INTERNATIONAL SECTION

"A KNOWLEDGE COMMUNITY FOR THE SOCIETY OF ACTUARIES"

ISSUE NO. 40

NOVEMBER 2006

INTERNATIONAL NEWS

Faculty150 1856-2006 Faculty of Actuaries. Celebrating 150 years.

All Roads Lead to Scotland in 2006

by Paul H. Grace

The Faculty of Actuaries, or rather to give it its full title, the Faculty of Actuaries in Scotland, the second oldest professional actuarial body, is celebrating its sesquicentenary this year. It was established on January 4, 1856; January 1 might have been preferred, but the inaugural meeting was probably delayed in deference to Hogmanay celebrations.

The Institute of Actuaries was formed in 1848; its first President, John Finlaison, was himself a Scot. A third of the Institute's membership lived and worked in Scotland. There were excellent personal relationships between those who worked in London and those who worked in Scotland, but in those days the only practical way of travelling from Edinburgh to London was by a 12-hour train journey; few of those actuaries working in Scotland were prepared to make that journey to participate in the Institute's deliberations and those in Scotland felt that they were "missing out." The solution was to establish an actuarial body based in Scotland—the Faculty of Actuaries was born.

The possibility of seeking a Royal Charter was discussed in 1857, soon after the Faculty's formation, but it was not until 1868 that the Faculty became the first actuarial body to obtain a charter when Queen Victoria granted the Royal Charter of Incorporation. New rules were drawn up and Fellows adopted the designatory letters FFA. The following year, a coat of arms incorporating the motto "Ad finem fidelis" was adopted.

continued on page 4

The lone piper at our "actuarial" concert performs for the attendees.

contents

Actuaries
Risk is Opportunity.℠

International Section News
Issue No. 40 • November 2006

International Section of the Society of Actuaries
475 N. Martingale Road • Suite 600
Schaumburg, IL 60173

Phone: (847) 706-3500 • Fax: (847) 706-3599
Web site: www.soa.org

This newsletter is free to section members. A subscription is $20.00 for nonmembers. Current-year issues are available from the Publication Orders Department by contacting Aleshia Zionce at (847) 706-3525. Photocopies of back issues may be requested for a nominal fee.

Editor's Note

by Catherine D. Lyn and Michelle John

Catherine D. Lyn, FSA, FIA, is a consulting actuary in Jamaica, W.I. She can be reached at clyn@sympatico.ca.

I have great pleasure in announcing that I am handing over the editor's position to Michelle John, who has been Assistant Editor these past two years. She develops ideas with the authors and has an artistic turn. The newsletter is already assuming a new look in her capable hands. This publication will continue to have an editorial team of three as I assume a new position as Features Editor and Carol Tom continues to hold the post of Assistant Editor. *International News* will evolve as we change roles and the new dynamics of the editors come into play.

Randy Makin, my predecessor who appointed me, opened up a whole new dimension in my life with *International News* and I have thoroughly enjoyed the work. I must thank all authors who responded to my invitations to write for *International News*. We look forward to having something in *International News* for each one of our readers around the world. In true actuarial fashion we have created a database to keep in touch with past authors and expand the network as well.

* * * *

Thank you, Cathy. I am excited to be taking on this role. In Part II of Mind the Gap (published in July's *International News*), we are reminded as actuaries to "put on a good show, be entertaining, tell a story." This doesn't mean that we lose the facts, but that we are conscious of the packaging. *International News* puts good actuarial stories in attractive packaging.

Financial reporting actuaries all across the globe are keeping their eyes focused on developments in International Financial Reporting Standards (IFRS) for insurance contracts. Some are threatening to retire before they become effective, but that's not an option for most of us, so instead, we keep ourselves informed. Brian Holland's accounting feature delves into the details on some of the principles being proposed and the issues faced. As a financial reporting actuary in Canada, I see the amount of work required just to align

continued on page 3

Chairperson's Corner

Let's Make the Impression of Making Progress

by William R. Horbatt

Faced with seemingly impossible data problems the other day, my client suggested that we "make the impression of making progress" which made me begin to think how important culture is to international actuaries. Perhaps most important is how cultural stereotypes frequently mislead.

Only in Paris, the shrine of the 35-hour work weeks and six weeks annual vacation, would I spend a "nuit blanche" working all night with my local team to complete a project. Who would have ever expected Italy, the home of "la dolce vita," to prohibit smoking in public places?

Great progress is occurring overseas expanding best practices and we all have something to learn. European companies are leading the way now advancing financial reporting with last year's implementation of European Embedded Value and, most importantly, public disclosure of specific financial impacts from old financial guarantees.

Although I may be retiring from the International Section Council, I will look back on my tenure with fond memories and with firm confidence that the new council will serve our membership well. Ciao e buona fortuna, mi amci! ☐

William R. Horbatt, FSA, MAAA, is a consulting actuary with Actuarial Consortium in Short Hills, NJ. He can be reached at Horbatt@ActuarialConsortium.com.

Editor's Note ... | from page 2

the asset side of the balance sheet with the International Standards. I can't wait until we get to the liabilities. The new RBC framework in Singapore has picked up on a number of global trends, e.g., valuation of assets and liabilities on a fair value basis. IFRS has been adopted in Jamaica and Janet Sharp discusses some of the challenges actuaries are facing over there.

With Asia's phenomenal growth and change, International News tries to keep you abreast of all the breaking news. This edition features news from both Hong Kong and mainland China.

In this edition, we celebrate with the Faculty of Actuaries in Scotland on their 150th anniversary and we celebrate the life of the first female Trinidadian actuary, Denise Radix. Read along and you can vicariously participate in the International Congress in Paris, the International Association of Black Actuaries meeting in Atlanta and the Management Workshops offered by the Pacific Rim Actuaries Club of Toronto, without having to go through airport security.

As actuaries, we are all busy in our day-to-day work, so the editorial team thanks you for taking the time to write articles, be ambassadors, send in announcements, contribute your ideas and give us your feedback.

Enjoy! ☐

Michelle John, FSA, FCIA, FIA, is assistant vice president and actuary at Sun Life Financial in Toronto, Canada. She can be reached at michelle.john@sunlife.com.

What Has the Faculty Brought to the Profession?

Records indicate that the Faculty members were active in research from the outset. In the second half of the 19th century an average of almost six papers a year were presented; many of these were published in the *Transactions of the Actuarial Society of Edinburgh* (the Society was merged with the Faculty in 1900).

Like the Institute, the Faculty has a history of encouraging research and the publication of the findings. One of the most prolific authors in recent times has been Professor David Wilkie; a widely used investment model bears his name.

Scots, renowned as emigrants, have made their presence felt in many parts of the world, in particular in the countries of the Commonwealth and in the United States. It is not surprising that many FFAs emigrated and were involved in the development of the profession in their new homeland. A Society of Actuaries publication refers to "the small band of FFAs who migrated to North America and who exerted extraordinarily large influence there." This has resulted in a significant proportion of the Faculty's membership being resident overseas and in order to represent their views the Faculty's governing body has, for a number of years, included at least one overseas member.

The Faculty, through its delegates to both the Groupe Consultatif and the IAA, continues to play a part in the development of the actuarial profession throughout the world.

Some of the guests gather during cocktail hour at the January 4th reception.

Given that one reason for establishing the Faculty was to promote and establish a school of actuarial study and research in Scotland, it is perhaps not surprising that at a time of steadily growing demand for our professional skills, Heriot-Watt University was the first U.K. university to establish an actuarial department (in 1972). In addition to its teaching activities, the department, which has expanded substantially over the years, is recognised internationally as a major center for actuarial research. This recognition enables it to attract staff of a high calibre and many distinguished researchers on short-term visits.

There have been many suggestions of closer cooperation between the Faculty and the Institute; amalgamation was proposed as long ago as 1864. Common examinations were suggested on a number of occasions, for example by the Faculty President in 1928. Despite the enormous demand on the profession's limited resources of operating two similar but distinct examination systems, common examinations were not held until 1994. Two years later the Faculty and Institute Management Committee was established and Councils delegated many of their routine responsibilities to that smaller and more streamlined body.

These changes freed up resources, in particular time, to devote to other developments. The Faculty has debated a number of issues and the U.K. profession made many beneficial changes that probably would not otherwise have been made. FFAs have played their part, alongside FIAs, in developing strategic solutions to a number of issues facing the U.K. profession—the launch of the British Actuarial Journal, the new Educational Strategy implemented in 2004, proposals for Peer Review, changes to the Disciplinary Schemes and the review of the Continuous Professional Development (CPD) Scheme are the more obvious recent developments. In discussing these developments, the profession has made significant changes where it would have been easy to settle for *status quo*.

Faculty Council started planning a suitable program to celebrate the sesquicentenary several years ago; subsequently some kindred groups caught the enthusiasm and decided to join in the celebrations. To mark the event, the Faculty decided to nominate a charity for support during the year by members and friends; as well as kindred societies, thus making a contribution to the life of Scotland. The charity selected was the Children's Hospice Association Scotland (CHAS). CHAS was established in 1992 to offer specialist respite care to children with untreatable terminal illnesses. It opened its first hospice in 1996 located in Kinross, Central Scotland. Because of the demand for places a second hospice located at Balloch in the West of Scotland opened in 2005. CHAS is currently piloting a project of home care for families of terminally ill children in the Highlands.

The celebrations started at 4:30 p.m. on Jan. 4, 2006, the actual 150th anniversary of the Faculty's establishment, with Harvie Brown, the Faculty's president welcoming members and their guests to a champagne reception in the Council Chamber at Maclaurin House, the Faculty's headquarters in Edinburgh. At 5:30 p.m., the time when 38 actuaries had agreed 150 years ago to form the Faculty, Harvie gave a brief talk on the history of the Faculty and the plans to celebrate its establishment during the year.

Not surprisingly, given the Faculty's long history of association with education and research, a number of events have educational connotations. Against this background the Faculty commissioned researcher Jennifer Straughn to work under the supervision of one of its Fellows at Heriot Watt University, Professor Angus Macdonald and Professor Matt Sutton on "Healthy Life Expectancy measurement in Scotland." This was a major piece of work and included some international comparisons. The results were presented at a Sessional Meeting of the Faculty held in Edinburgh on Feb. 20, 2006. Jennifer, a Barbadian, is a Faculty student and obtained a MSc at Heriot-Watt University; she won the first SCOR prize for actuarial dissertations. Matt Sutton is a professor with the Health Economics Research Unit, School of Medicine, University of Aberdeen and was on secondment to the Information Services Division of NHS Scotland.

Four weeks later on the 20th of March exactly 150 years after the founder members had approved the initial bye-laws and rules and adopted the constitution, two lectures were given to members and their guests. The first lecture was given by Professor David Simpson on "The Economy, Society and the Actuarial Profession 1856-2006" followed by "Intelligent Trust, Small Print and Good Communication" given by Baroness Onora O'Neill, until recently Principal of Newnham College, Cambridge. The lectures were followed by a dinner held in the Signet Library, to which friends were invited.

