretariat as “the Institute is run by the volunteers”.

It is certainly true that we could not get by without the 650 volunteers who are actively involved with the Institute. Out of a total membership of around 3,700 (2,500 of whom are Associates or Fellows) this is an enviable rate of volunteering.

However the Institute is a reasonable sized small business with an annual turnover of around \$8 million, and servicing 3,700 members is no mean feat.

We currently have around 25 staff but as we offer flexible working practices (part time and job share) this represents around 22 FTE (Full Time Equivalents).

So here is a sample of the things my wonderful team do:

- run over 100 events a year;
- administer education for 850 students;
- administer and provide membership services to 3,700 members;
- coordinate the activities of more than 600 volunteers across 60 committees and subcommittees;
- produce (with members’ input) professional standards and guidance;
- run a research grants program;
- produce publications (Actuary Australia, AAJ, textbooks);
- represent the profession in liaison with regulators, government, other politicians and bureaucrats;
- liaise with and (where relevant) co-operate with industry bodies and other professional organisations; and
- last but not least, promote the profession.

A copy of the secretariat organisation chart is available on the website under ‘About Us’.

We are a business and we run as a business, so we also have the back office administrative functions (finance, IT etc.) that come with that. We run as a not-for-profit so the aim is to have a neutral

budget each year (zero to a very small profit) and any gains or cost savings are reinvested back into the business for the benefit of you, our members. You will have noticed from our recent accounts that some significant cost savings were made last year in the business (around half a million dollars – the other \$240K or so was intangibles). These are automatically allocated to reserves initially; however the intention is to use this money to improve member services.

For some reason some members love to hate the Institute. (I found myself falling into this pattern early in my career). I think perhaps this comes from the fact that so many of us spend years trying to pass the exams, and the Institute is the one that keeps failing us.

What is interesting though is that invariably this sort of reaction is given by those who have little involvement with the Institute and are often not aware of all the things we do. If you are reading this magazine then I suspect you are not in this camp and I may be preaching to the converted. However perhaps you have friends or colleagues who are not engaged with the Institute or are disgruntled about aspects of what we do. Please encourage them to contact me or any of the Institute staff and let us know where we can improve our game. Please also encourage them to get involved – at least to subscribe to the daily news service, read the weekly bulletins and perhaps there will be more things of relevance to them than they realise. Also if they keep their member profile up to date on the web we can give them information that is relevant to them – the “practice area” field is key in this regard.

This reaction from some members is also partly our fault – we have to get better at engaging with all our members and offering you services that are relevant and valuable to you. It is for this reason that I have recently engaged our first Marketing Manager, Andrew Jones. His main role is to enhance the value proposition for you, our members, and make it more attractive to be a member of the Institute.

As always, I would be very interested to hear your views on things we can improve, and also on things you think we do well. You can contact me or Andrew with this feedback. ▲

Melinda Howes

melinda.howes@actuaries.asn.au

Welcome Dinner, Biennial Convention



Strategically placing Actuaries around the globe.



Sydney – Portfolio Analyst/Actuary

Fantastic opportunity for a nearly/newly qualified Actuary or Statistical Analyst to join a niche player in the Australian Financial Services Industry. Based in Sydney and reporting to the Head of Analytics you will be responsible for pricing, forecasting, reporting and the development of new analytical initiatives. Requirements for this role are as follows:

- A minimum of 3 years analytical (actuarial) experience
- Strong hands on experience with SAS
- A background in pricing of general insurance personal lines products is desirable
- Statistical modelling experience with knowledge of logistic regressions and survival analysis
- Strong team working skills and excellent communication both verbal and written

Contact Claire Street for more information.



Sydney – Actuarial Associate, General Insurance

Due to continued growth, this leading Australian Insurer is looking for an actuarial analyst to join their commercial lines actuarial team. You will have at least 3 years of experience in either a pricing or valuation role with strong SAS and excel skills and be progressing with your actuarial exams. With sound communication skills and the ability to communicate effectively with senior management you will be responsible for:

- Conducting portfolio analysis to promote better management of the portfolios
- Providing pricing advice to the business
- Valuations and claims monitoring to identify trends
- Contributing to the budgeting and forecast process

Contact Claire Street for more information.