The U.K. Profession organizes a number of conferences each year and it is not surprising that a Scottish venue was selected for many of them—Healthcare Conference (held in Edinburgh in May), Pensions Conference (held in St. Andrews in June), Finance and

Jennifer Straughn takes a moment to smile for the camera.

Investment (held in Edinburgh, also in June), Life Convention and Exhibition (held in Glasgow in November) and Younger Members' Convention (to be held in St. Andrews in December). A representative from CHAS will attend each of these conferences in order to explain the work of the charity and hopefully attract donations.

The international perspective was not overlooked. The decision was made several years ago to invite the European Actuarial Consultative Group (the Groupe Consultatif) to hold its 2006 Colloquium in Edinburgh; this took place on September 22nd. The speakers were drawn from six countries and the Colloquium attracted delegates from all over Europe. To encourage wide participation, Faculty Council set up a bursary fund to assist younger actuaries from those countries that had joined the European Union in May 2004 to attend the Colloquium. This attracted a large number of applications but unfortunately not all requests could be met.

Despite having held its first half-yearly 2006 meeting in Europe, namely in Paris, preceding the 28th Congress, the International Actuarial Association accepted the Faculty's offer to host the November 2006 Council meeting in Edinburgh. The Faculty have organized a social program to make the visit a memorable one for the delegates.

continued on page 6

The team that "bagged" the first Munro in the Scottish mountains by planting a Faculty umbrella on the summit.

The IAA and Groupe Consultatif decided to hold their third joint Education Conference in Edinburgh to follow the November IAA meetings. (A report outlining the discussions at the second such conference held in Berlin in November 2003 was included in the Issue No. 38 of the Society's International Newsletter published in March 2006).

The celebrations are not all around the profession and its work. There are 284 Munros in Scotland—mountains at least 3,000 feet high above sea level. Amongst the objectives of any Scottish mountaineer is to "bag" (or climb) every Munro. Harvie achieved this objective in 2004 and challenged actuaries to match his achievement by "putting an actuary on the top of every Munro in 2006." One group of 12 were off to a flying start, bagging Ben Lomond on Saturday, January 8th—they "planted" a Faculty umbrella on the summit. The challenge stimulated interest in the Faculty's 150th celebrations beyond its own membership. One of the London based Actuarial Dining Clubs, for the first time, held its weekend outing in Scotland and its members "bagged" one of the Munros; an Honorary FIA has also done his bit by bagging 11 Munros. At the time of writing, 162 Munros have been bagged or "reserved." A number of those bagging Munros were sponsored with the proceeds going to CHAS.

Other activities raising money for CHAS included participation by 72 members of the Faculty of Actuaries Student Society in the Edinburgh Marathon on Sunday, June 11th. This carried the amount raised comfortably past the half-way point.

Reference has already been made to the Champagne Reception on January 4th and Dinner on March 20th; a number of other social events have taken place or are planned. A charity concert was held on March 19th in Greyfriars Kirk, Edinburgh. The program featured organ, piano, saxophone, flute, bassoon trumpet, bagpipes, harp and a Gaelic singer added a Scottish flavor. All but one of the performers were FFAs, the exception being the harpist who is employed in the Faculty office.

There have also been celebrations outside Scotland. The Faculty of Actuaries (England) Club—a dining club for those FFAs working in England (or Wales) (I myself worked in Wales in the late '60s and was invited to become a member, but first they had to modify the constitution!) held a Dinner and Ceildh in the Caledonian Club located in London's West End on May 12th. Attendees, including Alf Guldberg, the IAA Past President and his wife Gudrun found the Scottish Country Dancing particularly enjoyable.

The Australian and New Zealand FFAs held a convivial dinner in Melbourne on Saturday, April 8th attended by Harvie and his wife Joss and to which the President of the Institute of Actuaries in Australia was invited. The Actuarial Society of South Africa, many of whose members are Fellows of the Faculty, are holding a celebratory dinner in October.

The celebrations will be brought to a close with a Gala Ball on Saturday, December 2nd in the Edinburgh International Conference Centre—hopefully by that date all the Munros will have been bagged and the Faculty's fund raising target for CHAS exceeded. □

Paul H. Grace was president of the Faculty of Actuaries from 1996-1998. He was an appointed actuary until his retirement from full-time employment. He was also chairman of the Groupe Consultatif Actuariel Europeen in 2004-2005. He can be reached at paul.grace@virgin.net.

References

1. "The Faculty of Actuaries in Scotland 1856 – 1956" by A. R. Davidson

2. "The history of the Actuarial Profession in North America 1809-1979" by E. J. Moorhead published by the Society of Actuaries

International Section Election Results

We welcome the contribution of our newest council members, three highly qualified and committed Section members. The results of the recent International Section Election are in. Philip Cammidge, Bosco Chan and Carl Hansen have been elected to three-year terms on the International Section council.

The council would also like to take this opportunity to thank the outgoing council members, Tom Leonard, Anna Louie and Ronald Poon-Affat, for their hard work and dedication over the last three years. And last, but not least, I'd like to extend a special "thank you" to Bill Horbatt, our outgoing International Section Council chair. We couldn't have done it without you!

We'll tell you a bit about each of your new council members below so you can start getting to know them.

* * * *

Phillip Geoffrey "Alistair" Cammidge is an actuary at TIAA-CREF in Charlotte, N.C. Phillip describes himself as a "professional expatriate." This could have something to do with the fact that he has lived in: England, Sierra Leone, Singapore, Cyprus, Denmark, South Africa and the United States. He has also practiced in a number of areas: life actuarial, pensions actuarial, investments and life consulting. He sometimes takes the role of the U.S. correspondent of The Actuary (magazine of the Staple Inn Actuarial Society).

In his own words, "Mathematics being the international language—and a PC being on every desk—North American actuaries are well placed to take advantage of globalization."

Bosco Chan is a Consultant & Group Leader in the Retirement Service Center of Mercer Human Resource Consulting in Toronto, Canada. Bosco has written articles for our own International News and papers for Society of Actuaries' publications. Recent International News articles were "The Ripple Effect of Asian Tsunami around the World," "Building Solid Business Relationships—a Reflection of Everyday Relationships" and "Walk on Water—Riding the Globalization Wave."

In his own words, "The actuarial profession is changing rapidly and the trend is to expand our profession globally. Not only are emerging markets playing an important role in revenue growth; sharing knowledge and viewpoints with actuaries abroad can accelerate our personal professional development."

Carl I. Hansen is an Executive Director at Milliman Global in Seattle, WA. Carl has extensive employee benefits actuarial experience, working in both the United States and the United Kingdom. His consulting experience includes valuation of benefits, plan design, participant communications, plan administration, accounting for benefits, M&A activity and compliance issues in the United States and abroad.

In his own words, "I am a strong believer in thinking globally, both professionally and personally. I want to promote global thinking in the actuarial profession by helping SOA members to better understand issues faced by actuaries and related professionals in other countries."☐

SOA International Experience Survey—Embedded Value Financial Assumptions

by Charles Carroll[1], William Horbatt and Dominique Lebel

Starting in 2003, the Society of Actuaries International Experience Study Working Group has been conducting surveys of published embedded value financial assumptions.[2] This article updates the survey with 2005 data.

The purpose of this survey is to provide international actuaries with benchmark assumption data. Since many companies make this information publicly available, no formal data request was issued. Instead, the survey was based on reports published on the Internet by 30 companies centered in Asia, Australia, Canada and Europe, many of which are active internationally.

Each financial assumption presented in this article is the average value of the assumption reported by all companies in their 2005 embedded value reports. If no companies reported a specific assumption in a given country, then that assumption is labeled "NA," signifying that data is not available. Some companies vary assumptions by projection year, while other companies use a single assumption; if a company varies an assumption by projection year, the value for the earliest period is used in this study.

Companies Included in Survey

Aegon	Allianz
AMP	Aviva
AXA	CNP
Fortis	Friends Provident
Generali	Hannover Re
HBOS	Industrial Alliance
ING	Irish Life & Perm.
Legal & Gen	Lloyds TSB
Manulife	Mitsui
Munich Re	Nordea
Old Mutual	Prudential (U.K.)
Resolution	Standard Life
Swiss Life	Swiss Re
T&D	Tokio Marine
Winterthur	Zurich

Financial Assumptions from Survey

Financial assumptions presented in this article include:

(1) Discount rate—the rate used to calculate the present value of future distributable earnings.
(2) Equity return—the total return on common stock investments.
(3) Property return—the total return on investments in real estate.
(4) Fixed return—the yield on a corporate bond portfolio held by an insurance company.
(5) Government return—typically the yield on a 10-year bond offered by the local government.
(6) Inflation—the rate used to increase future expenses and, possibly, revalue policy terms that are tied to inflation.
(7) Tax rates—income tax rates by jurisdiction.

When reading Table 1, several thoughts should be kept in mind:

- A significant number of companies (15) introduced market consistent embedded value (MCEV) this year where the discount rate is not calculated directly, but is inferred from the embedded value calculation.
- In the case of traditional embedded values (TEV), the discount rate may be based on the company's own weighted average cost of capital (WACC) or on Capital Asset Pricing Model (CAPM) methodology applied on a broader basis; in the latter case, many companies assume a level of volatility that matches the broad market (i.e. Beta is equal to one), which results in a discount rate that is equal to the risk free rate plus an average equity risk premium. Other companies

1 Charles gratefully acknowledges the assistance of Yoshiaki Ito, FIAJ of Ernst & Young's Tokyo office.

2 *International News,* Issue 34, October 2004, Society of Actuaries, p. 19—this can be found at: *http://library.soa.org/library-pdf/ISN0410.pdf* and *International News,* Issue 36, July 2005, Society of Actuaries, p. 28—this can be found at: *http://library.soa.org/library-pdf/ISN0507.pdf.*

employing CAPM methodology may vary discount rates by product line to reflect the higher Beta associated with riskier business. For still other companies, the choice of risk discount rate appears to be based on judgment with no specific theoretical underpinning. Three companies disclosed using WACC and five companies disclosed using CAPM.

- Equity and property returns normally include both cash income (that is, stockholder dividends and rental payments) and asset value appreciation (or depreciation), and these yields may be reported net of investment expenses. Alternatively, equity returns may represent a fund appreciation prior to any fees or charges made against the fund. In all cases, equity and property returns will be influenced by company investment strategy.
- Fixed returns reflect the investments in an insurer's bond portfolio. Amortized book yields are typically used in countries where book profits are based on amortized book value, while current market redemption yields are used when profits are calculated using market values. Companies generally do not disclose whether the fixed income returns are net of defaults or investment expenses.
- The inflation assumption may differ from general inflation (for example, the increase in a consumer price index).
- Tax rates are dependent upon individual company circumstances (for example, the existence of tax loss carry forwards) and thus these rates cannot necessarily be applied to other companies.

Finally, it should be noted that some companies use identical assumptions for multiple countries (on the basis that this results in immaterial differences), and this practice would tend to dampen differences between countries.

Several observations can be made concerning Table 1 on page 10 when compared to similar data published last year:[3]

- For the averages that are based on a significant number of companies, there was very little change from last year.
- The lack of significant change is interesting in that the majority of companies (21) in the study complied with European Embedded Value (EEV) Principles in 2005, many for the first time.

continued on page 10

3 ibid

Limitations

Readers should use judgment when interpreting the results of the survey and note that:

- When comparing one assumption to another, it should be noted that different companies might be contributing data to different assumptions, so that differences between variables may reflect differences between companies, rather than differences between the assumptions.
- Some cells include data from many companies, while others include data from as few as one company.

Countries Included in Survey

(Number in parentheses is the number of companies that disclosed assumptions for this country)

Australia (3)	Austria (4)
Belgium (7)	Brazil (1)
Bulgaria (2)	Canada (4)
Czech (3)	Chile (1)
China (4)	Denmark (1)
Finland (2)	France (10)
Germany (8)	Greece (3)
Hong Kong (3)	Hungary (3)
India (3)	Indonesia (2)
Ireland (6)	Italy (7)
Japan (6)	Luxembourg (6)
Malaysia (3)	Mexico (1)
Netherlands (10)	Norway (1)
New Zealand (2)	Peru (1)
Philippines (1)	Poland (4)
Portugal (3)	Romania (2)
Russia (2)	Singapore (1)
South Africa (1)	Slovakia (3)
Spain (8)	South Korea (3)
Sweden (1)	Switzerland (3)
Thailand (3)	Taiwan (4)
U.S. (9)	U.K. (11)
Vietnam (1)	

Table 1: Average 2005 Financial Assumptions

Country	Discount Rate (1)	Equity Return (2)	Property Return (3)	Fixed Return (4)	Government Return (5)	Inflation (6)	Tax Rates (7)
Africa							
South Africa	10.8%	11.1%	9.1%	7.6%	7.5%	4.6%	32.0%
America Latin							
Brazil	23.2%	NA	NA	NA	11.2%	5.7%	NA
Chile	9.6%	NA	NA	7.3%	5.8%	3.0%	NA
Mexico	12.1%	NA	NA	9.0%	8.9%	3.5%	NA
Peru	12.6%	NA	NA	7.6%	3.4%	3.0%	NA
America North							
Canada	7.3%	7.8%	8.6%	4.6%	4.1%	2.0%	34.0%
U.S.	7.6%	8.3%	7.6%	5.3%	4.6%	2.5%	34.8%
Asia / Pacific							
Australia	8.7%	9.6%	7.3%	6.1%	5.3%	2.8%	30.0%
China	9.7%	8.2%	4.0%	4.2%	4.9%	2.9%	33.0%
Hong Kong	8.0%	9.7%	NA	6.3%	5.0%	1.4%	17.5%
India	12.7%	10.3%	8.5%	8.0%	8.4%	4.8%	35.0%
Indonesia	17.6%	18.1%	17.5%	NA	13.0%	7.3%	20.0%
Japan	6.5%	5.5%	NA	1.9%	1.8%	0.4%	36.1%
Malaysia	7.6%	7.6%	6.4%	6.5%	5.6%	3.2%	13.3%
New Zealand	8.9%	8.6%	7.8%	4.6%	4.4%	2.5%	NA
Philippines	16.5%	NA	NA	NA	10.5%	5.5%	NA
Singapore	6.8%	NA	NA	NA	4.5%	1.8%	NA
South Korea	9.5%	9.2%	6.8%	4.7%	5.4%	2.6%	27.0%
Taiwan	7.8%	5.8%	2.3%	3.4%	3.3%	2.1%	25.0%
Thailand	11.2%	9.6%	7.3%	4.9%	6.2%	1.9%	30.0%
Vietnam	16.5%	NA	NA	NA	10.5%	5.5%	NA
Europe Central							
Bulgaria	7.3%	7.2%	4.4%	4.0%	3.9%	3.3%	15.0%
Czech Republic	7.9%	6.8%	4.4%	3.8%	3.8%	2.3%	24.0%
Greece *	6.8%	6.6%	4.1%	3.6%	3.5%	2.0%	32.0%
Hungary	8.9%	9.5%	8.6%	6.0%	6.1%	3.8%	16.0%
Poland	8.5%	7.7%	6.3%	5.1%	4.9%	2.5%	19.0%
Romania	7.4%	7.4%	4.6%	8.3%	6.1%	2.0%	16.0%
Russia	10.9%	9.2%	6.8%	7.5%	6.6%	4.0%	24.0%
Slovakia	7.9%	6.9%	4.4%	4.0%	3.9%	2.5%	19.0%
Europe Western							
Austria *	6.4%	6.6%	4.0%	3.5%	3.3%	1.8%	25.0%
Belgium *	7.2%	6.7%	4.9%	3.6%	3.4%	2.0%	34.0%
Denmark	7.2%	6.6%	NA	NA	3.4%	NA	NA
Finland *	6.7%	6.7%	NA	3.5%	3.4%	NA	NA
France *	6.6%	6.4%	5.2%	3.6%	3.4%	2.0%	34.3%
Germany *	7.4%	6.8%	4.8%	3.5%	3.6%	2.1%	40.0%
Ireland *	6.5%	6.5%	5.0%	3.5%	3.3%	3.4%	16.9%
Italy *	6.3%	6.3%	4.8%	3.5%	3.4%	2.2%	36.3%
Luxembourg *	7.0%	5.6%	5.1%	3.7%	3.3%	2.4%	25.8%
Netherlands *	6.7%	6.2%	5.2%	3.6%	3.4%	2.2%	29.6%
Norway	7.2%	6.6%	NA	NA	3.4%	NA	NA
Portugal *	6.5%	6.9%	4.1%	3.5%	3.3%	2.7%	27.5%
Spain *	6.7%	6.0%	5.1%	3.6%	3.4%	2.2%	35.0%
Sweden	6.8%	NA	NA	NA	3.3%	NA	28.0%
Switzerland	8.0%	6.1%	3.6%	2.3%	2.4%	1.0%	22.0%
U.K.	7.4%	7.3%	6.4%	4.6%	4.2%	3.0%	30.0%

* Asterisks refer to countries within the Euro zone.

- Some companies that restated 2004 results to be on an EEV compliant basis restated the risk discount rates for 2004, usually by only a small amount.

Half of the companies indicated in their embedded value disclosures for 2005 that they had adopted, at least for some portion of their covered business, a Market Consistent Embedded Value (MCEV) methodology. A methodology is considered market consistent if each cash flow is valued consistently with traded instruments that display similar risks. Thus, under the MCEV approach, each cash flow is discounted using a risk discount rate appropriate for valuing similar cash flows in the market. So, companies following MCEV, strictly speaking, do not have risk discount rates that are comparable to those used by companies employing a more traditional approach. For companies employing an MCEV methodology, discount rates in the table above are the RDR inferred from the MCEV calculation. That is, they are discount rates that would develop the same value of insurance inforce (VIF), but following traditional embedded value methodology.

The implied risk discount rates for companies that adopted an MCEV methodology typically exhibit much greater differences between countries than is the case for companies following a traditional EV approach. In some cases the rates varied by up to 10 percent. Such differences were much greater than the differences in risk free rates between countries. They reflect the different risk profiles of the products that compose the inforce business in the different countries. In particular, products with guaranteed cash values and minimum interest crediting rates will tend to have high implied discount rates under an MCEV approach.

Investment Premiums and Other Marginal Relationships

Investment premiums are the additional yield an investor is expected to receive by purchasing an asset other than a government bond.

- Equity premium—the excess yield from investing in common stock over the return on government bonds.
- Property premium—the excess yield from investing in real estate over the return on government bonds.
- Credit spread—the excess yield from investing in a mix of corporate and government bonds over the return on government bonds.

In addition, the following two marginal relationships may be of interest:

- Risk premium—the excess of the embedded value discount rate over the return on government bonds.
- Real return—the excess of the government return over inflation.

Table 2 presents the average marginal relationships disclosed by the companies in the study. The margins are the average result for those companies that disclosed assumptions for both returns used to calculate the margin. Since some companies disclosed an assumption for government bonds, but not for the other returns, the values in Table 2 are not always equal to the differences in the values shown in Table 1.

A few observations can be made when comparing Table 2 to last year's results:

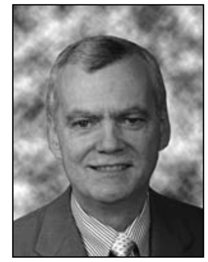
- Real rates of return generally decreased in Western Europe, while changes elsewhere were mixed.
- There were significant increases in the risk premium for certain countries such as Switzerland and Germany. (For further discussion of this, see the discussion later in this article about Table 3.)
- Except for the risk premium in Mexico, all Latin American margins remained constant or decreased.
- Margins in North America generally changed very little, except for Canadian property premiums, which increased significantly.
- The trend in margins in Central Europe was mixed, with no clear pattern discernible.
- Asian credit spreads generally increased while changes in other margins were mixed.

Please note that the data is relatively sparse outside of Western Europe and North America, so observations and conclusions could be different if additional data was available.

Components of Implied Risk Discount Rates

Two of the companies that adopted an MCEV methodology for their EV reporting for 2005 provide in their disclosures an analysis of the components of their implied risk discount rates (IDRs) by territory that provides some interesting insights into the differences from traditional EV and the value drivers of MCEV.

continued on page 12



Charles Caroll, FSA, MAAA, FCA is a partner at Ernst & Young LLP in New York, N.Y. He can be reached at charles.carroll@ey.com.

William R. Horbatt, FSA, MAAA, is a consulting actuary with Actuarial Consortium in Short Hills, NJ. He can be reached at Horbatt@ActuarialConsortium.com.

Dominique Lebel, FSA, MAAA, FCIA, is a consulting actuary at Towers Perrin in Weatogue, Conn. He can be reached at Dominique.Lebel@towersperrin.com.