Sydney – Financial Analyst

A Global leader within the Consulting Industry is currently looking to add an experienced financial modeller to join their dynamic and developing team working on a wide range of financial modelling consultancy projects. You will be a driven and mature individual with a professional attitude and a focus on team work and have developed strong technical skills in a similar function. Responsibilities and skills essential to this role are as follows:

- Providing Analytical Support in Financial Model Auditing
- Reviewing excel based financial models developed by clients
- Advanced Excel and knowledge of VBA
- 2-4 years experience in financial modelling of large projects
- Mathematics, Finance or Commerce degree

Contact Claire Street for more information.



International Travel! – Actuary, Life Insurance

This is a really exciting opportunity for the Actuary with aspirations to travel. The newly formed global financial solutions team of this major international re-insurer is looking for Actuaries with Fellowship to spend a few years in the US “learning the ropes” and then be part of the team to develop their business in the Australasia region. The final destination is yet to be decided but likely to be Hong Kong or Singapore, but could possibly be Sydney. You can be sure of an exciting and interesting career though, working on a variety of transactions for this new global function.

- Actuarial Fellowship
- Several roles available
- Minimum 6 years working experience upwards
- Strong communication skills
- Consulting experience a plus
- Strong interest in asset intensive work

Contact Lesley Traverso for more information.



Hong Kong – Director, Life Consulting

A global actuarial and insurance consulting practice is searching for a senior actuary with ambitions to become a partner in the near future. You will have responsibility for the continued growth of the practice as well as practice management.

- Business Development – actively seek and generate new opportunities
- Manage and develop existing client relationships
- Qualified Actuary with demonstrable track record of success
- Senior role requiring excellent management capabilities
- Experience of some of the following actuarial techniques: ALM, stochastic modelling, EV, USGAAP, IFRS, realistic balance sheet, ICA, asset modelling, capital management, distribution, M&A / structuring

Contact James Lecoutre for more information.



Hong Kong – Regional Chief Actuary, Life Insurance

Leading International Insurer is looking for an experienced Life actuary to co-ordinate and oversee all actuarial work across the Asia region. This company is looking to expand their presence in some of the developing markets in Asia, so this is a great opportunity to be involved with setting up new offices and establishing actuarial capability.

- Qualified Actuary, preferably with Asian market experience
- Necessary cultural sensitivity to work across different regions
- Ability to work independently and be hands on with actuarial work
- Asian language skills are preferable but not essential
- Great step up for an experienced actuary looking to move into management

Contact James Lecoutre for more information.

Lesley Traverso

T: +61 (0)2 9226 7459
M: +61 (0)433 129 390
lesley.traverso@dwsimpson.com

James Lecoutre

T: +61 (0)2 9226 7412
M: +61 (0)404 397 503
james.lecoutre@dwsimpson.com

Claire Street

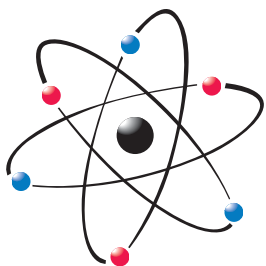
T: +61 (0)2 9226 7418
M: +61 (0)401 606 171
claire.street@dwsimpson.com

1300 22 88 279 (1300 ACTUARY) www.dwsimpson.com

**Job of
the month**

See www.acumen-resources.com
General insurance consulting Job ref: J3916

Global opportunities



ACUMEN RESOURCES

Global Actuarial Recruitment

the *new* name for **Qed Actuarial**



Industry insight



Worldwide contacts

Run *by* actuaries *for* actuaries

London

uk@acumen-resources.com
Tel +44 20 3189 2900

Dublin

ireland@acumen-resources.com
Tel +353 1 6099 400

Sydney

australia@acumen-resources.com
Tel +61 2 9262 1612

Hong Kong

asiapacific@acumen-resources.com
Tel +852 3051 980