Table 2: 2005 Investment Premiums and Other Marginal Relationships

Country	Risk Premium (8)=(1)-(5)**	Equity Premium (9)=(2)-(5)**	Property Premium (10)=(3)-(5)**	Credit Spread (11)=(4)-(5)**	Real Return (12)=(5)-(6)**
Africa					
South Africa	3.3%	3.5%	1.5%	0.0%	3.0%
America Latin					
Brazil	12.0%	NA	NA	NA	5.5%
Chile	3.8%	NA	NA	1.5%	2.8%
Mexico	3.2%	NA	NA	0.1%	5.4%
Peru	9.2%	NA	NA	4.2%	0.4%
America North					
Canada	3.2%	3.7%	4.6%	0.5%	2.1%
US	3.1%	3.8%	3.0%	0.8%	2.1%
Asia / Pacific					
Australia	3.4%	4.3%	2.0%	0.8%	2.6%
China	4.8%	4.7%	0.7%	0.5%	2.1%
Hong Kong	3.0%	4.5%	NA	1.5%	3.0%
India	4.4%	3.0%	1.4%	0.5%	3.5%
Indonesia	4.6%	3.5%	2.9%	NA	5.8%
Japan	4.6%	3.4%	NA	0.2%	0.6%
Malaysia	2.0%	2.9%	1.7%	1.4%	2.5%
New Zealand	4.5%	4.3%	2.0%	0.3%	1.9%
Philippines	6.0%	NA	NA	NA	5.0%
Singapore	2.3%	NA	NA	NA	2.8%
South Korea	4.1%	3.5%	1.1%	0.0%	2.8%
Taiwan	4.5%	3.3%	0.4%	0.6%	1.2%
Thailand	5.0%	3.5%	1.2%	0.1%	4.1%
Vietnam	6.0%	NA	NA	NA	5.0%
Europe Central					
Bulgaria	3.4%	3.5%	0.7%	0.0%	0.6%
Czech Republic	4.1%	3.0%	0.7%	0.0%	1.5%
Greece *	3.3%	3.1%	0.7%	0.1%	1.6%
Hungary	2.8%	3.4%	2.3%	0.1%	2.3%
Poland	3.5%	2.8%	1.1%	0.3%	2.5%
Romania	1.3%	3.5%	0.8%	0.0%	4.1%
Russia	4.3%	3.5%	1.1%	0.0%	2.6%
Slovakia	4.0%	3.0%	0.7%	0.0%	1.4%
Europe Western					
Austria *	3.1%	3.3%	0.7%	0.2%	1.5%
Belgium *	3.6%	3.1%	1.3%	0.2%	1.6%
Denmark	3.8%	3.2%	NA	NA	NA
Finland *	3.3%	3.4%	NA	0.2%	NA
France *	3.0%	2.9%	1.8%	0.3%	1.4%
Germany *	3.7%	3.2%	1.2%	0.1%	1.6%
Ireland *	3.1%	3.2%	1.7%	0.2%	-0.1%
Italy *	3.0%	3.0%	1.5%	0.1%	1.2%
Luxembourg *	3.6%	1.9%	2.0%	0.6%	0.8%
Netherlands *	3.2%	2.6%	1.8%	0.2%	1.3%
Norway	3.8%	3.2%	NA	NA	NA
Portugal *	3.1%	3.5%	0.7%	0.2%	0.7%
Spain *	3.3%	2.6%	1.7%	0.2%	1.2%
Sweden	3.4%	NA	NA	NA	NA
Switzerland	6.1%	3.5%	0.4%	0.0%	1.7%
UK	3.1%	3.2%	2.3%	0.3%	1.0%

* Asterisks refer to countries within the Euro zone.

** Calculated including only companies with complete data.

Table 3: Sample Implied Risk Discount Rates (IDR)

Country	RFR	MFR	FO&G	CoC	IDR
Australia	5.27%	1.73%	0.10%	0.55%	7.65%
Benelux	3.32%	3.36%	1.97%	0.65%	9.30%
France	3.29%	3.05%	1.26%	0.72%	8.32%
Germany	3.47%	2.47%	3.16%	1.19%	10.28%
Hong Kong	4.37%	1.32%	1.10%	0.60%	7.39%
Japan	2.03%	6.84%	0.79%	1.14%	10.80%
Switzerland	2.50%	3.50%	4.70%	0.90%	11.60%
U.K.	4.22%	0.95%	0.24%	0.75%	6.15%
U.S.	4.66%	1.93%	0.62%	0.52%	7.73%

Table 4: Sample Stochastic Assumptions

		Stock		Property		Bonds		
	Companies	Yield	Volatility	Yield	Volatility	Yield	Volatility	Type
Europe	11	6.8%	19.9%	5.2%	16.3%	3.5%	6.6%	Government
Japan	2	4.2%	18.5%			1.7%	11.3%	Government
So. Africa	1	11.1%	22.0%	9.1%	15.0%	7.6%	13.0%	Government
So. Korea	2	9.2%	36.0%	6.8%	14.0%	4.9%	3.7%	Government
Switzerland	2	5.7%	18.2%	2.6%	14.0%	1.4%	13.2%	Government
U.K.	7	6.3%	20.1%	7.1%	16.0%	3.7%	5.5%	Government
U.S.	7	8.3%	19.1%	8.6%	14.0%	5.2%	7.9%	Mixed

In these analyses, the MCEV implicit discount rate is expressed as the sum of four components, three of which are marginal: (1) the risk free rate (not marginal), (2) a margin for financial risks, (3) the cost of options and guarantees, and (4) the cost of capital:

- The risk free rate (RFR) is frequently the government bond rate and may vary by duration. These rates were shown above in Table 1.
- The margin for financial risks (MFR) may be calculated as the additional expected yield above the risk free rate on a portfolio of assets that match expected policyholder cash flows.
- The cost of financial options and guarantees (FO&G) are stochastically determined based upon policy terms, the portfolio of assets that match policyholder cash flows and stochastic market assumptions.
- The cost of capital (CoC) is an explicit charge for capital investment underlying the portfolio.

Table 3 above illustrates the analysis of the implied risk discount rates for the two companies that provided the data for value of insurance in-force calculations at Dec. 31, 2005.

An important determinant of differences between implied risk discount rates for different countries is the cost of financial options and guarantees (FO&G), particularly minimum interest rate guarantees that companies reported to have impacted costs in Germany and Switzerland.

Stochastic Market Assumptions

A number of European companies are calculating the values of options and guarantees following stochastic approaches in order to comply with European CFO Forum guidelines for embedded value calculations. Sixteen of the 30 companies surveyed disclosed stochastic market assumptions in their 2005 European embedded value (EEV) reports. Averages of several of these assumptions are shown in Table 4 below (volatility may also be referred to as standard deviation).

Note that some companies reported volatility without reporting yields. Some companies determined volatilities from historical market experience while others measured the implied volatility in current derivative prices, which may result in significant differences between companies.

Summary

The SOA International Experience Study Working Group (IESWG) publishes this survey to enhance the knowledge of actuaries about current international market conditions and practices. Practices continue to evolve and we wish to encourage an open discussion on appropriate methodologies and further disclosure of both assumptions and the thoughts behind their formulation.

The IESWG intends to update this survey annually. We invite additional companies to provide data, on a confidential basis, to be included in this and future surveys. Please contact Ronora Stryker (*rstryker@soa.org*) or Jack Luff (*jluff@soa.org*) at the Society of Actuaries for further information. ☐

New Milestone in Chinese Insurance History:

Government's Guidelines Show Powerful Support for Insurance Industry

by Cui Jie

PHOTO BY PROLF

Author's Note: The author would like to thank Ms. Zhang Xinyu for her contribution to this article. References to China are to Mainland China only.

In June 2006, China State Council released "Guidelines for Chinese Insurance Industry's development." The guidelines make it clear that the government will continue to support the insurance industry to grow faster and stronger; to improve the regulatory environment for the insurance industry and also to encourage more efforts in specific fields such as health and pension insurance, agriculture insurance and liability insurance. It is believed that the guidelines will have a great impact on the Chinese insurance market.

My neighbor bought a new car after his job relocated to a more remote part of the city. Such choice seems usual nowadays, but 10 years ago, nobody imagined that there would be so many private cars on the roads today. This illustrates the dramatic development in China's economy. China's GDP was only $851.6 billion in 1996, after 10 years of annual growth of more than 10 percent, it was targeted to reach $2229.0 billion in 2005 and rank fourth in the world.

The insurance industry in China has also experienced fast growth. The total premium income increased from $10 billion in 1996 to $61.9 billion in 2005 with an annual growth rate of about 24 percent, which is a rather high rate compared to the rest of the world.

All these figures are exciting. However, some indexes are not as good. Firstly, "the insurance depth" (gross premium income/GDP) is only 3.6 percent; secondly "the insurance density" (gross premium income/ population) was only $47 in 2005. Compared with the average level of developing countries whose depth is 9.2 percent and density is $512, there is still a long way to go for the Chinese insurance industry.

In 2010, the target total premium income for the Chinese insurance industry is about $125.6 billion, that means 5 percent of GDP (expected to be $2638.2 billion). This sounds encouraging. But, what will the Chinese government and insurance companies do to meet this target?

In June 2006, China State Council released "Guidelines for Chinese Insurance Industry's Development." These guidelines aim to set up a modern insurance industry in China with:

- Integrated market systems
- Improved regulatory mechanism
- A full range of products and services
- Scientific and rational enterprise management

1. On the topic of integrated market systems, the guidelines emphasize the exploration of new markets and satisfying insurance demand.

The first guideline is about health insurance and pension markets.

In the latest issue of *International News,* developments in the health and pension markets were introduced, such as the setup of

Enterprise Pension System and the establishment of health and pension companies. What has happened recently? On the health insurance side, CIRC released a new set of regulations effective Sept. 1, 2006. The regulations focus on the following fields: health insurance administration, product development, sales, actuarial requirement, reinsurance requirement and legal responsibilities. On the pension side, 24 out of a total of 31 provinces in China have released regulations to facilitate the new system. A few giant state-owned enterprises have established their own pension schemes. Particularly, the guidelines encourage the set-up of medical and pension schemes for people in rural areas.

Secondly, insurance in rural areas is also a key issue. The target is to harmonize insurance services provided to rural and urban areas.

Though rural areas are underdeveloped, living standards of the people in these areas have improved a lot in the past 10 years and these people also need all-sided insurance to secure their life and property. Especially since 70 percent of the population in China live in rural areas.

In the guidelines, the government aims to establish a multilevel mechanism to provide more insurance coverage and service in rural areas by combining efforts of central and local governments, insurance companies and the people in the rural areas themselves. Therefore, insurance companies are expected to play an important role in this, with emphasis on the lines of business below:

(1) Agriculture insurance

Agriculture is a basic industry in China. The existing form of protection which includes subsidies from the government and loss compensation afterwards is not sufficient. The guidelines point out that it is necessary to combine government subsidies and insurance management, to explore mutual insurance and develop simple products with low premiums, to set up a multilevel catastrophic risk share and reinsurance system and in the end to assist agriculture insurance to have a long-term development strategy.

(2) Medical insurance and pension schemes

In the 1950s, China set up a comprehensive medical scheme for the people in rural areas. However, after the economic reform and opening of China at the end of the 1970s, the original scheme collapsed. After a long time and many trials and frustrations, the government has accumulated some experience with the so-called New Rural Cooperative Medical Scheme. The guidelines attempt to introduce the new scheme to more rural areas and encourage insurance companies to invest in medical institutions, but both are still in the exploratory phase.

People in rural areas are not generally enrolled in retirement plans. Traditionally, aged people are supported by their children. However, with the population aging and Planned Parenthood policy, this norm will gradually break down. Both the government and the insurance companies are exploring the provision of insurance in this field and are trying to develop supplementary pension insurance.

continued on page 16

A beautiful view of China's buildings in the downtown area.

Reprinted with permission from Photos.com.

Liability insurance is also a new and significant field with more and more people feeling entitled to compensation from the legally liable party.

In China we may hear of such stories as: a worker is disabled due to a flaw in the company's machinery, but that small corporation can't afford the compensation, or the corporation escapes from the liability and leaves the worker in a tragic situation, or the corporation goes bankrupt with the medical expense burden and more workers lose their jobs.

The guidelines attempt to introduce more liability insurance in the production fields by policy direction, insurance enterprise operation, and regulation supervision. More work will be done subsequently, such as to develop varied liability insurance products; to introduce insurance into the mining industry and then extend it to other high-risk industries when some experience has been accumulated; and to set up a security guarantee system for some high risk industries.

As of July 1, 2006, motor liability compulsory insurance has been standardized across the whole of China. It includes the same death, disability, medical and property loss benefits with identical premiums. Other liability products will be explored and introduced gradually.

2. Concerning regulatory mechanisms, the guidelines aim to improve the regulatory environment for the insurance industry with focus on regulation system design and construction.

The guidelines aim to establish a modern insurance regulatory system with three pillars. They are:

- Solvency supervision
- Market conduct supervision
- Corporate governance supervision

The guidelines highlight the need to set dynamic warning systems, actuarial instructions, accounting standards, and valuation instructions; to set up the Marketing Entry and Quit Mechanism with strict requirements such as organization requirements; security fund system; credit valuation and rating system.

Another item that will have a significant impact is investment deregulation.

Originally the security and stability of the insurance fund was paramount to the supervisors with regulations limiting the investments to bonds and CDs only.

With the capital market gradually maturing and the insurance fund scale expanding quickly, insurance companies will play increasingly important roles in the capital market in China. Since 1999, insurance companies have been allowed to invest into funds, and now stocks are also permitted.

Currently, the guidelines propose that companies can take on more risk if they are well managed. The insurance fund may be invested in real estate, enterprise stocks and commercial banks, overseas investments, and then gradually securitized assets. Furthermore, asset management companies are encouraged to do more for insurance fund investment.

3. Concerning scientific and rational enterprise management, the guidelines give pointers on improving insurance corporate governance and assisting the corporation with its continuing developing strategy.

Firstly, insurance companies should establish the organizational structure of modern enterprises with shareholder meetings, a board of directors, supervisory committees and managers to attain a balance and interaction between management and ownership. Secondly, insurance companies should strengthen internal control and risk management; train professional staff and retain experts, optimize the human resource function and set up corporate liability mechanisms. Lastly and emphatically, insurance companies are encouraged to invest in banks and become giant financial holding institutions, which will help the insurance company to provide one-stop financial services including insurance, banking and financing, etc.

In 2003, some Chinese insurance companies started to prepare for their IPOs. These companies focused their attention on internal control and organizational structure reform to strengthen the company's competitive position. At the end of 2003, PICC and China Life were the first two insurance companies to gain success with their overseas IPOs. Subsequently in 2004, Ping An Insurance Company of China (group) also successfully gathered capital in the Hong Kong stock market.

In 2005, Carlyle Group invested in CPIC's subsidiary China Pacific Life Insurance Co., Ltd. and recently IAG invested in China Pacific Insurance (Group) Co., Ltd., (CPIC), subsidiary China Pacific Property Insurance Co., Ltd. Both investments brought significant capital to CPIC. These deals also helped the local insurance companies to improve their internal management and IPO preparation.

With more capital pouring in, China Life mentioned above, acquired 1.75 percent of the ownership of Xing Ye Bank. Ping An Insurance Company of China (group), the second largest insurance company, acquired 89.5 percent of the ownership of a local bank in Guangdong Province. This is its second bank investment. All these purchases are regarded as steps towards becoming financial holding groups. □

With the capital market gradually maturing and insurance fund scale expanding quickly, insurance companies will play increasingly important roles in the capital market in China.

Cui Jie is a consulting actuary at Ping An Insurance Company of China in the People's Republic of China. She can be reached at cuijie@pingan.com.cn

International Section in Paris

by Catherine D. Lyn

Around the table at Chez George, Ruth and George Beram (Korea), Cathy Lyn (Jamaica), David Parmee (U.K.) Jules Gribble partially hidden (Australia), Bill Horbatt hidden (U.S.A.), Martha Sikaras (U.S.A.), Robert Beuerlein – President of the SOA, Mian Ikram Shakil (Luxembourg). Not pictured: Jim MacGinnitie and Luis Gabriel Caro.

The 28th International Congress of Actuaries was held from May 28th to June 2nd, 2006 in Paris.

If you were not able to attend, this feature will bring some of the 28th International Congress of Actuaries to you. If you were there, this is a chance for us to share memories of this special event.

Chez George

One of the highlights on the first day of the scientific program was a luncheon at Chez George. It was sponsored by the SOA for members of the International Section council and ambassadors. This was a good opportunity for us to meet in person while enjoying French cuisine. Many of us met for the first time, got to know each other and collected ideas on strengthening the International Section's role in the SOA.

The Dream Team: Rodney, Mike, David, Carl and Allan

On June 1st, the International Section sponsored a panel discussion **The Actuarial Control Cycle and Regulatory Intervention** led by Rodney Lester, USA, World Bank. Other panelists were *Mike Kipling, U.K., Resolution plc.; David Finnis, Australia, IAG; Carl Hansen, U.S., Milliman Global and Allan Brender, Canada, OSFI.*

Rodney opened the session with an overview of what the World Bank team has observed and his own views on the regulation of the profession and resulting issues. The other speakers described the circumstances leading to change in their areas of speciality, the official and professional responses and the current outworking.

This topic arose as there is increased focus on the regulation of actuaries in many jurisdictions. Various events have precipitated major reforms in some territories and more formal and prescriptive regulation of insurance and pensions business in others. Some governments want processes in place to deal with insolvencies and others question the self-regulatory nature of the profession, comparing it in particular to the accounting profession.

The profession is faced with the need for more transparent processes and maintaining public trust in regulation. The panellists focused more on describing the role of actuaries in the regulation process as well as the "regulation of actuaries." They wanted to concentrate on the positive elements of the growing influence of actuarial thinking as part of supervision.

The presentations from the panel encouraged debate about how regulatory conditions are changing, what is common or different between regions, whether the measures put in place are likely to prevent repeat occurrences of disasters and how the regulations might cope in volatile situations.

Presentations

The International Section members who contributed to the week long scientific program are listed below with a description of their presentations. Papers can be found using the following link *http://papers.ica2006.com/auteurs.html*.

George Beram, Korea

The emergence of occupational pensions in Korea

The Republic of Korea (South Korea) has the world's 10th largest economy, based upon 2004 GDP, but no occupational pension system until now. Defined benefit and defined contribution plans were allowed for the first time beginning Dec. 1, 2005, but only as replacements for existing mandatory termination indemnities. With a rapidly aging population, a national social security pension system that promises double what can be delivered at current contribution rates and the rapid decline of the Confucian system where children take care of elders, an occupational pension system that works well is needed. Time will tell, but the new Korean occupational system has some interesting twists, actuarially and otherwise. This paper addresses the past, the present and what the future may hold for a dynamic, innovative society that is being forced to face a rather sudden and rapidly changing demographic structure and the retirement issues that are emerging equally rapidly.

Tony Broomhead, USA

Pensions: Changing scenario for pensions in Mergers and Acquisitions

North American merger deals in 2005 numbered 4,080 and were worth US$ 1,104,700 million. The talk covered: understanding the deal, the role of the actuary and the changing scenario for pensions in mergers and acquisitions from the North American perspective. The other two presenters covered this topic from a U.K. perspective and a European perspective.

In addition, Tony chaired a panel discussion entitled *"Principles of Accounting for Pension Cost."* The session covered the topic from three different viewpoints—the consultant, the company and the investment analyst.

Luis Caro, Colombia

Payout Phase for Fully Funded Pension Schemes: An Alternative Approach to Risk Distribution

The payout phase of fully-funded pension schemes relies on the existence of an annuity market and an insurance industry that can support it. This is not the case when these schemes result from pension reforms in less developed countries. In these situations, in general, the annuity market is going to develop from the pension reform itself. Therefore, the industry has to deal with three delicate issues: first, the low initial base of retirement savings that is the starting point; second, lack of reliable mortality data; and third, underdeveloped capital markets. If these issues are not clearly understood and factored into the methodology for determining reserves and capital requirements, it is very possible that in the long run the insurance industry will not be able to respond to the expectations. This would be a major drawback, with difficult to measure costs. This work proposes an alternative scheme of risk distribution. The idea is to keep the insurance industry's exposure to risk in line with their current capital requirements. The excess risk is shifted to the annuitants, under a methodology in which they are rewarded consistently with the risk they bear.

Sam Gutterman, U.S.

Current Developments in International Accounting

This summarizes the current status of the discussions surrounding the development of a new international accounting standard for insurance contracts.

Fair Value of Insurance Contracts
This is a paper written by Sam Gutterman, David Rogers, Larry Rubin and David Schienerman. It provides a set of criteria to be used to assess a methodology for estimating the fair value of the liability for insurance contracts, one approach to a possible fair value methodology, and a discussion of key issues underlying any such methodology.

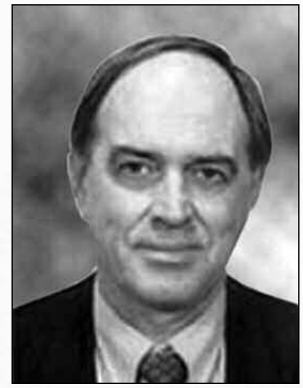
William Horbatt, U.S.

International Experience Studies

Historically, actuaries practicing in international markets have been challenged by the lack of or consistency in experience statistics available in emerging and other markets throughout the world. Without such data, it has been difficult for actuaries to price products or evaluate business performance for senior management. This paper is a report from the Society of Actuaries International Experience Survey working group. It details the SOA's efforts to provide its members, practicing internationally as well as other interested individuals, with practical information on comparing experience among different countries and helping to assess market attractiveness. The paper also describes the software tool and other resources developed to assist with this work and illustrates their applicability in performing an internal company or local inter-company study.

continued on page 20

The Dream Team



Rodney Lester

Mike Kipling

David Finnis

Cathy Lyn, Jamaica~Chris Daykin, U.K. ~Maria Teresa Palandra, Canada

Professionalism within the Business Context

This paper is a contribution to the current discussion about future developments in professionalism. Generally, the work of professionals is now subject to greater public scrutiny than there has ever been, with actuaries being no exception. Actuarial bodies are reviewing their modus operandi, with a view to reinforcing principles introduced at the level of Fellowship qualification and making changes where necessary. A fundamental objective of the reviews is to ensure the integrity of the profession. This paper argues the importance of ensuring that the work of actuaries be respected and understood and suggests that future actuaries will be best served by the profession taking a more proactive public role.

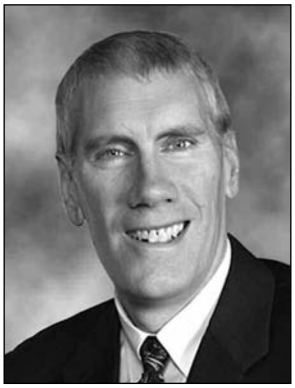
Marc Slutzky~Ed Morgan, U.S.

Preparing for Solvency II—Theoretical and Practical Issues in Building Internal Economic Capital Models using Nested Stochastic Projections

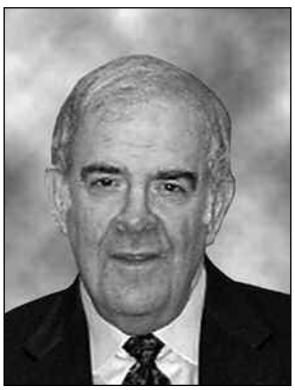
This paper describes the expected role of internal economic capital models in Solvency II and discusses the case for their use. The authors have developed and implemented such an internal economic capital model for a major U.S. insurer, using nested stochastic projections. Stochastic projections are inherently complex; require long runtimes and results are difficult to analyze. Nested stochastic projections are far more complex because of the additional scenarios run at future durations. They are used to stochastically project realistic balance sheets (i.e., with liabilities valued on a market consistent basis). The paper describes how these problems and challenges were dealt with and the insights gained. These observations also have applicability to other regulatory and financial reporting developments such as European Embedded Value, U.K. ICAs and the developing International Financial Reporting Standards.

Merci beaucoup et au revoir. □

The Dream Team



Carl Hansen



Allan Brender

Catherine D. Lyn, FSA, FIA, is a consulting actuary in Jamaica, W.I. She can be reached at clyn@sympatico.ca.

Denise Radix-Richards, FIA, ASA (1949-2006) – A Memoir

by Michael J de H. Bell

In 1970 I was a junior partner of the U.K. actuarial firm of R Watson & Sons (now Watson Wyatt). The firm that I had joined seven years earlier was then primarily a provider of actuarial services to major U.K. pension plans and was situated in a market town 20 miles south of London. However, in the mid 1960s the firm was appointed to advise a large Trinidadian life insurance company, and as a result, it acquired over the next few years a number of other Caribbean clients. Early in 1970 the partners of the firm made a somewhat surprising decision, considering that it had at that time no other branch offices, to open a branch of the firm to service its fledgling Caribbean clientele. I was volunteered to start this venture. The first question was where to locate the new office. The choices were Trinidad or Jamaica, as these were the largest of the English speaking Islands. From a client perspective, Trinidad would have been the natural choice. However, there was one actuary resident in Trinidad, Mervyn De Souza, who had recently qualified and, although he then worked for the Government, had started a small actuarial consulting practice. On the other hand, at the time the decision was made, there were no actuaries resident in Jamaica. The first Jamaican to qualify as an actuary was Daisy McFarlane-Coke, who returned to Jamaica on qualification in 1970. So, I was sent to Jamaica in mid 1970 to establish a branch of the firm.

The first year or so that I spent in Jamaica was occupied in trying to establish an office and educating potential clients why they needed the services of an actuary. By the second year I was in need of extra hands to help with the growing work load and started to look for an actuarial student. The person that I found to fulfil this role was Denise Radix. Denise had just graduated from the University of the West Indies (UWI) at Mona, Jamaica and wished to remain for the time being in Jamaica, as her husband was studying medicine at UWI. When she joined me in 1971 she already had one daughter and notwithstanding the domestic pressures, she passed the Institute of Actuaries exams with alacrity and qualified as a Fellow in 1975, having given birth to a second daughter whilst studying. Denise was the third person to qualify as an actuary in the English speaking Caribbean; the first who had done virtually all their studying locally—no mean feat. In 1974 her husband qualified as a doctor and they decided to return to Trinidad. Denise was asked by Watson to establish and run a branch office in Port of Spain, primarily to service the firm's main client in the Island. After qualification she was appointed partner in charge of the Trinidad office.

Denise ran the local Watson office in Port of Spain for a number of years, but unfortunately due to ill health, she decided she could not continue to run the office. Thus, it was decided by the firm to close the Trinidad office and revert to servicing the local clientele from Jamaica and the U.K. Subsequently, Denise worked as the company actuary for a small local life company and the pensions actuary for one of the largest local life companies. During her career Denise encouraged the development of actuarial talents, helping to make the Caribbean much more self reliant for actuarial skills. In particular Denise was one of the three founding members of the Caribbean Actuarial Association, which was formed in 1992.

Denise will be missed by her family and friends. She was proud of the achievements of her two daughters and was interested in the world around her. I am proud to have known Denise and of being partly instrumental in her becoming an actuary. I will continue to have fond memories of Denise. ☐

Michael J de H. Bell, ASA, FIA, is a consulting actuary in Cornwall, United Kingdom. He can be reached at michaelbell@bedfonthouse.co.uk.

2006 IABA Annual Meeting: Leading Change

by Valarie Fields

Encouraging Excellence

Editor's note: This article was originally published in: The Voice of IABA—newsletter of the International Association of Black Actuaries, August 2006. Reprinted with the permission of the International Association of Black Actuaries.

The 13th Annual Meeting of the International Association of Black Actuaries was held in Atlanta, Ga., on August 3-5, 2006 at the Crowne Plaza Ravinia. The theme for this year's meeting was "Leading Change."

The pre-meeting activities included a student information session. Nearly 20 high school and college students seeking guidance about both the actuarial profession and corporate America, in general, attended the student session. There were also numerous professionals in attendance spanning human resource officers and recruiters to investment professionals and, of course, actuaries from all practices and with varying experience. One notable attendee was Dwight Williams, II, a rising high school junior, from Charlotte, NC, who has already dedicated himself to becoming an actuary. The students and professionals had an open floor discussion on topics ranging from choosing the right employer and resume tips to office culture and common pitfalls for young actuaries.

Networking Reception in Ravinia Gardens, sponsored by D.W. Simpson & Company.

On Friday, IABA President, Stafford L. Thompson, Jr., officially kicked off the meeting with a rousing welcome speech entitled, "Who Among You Has Vision?" His opening set the tone for a weekend that was dedicated to individual and organizational growth. Immediately following the welcome, the group separated into classrooms for professional learning sessions.

Between Friday and Saturday, a total of 13 learning sessions were presented. Sessions covered topics for all actuarial concerns including, "The Impact of AIDS on Insurance and Pensions in Africa," "Hedging Guaranteed Benefits" and "Professional Ethics—A Case Study." Most sessions were also eligible for Professional Development (PD) and Continuing Education (CE) credits from the Society of Actuaries and the American Academy of Actuaries. Between the sessions, participants had periodic breaks to refresh and socialize. One such break was the whimsical "Braves Break," a snack time complete with soft pretzels, popcorn and Cracker Jacks accompanied by the prerequisite Braves paraphernalia all over the room.

On Friday evening, members attended the Networking Reception in the Ravinia Gardens, sponsored by DW Simpson & Company. Surrounded by tropical plants and island music, guests enjoyed a wide variety of hors d'oeuvres while having the opportunity to meet new people and to connect with old acquaintances. Many of the students in attendance could be seen utilizing some of the networking tips they had received earlier in the day, as they circulated among the crowd. After the reception, participants were free to explore Atlanta, socialize at the hotel or get a good night's sleep for the upcoming day.

Saturday morning started bright and early at 7:45am with a breakfast, sponsored by Ernst & Young LLP, after which, participants again had the opportunity to attend learning sessions. One notable session on Friday was "The American Pension Plan: From Capitol Hill to the Board Room." What made this presentation especially interesting was the fact that new pension reform legislation had just been passed the previous evening in Washington, D.C. This presentation was the first glance that many of the attending actuaries had of the new provisions that were awaiting President Bush's signature.

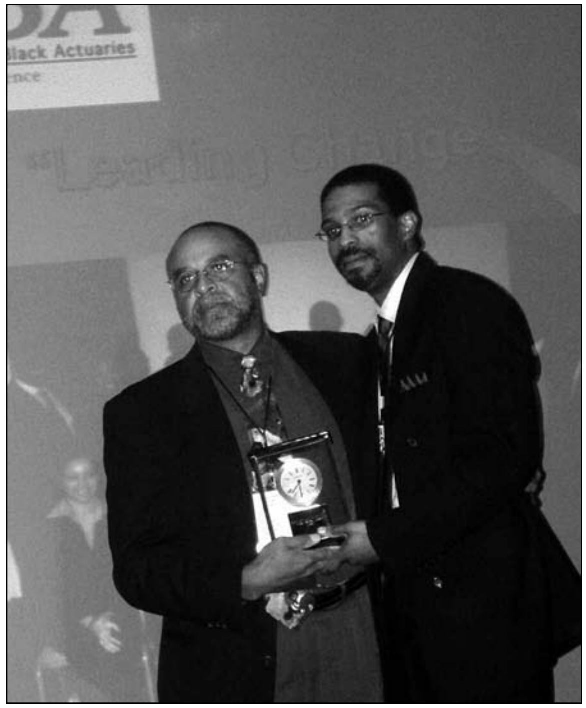
The Business Meeting took place on Saturday afternoon, after a lunch sponsored by Watson Wyatt. After reports by organizational officers, committee leaders and the City Affiliate leaders, elections for the officers for the upcoming fiscal year were held. Stafford L. Thompson, Jr., stepped down as the President of IABA and assumed the role of Corporate Advisory Council Liaison. Jeffery L. Johnson, a former IABA President, was elected to once again fill this position. John Robinson was elected as the new IABA Vice President, filling the position left vacant by Becki M. Hall. James Jones, Jamala Murray and David James were re-elected to their positions as Treasurer, Secretary and Student Liaison, respectively. Finally, there were two vacant Director positions that were filled by Sharon Robinson and Linda Shepherd, both former Presidents of IABA and veterans of the actuarial profession.

The conference ended with the Awards Dinner on Saturday evening. Awards were presented throughout the three-course meal. Students who passed exams this year and new designees were recognized. Later, corporate sponsors were also recognized. Temple University was named College of the year, an award shared by Howard University and University of the West Indies in 2005. CNA Insurance and Towers Perrin were named Employers of the Year. Wrapping up the awards portion of the program, service awards were given to valuable members of IABA.

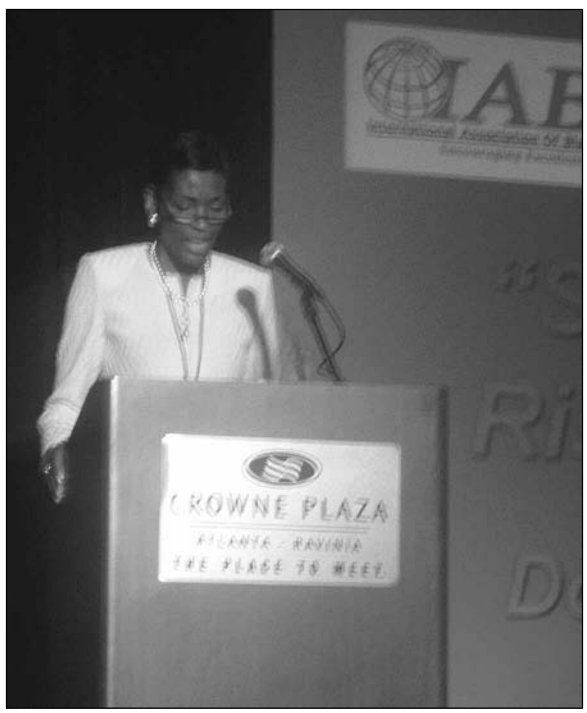
The culmination of these awards was the surprise presentation for outgoing President, Stafford L. Thompson, Jr. In an emotional presentation, he was presented a token of appreciation on behalf of IABA by his mentor, Ollie Sherman and President of the IABA Foundation, Arthur R. Randolph, II.

Following the awards, guest speaker Donna James, talked about "Successful Risk Taking." Her speech caused everyone to pause and truly measure what was important. For many, Ms. James' words heralded back to our younger years when the 'old folks' would remind us to do "what was right, not what was popular." Ms. James reiterated the courage it takes to continue to do what is right when climbing the corporate ladder. She also spoke on several other key traits necessary for professional 'risk taking' in the corporate environment.

For those in attendance, the meeting was a wonderful opportunity to learn, to grow and to network. A wealth of information and knowledge was imparted over the course of the weekend. As IABA continues to "Lead Change" throughout the industry, we also continue to recognize that the members of IABA are what make it the wonderful organization that it has become. We look forward to seeing everyone at the 14th Annual Meeting, slated to take place in Chicago, IL. ☐



Ollie Sherman presents service award to Stafford Thompson, Jr. (outgoing President).



Donna James speaks about "Successful Risk Taking."

Valarie Fields is the Atlanta City Affiliate Leader for IABA. She can be contacted at Iaba_Atlanta@yahoo.com

Risk-Based Capital Framework in Singapore

by Eric Seah

A breathtaking view of the Singapore skyline.

Reprinted with permission from Photos.com.

After an extended period of planning and testing, the Monetary Authority of Singapore (MAS) launched the Risk-Based Capital (RBC) framework in the second half of 2004. All insurers (except those that are specifically exempted, such as specialist insurers and captive insurers) are to comply with the new RBC requirements from Jan. 1, 2005 onward.

The new framework amends the valuation methodology for assets and liabilities, establishes new capital requirements, and introduces a new set of statutory reporting requirements.

Both the actuarial and accounting professions worked closely with MAS during the planning and testing process. The insurance industry was widely consulted on the impact and ramifications of the proposed requirements before they were finalized.

The RBC regime has now been in place for more than 18 months. The transition has been a smooth one, with little surprises.

The purpose of this article is to provide a brief introduction and overview to the RBC framework, and to touch on the experience and responses by the industry so far. While the RBC requirements cover both life and general insurance, we will focus on life insurance.

Reasons for the New RBC Framework

It is generally accepted that the statutory solvency framework prior to RBC has worked rather well under the old environment when traditional insurance products and investment vehicles were involved. The old solvency requirements were based on some percentages of reserves and sum at risk. Policy liabilities were based on some modified net level premium methodology, which relied on undisclosed margins and approximations.

With the advent of new products and investment vehicles, and the myriad of new risks associated with them, increasingly the old framework was found to be inadequate. The reserving methodology under the old framework did not give a good indication of the adequacy and assurance of reserves in meeting future commitments to policyholders. Also, assets were valued on a combination of book and amortized value basis. There was no clear linkage between the valuation of assets and liabilities. In short, the old framework did not allow a transparent assessment of the risks and financial strength of the insurance companies.

Against this backdrop, the RBC framework was developed. It is risk-focused. It is in accordance with the emerging international standards and good practices in developed markets. As such, it helps to align the prudential requirements with the global trend of adopting transparent valuation method using "fair value" basis and risk-adjusted capital requirement.

The RBC Framework

It is clear that the new framework must satisfy certain objectives, the key ones being:

- It must encourage active risk management by the insurance companies;
- It must provide a good indicator of financial strength;
- It must facilitate monitoring of financial position and risks by both regulator and insurance companies.

The new framework should provide a consistent approach of valuing the assets and liabilities, on a fair and market value basis.

Capital requirements should be risk-adjusted, reflecting the level of risks undertaken by the insurance companies. The framework should be transparent, simple and easy to implement and apply. The results and outcome should be readily comparable to other frameworks. In the end, it should be an effective and acceptable tool for insurance companies to manage the risks and the business.

Valuation of Assets and Liabilities

The "lower of cost or market value" basis under the pre-RBC regime is changed to marked-to-market basis. In short, assets are to be valued on market value or realizable value basis.

All assets of the insurance companies are reflected in their balance sheet. The admissibility or eligibility of assets in the balance sheet is dealt with through the use of capital requirement rules. In brief, an inadmissible asset will see a 100 percent risk charge (see C3 risk charge in the next section).

Under the pre-RBC regime, the policy liabilities are based on modified net premium valuation method using interest rates and mortality tables prescribed by regulations. The interest rate and mortality assumptions are conservative. Some level of expenses is allowed, but other factors such as lapse are not accounted for. The policy liabilities do not cover non-guaranteed benefits such as future policyholder bonuses and dividends.

With the new RBC regime, gross premium valuation on future projected cash flows is used to determine the policy liabilities. Both guaranteed and non-guaranteed benefits are to be included. Key assumptions that have impacts on the value of the liabilities are to be accounted for. These would normally include interest rates, commission rates, expense ratios, mortality and morbidity rates, and lapse rates. The assumptions are to be on best estimate basis, with Provision for Adverse Deviation (PAD). The PAD is used to allow for and reflect the inherent uncertainty and volatility in the best estimate assumptions.

There are variations for different classes of products and liabilities. Policy liabilities for non participating products and unit-linked products (aside from the unit reserves) are valued using the risk-free yield curve, which is based on the (risk free) yield curve of Singapore government bonds.

For policy liabilities associated with participating products, two valuations are required. The first is to value only the guaranteed benefits using the risk free yield curve (known as Minimum Condition Liability). The second one is to value both guaranteed and future non-guaranteed benefits using the best estimate yield curve, which essentially is the expected investment yield on the assets supporting the participating products, and which would generally be higher than the risk free investment yield. The policy liabilities are the larger of the two (for all policies combined). It is noted that due to the lack of government and corporate bonds with term more than 10 years, a long-term risk free discount rate (LTRFDR) is stipulated in the regulations. Used for valuing cash flows with duration 15 years or more, the LTRFDR is derived from the historical and prevailing yields of long-dated Singapore government bonds, and reflects expected future interest rate trends.

Capital or Solvency Margin Requirements

Under the RBC regime, the capital or solvency requirement is designed to cover risks in both assets and liabilities faced by the insurance company, rather than just the liabilities in the pre-RBC regime.

With assets and liabilities valued on a consistent basis (fair value and marked-to-market bases), the new capital requirements present a unifying approach for providing capital to cover potential losses arising from both assets and liabilities. The capital requirements for an insurance company have also been aligned across financial institutions, to minimize capital arbitrage in an increasingly integrated financial landscape. The new framework also serves as an early warning and indicator of financial weakness, and facilitates progressive intervention by regulators where necessary. In this connection, the framework will also facilitate comparisons across insurance companies.

The new solvency framework consists of two requirements: (a) Fund Solvency Requirement (FSR) applicable to each insurance fund; and (b) the Capital Adequacy Requirement (CAR), applicable to all funds (including the shareholder fund) combined under an insurance company.

The capital requirements for each of the insurance and shareholder funds are made up of three components, referred to as C1, C2 and C3 risk charges in the regulations. These risk charges are essentially factor-based, and are tied directly to the risk exposure.

Related to insurance risks undertaken by

continued on page 26

With the new RBC regime, gross premium valuation on future projected cash flows is used to determine the policy liabilities.

insurance companies, the C1 risk charge is calculated by applying specific risk margins to key insurance assumptions such as mortality, morbidity, expenses and lapse rates. Effectively, it is equal to the difference in the values of policy liabilities on best estimate assumptions (plus PAD) plus risk margins, and on best estimate assumptions (plus PAD). The risk margins are prescribed by the regulations.

Skyscrapers in Singapore's downtown metropolitan area

Reprinted with permission from Photos.com.

The C2 risk charge reflects (a) the risks inherent in the asset portfolio, and (b) the extent of duration mismatch between assets and liabilities. The risk charge on asset is related to the market and volatility risks associated with the asset classes. For example, equity generally attracts a 16 percent risk charge, while a non-sovereign bond has a risk charge of 0.25 percent to 8 percent depending on the credit rating and remaining term to maturity. The risk charge on asset liability duration mismatch measures the impact of interest rate changes on assets and liabilities. Two interest rate scenarios are examined, with equal magnitude of change in opposite directions (one up and one down). The impact of interest rate changes on asset depends on the bond exposure, as well as the coupon rates of the bonds and the remaining term to maturity. The impact on liabilities is simply the change in policy liabilities in response to change in risk free yields (ranging from 0.6 percent to 1 percent). The combined impacts on assets and liabilities are calculated for the two scenarios, with the larger numerical result deemed to be the C2 risk charge.

The C3 risk charge is about the concentration risks in certain types of assets, and in counter-party or groups of counter-parties. It is a function of an insurance company's exposure, in excess of prescribed concentration limits.

The sum of C1, C2 and C3 risk charges for each fund is known as Total Risk Requirement (TRR). The amount of capital in each fund available to meet TRR is called Financial Resource (FR).

In general, FR is simply the excess of fund assets over the liabilities, allowing for adjustments such as credits for reinsurance. For the participating fund, FR is made up of two parts: (a) balance of surplus account; and (b) level of provision for non-guaranteed benefits (currently set at the level of 50 percent, subject to certain limits). The inclusion of the provision for non-guaranteed benefits as part of FR is to recognize the ability of an insurance company to reduce future bonus rates for participating policies.

For each insurance fund, the Fund Solvency Requirement (FSR) is satisfied when its FR exceeds its TRR. The CAR is defined as the ratio of total FR to total TRR, for all funds combined. The regulations stipulate that when CAR falls below 120 percent it will trigger a financial resources warning event, in which case insurance companies must notify the authority and submit a plan on how it intends to bring the CAR back above the 120 percent level.

Adapting to the New RBC and Challenges for Life Insurance Companies

It became quite clear right from the beginning that the new RBC regime would have very different impacts and ramifications for the life insurance industry.

While insurance companies are taking steps to make changes to their product portfolio and asset liability strategies, the industry in general is still going through the learning period of understanding the implications of the new regime on the capital requirements, the interaction of assets and liabilities, and the effect of guarantees on the risk charges.

One immediate consequence of the RBC regime is that the policy liabilities are more volatile than the pre-RBC regime, due to the use of up-to-date risk-free yield curve in valuing the policy liabilities. Interest rate changes, volatility in asset prices and credit spreads can bring about uneven movements in assets and liabilities, causing CAR to fluctuate. This is especially so if there is significant duration mismatch and exposure to assets of higher risks and volatility. Companies are now actively performing scenario testing to understand and evaluate the impact on capital needs, and to forecast the capital requirements as part of their active capital management process.

Insurance companies are looking more closely at the interaction of assets and liabilities, and carrying out asset liability modeling and analysis work, with a view to manage and reduce the duration gap. In this regard, some companies are working with investment fund managers to explore ways to extend the asset duration, given that the terms of Singapore dollar bonds are generally less than 10 years, and certain products have duration much longer than 15 years (e.g., whole life insurance and deferred annuity). The goal of extending the asset duration will allow companies to become more interested and involved in new markets. For example, the retirement annuity market, which has been downplayed by the industry because of the high capital requirements, may look more appealing.

There is also increased interest in the insurance industry to look into asset strategies to see how they can take on more risks to improve the performance and return of assets, while at the same time manage and contain the capital charges under the regulations. This would allow insurance companies to give a better product to customers who are prepared to take on more investment risks (e.g., associated with participating products).

In short, there are no lack of challenges for the life insurance industry. It is obvious that products with higher duration mismatch and heavier guarantees will attract increased capital and solvency charges. Striking a balance between customers' desire for long-term guarantees on the one hand, and managing risks and reducing capital requirements on the other, is a continual challenge that the life insurance industry has to face and deal with. □

Eric S. T. Seah, FSA, FCIA, is actuarial director with Aviva in Singapore. He can be reached at Eric_seah@aviva-asia.com.

Accounting Corner
IFRS Insurance Phase II: Principles Proposed

by Brian Holland

Editor's Note: The opinions expressed in this article are personal and do not necessarily reflect those of the author's employer.

The IASB is continuing its work toward developing a next-generation standard for insurance accounting under the IFRS Insurance Phase II project. Two leading insurance industry groups have been contributing to the development of International Financial Reporting Standards (IFRS) by volunteering their input to the IASB as it executes its challenging work. These industry groups are working to ensure that the IASB develops IFRS Insurance Phase II with adequate input directly from the insurance industry. An important part of industry's input has taken the form of principles for Phase II insurance accounting. Both insurance industry groups had developed principles, and in 2006 both have expanded on their previous work. This article examines the two proposals in detail.

The two industry groups are the CFO Forum, and the Group of North American Insurance Enterprises (GNAIE) working together with four leading Japanese life insurers. The CFO Forum also developed European Embedded Value. The CFO Forum presented its elaborated principles to the IASB on June 22nd. GNAIE and four leading Japanese life insurers, herein referenced as G/J, published their extended principles on April 19th. The CFO Forum and G/J presented jointly on their progress to the IASB on June 29th. As before, we still have a general industry consensus on some key issues. There are some points of discussion that remain, as is evident in the newer details that have been released. The level of consensus that we now see is significant, as the CFO Forum and G/J emphasised in their IASB presentation. The principles themselves may be found at *http://www.gnaie.net/images/GNAIEJpnLifeInsAcctPrincpls.pdf* and *http://www.cfoforum.nl/phase.html.*

The two sets of principles are structured a bit differently. G/J have 16 principles and 34 subprinciples, along with bases for conclusions (BC) and implementation guidance (IG). The CFO Forum has nine principles and 47 extended principles (EP) as well as bases for conclusions (BC). The main points from the two sets are aligned and discussed below.

a) **Release from risk.** *G/J: 3; CFOs: A.* Profits are to be recognized as the insurer is released from risk, in relationship to a risk profile over the coverage period. For example, if the present value of future benefits is the risk bearer, then the expected component of profits emerges as that present value declines.

1) **No gain at inception.** *G/J: 4; CFOs: A and B implication (i).* At coverage inception the company has not yet been released from any risk. Therefore, as implied by the release from risk principle, neither approach allows a gain at inception. The margin on assumptions is, at least initially, the balancing item to assure that this requirement is met. Margins are to be considered at the portfolio level. Economic losses on individual contracts are to be shown at issue. It is not entirely clear how portfolio-level margins will be set if there are policy-level economic losses. One solution may be to separate policies with initial losses into a separate portfolio for management.

2) **Reflect risk and uncertainty.** *G/J: 6; CFOs: B.* Both approaches require risk and uncertainty to be reflected in the liability. At inception, risk and uncertainty are addressed as described under "no gain at inception." After policy inception, the reserves must include an adequate margin. In contrast to US GAAP, margins are also required on claims reserves (CFOs: EP4, G/J: 3.02 and BC9) and in loss recognition (G/J: 2 "… at all times … adequate provision for risk and uncertainty"; CFOs: BC25 "the liability adequacy test … should include an allowance for risk and uncertainty"). G/J state (IG 1) that there should not be detailed guidance on setting margins, and that they are to be revised if "inadequate."

3) **Sufficiency of reserves (liability adequacy).** *G/J: 2; CFOs: A and B implication (i).* CFOs require expected economic losses to be recognized at issue (EP17). A liability adequacy test is also required (EP18) at all times, comparing the liability to the amount required for another insurer to take over all of the portfolio's obligations, i.e. the current exit model. G/J state no liability adequacy test is necessary due to the methodology, apart from the initial establishment of the liability at which time a loss might be necessary.

b) **Consider all resources for funding all obligations.**

1) **Consistency of asset and liability measurement.** *G/J: 13; CFOs: H.* The CFOs require consistency of asset and liability measurement. G/J require that companies have the ability to measure consistently.

2) **All future cash flows considered.** *G/J: 1; CFOs: B.* Considering all future cash flows means that the gross premiums will be used in the valuation. The reserves are the present values of future outflows less inflows, i.e. gross premiums, so the reserves are gross premium reserves.

3) **Behaviour of policyholders considered, including renewal rights.** G/J: 10,11; CFOs: D. Both bases emphasize that the "big picture" is to be considered.

4) **Participating benefits considered.** *G/J: 15; CFOs: G.* The CFO Forum emphasizes that participating contracts should be valued by the same principles-based approach as non-participating contracts. G/J require the liability to reflect the expected participating benefits, and argue that participating benefits are not different from other benefits (BC33).

5) **Options and guarantees valued.** *G/J: 8; CFOs: E.* Both groups emphasize that all options and guarantees are to be valued. They also agree that valuation should be consistent with markets where the markets exist (G/J: 8.01, CFOs: EP40), and that valuation techniques must be used otherwise. The CFO Forum explicitly addresses non-financial guarantees and their interaction with financial guarantees, but it is clear from the overall G/J principles that they also require holistic evaluation of the options and guarantees.

6) **Separate account assets.** *G/J: 14; CFOs: EP12, EP44.* For linked benefits, the linked assets' returns (G/J) or market values (CFO Forum) must be considered in the liability measurement.

7) **Unbundling of deposit components.** *G/J: 16; CFOs: EP13.* Unbundling is unnecessary (CFOs) or highly unlikely to be needed (G/J) due to all cash flows having already been considered.

8) **Deposit value floor unnecessary.** *G/J: 10.01; CFOs: BC44.* A deposit floor is a minimum liability equal to the amount deposited, which for example could be considered the cash value. G/J and the CFO Forum both argue that a deposit floor is unnecessary due to accounting for policyholder behaviour. So, the cash value will be reflected in the liability to the extent that it is assumed that policyholders will lapse.

c) **Assumptions unlocked.** *G/J: 7; CFOs: A and B implication (ii).* Both methods allow the use of current best estimates with a margin for risk and uncertainty. An important difference is that the CFO Forum explicitly requires assumption updates for both positive and negative anticipated changes (EP25), while G/J require unlocking

continued on page 30

The CFO Forum explicitly addresses non-financial guarantees and their interaction with financial guarantees …

only in the event of loss recognition, although allowing it in other cases. G/J's asymmetric unlocking requirement is clear in BC17, "companies may often elect not to change assumptions and margins unless a loss recognition situation has occurred." G/J 7.02 requires financial assumptions to be "based on market information where available and reliable," which seems to mean that the financial assumptions must be updated, but from BC17 the intent regarding financial assumptions is not entirely clear. So, the two groups have struck different balances between comparability and flexibility.

The CFO Forum requires reserve changes from financial assumptions to be recognized consistently with the treatment of market value of assets (EP30). Reserve changes from changes in non-financial assumptions are to be recognized over the risk profile, which effectively means that the aggregate assumptions are adjusted via the margin to release the profit accordingly. So, the changes in non-financial assumptions impact the expected reserve release.

G/J do not allow spreading assumption change impacts as is clear in BC17, "reserve assumption changes bring future expected results into the current year's results."

d) **Discount rate.** *G/J: BC32; CFOs: EP10.* The CFO Forum considers the risk free yield curve (BC19) to be appropriate. The CFO Forum also considers an adjustment to remove some of the liquidity risk premium to be potentially appropriate for some products with lower liquidity needs. G/J require a margin for uncertainty. G/J consider the risk free rate to be inappropriate because it is inconsistent with pricing and valuation practice. G/J specify (IG5) that the discount rate should include a margin for risk and be net of expenses and expected defaults. The G/J details are under principle 14 on separate accounts or similar dedicated portfolios, but are written generally as if to apply to all products.

e) **Own credit risk ignored.** *G/J: 12; CFOs: F.* Because obligations to policyholders are ahead of debt, the insurer's credit rating should not be a factor in the insurance liability valuation.

f) **Portfolio basis of measurement.** *G/J: 9; CFOs: C.* Measuring on portfolio level versus on policy level influences the determination of margins, and evaluation of adequacy of reserves. The CFO Forum notes that interactions between portfolios will be considered further, both aggregate exposures and diversification.

g) **Intangible customer relationship asset recognized.** *G/J: 5; CFOs: A and B implication (ii).* Acquisition costs are capitalized under each approach and held as an explicit asset, as opposed to netting the asset against the reserve for benefits. The CFO Forum calls the capitalized costs a customer intangible asset, and G/J also refer to it as a policyholder intangible. G/J require capitalization of only the directly attributable costs (5.02), while the CFO Forum also requires capitalization of allocated indirect and overhead costs (EP20). Earnings under G/J would therefore appear a bit later than under CFO. CFO Forum: expensed in proportion to profit (BC 33)

h) **Value-based reporting.** *G/J: n/a; CFOs: I.* The CFO Forum mentions that supplemental value-based measurements are helpful to show management's view of value creation from, for example, issuing new business.

You may have noticed key similarities to the Australian Margin on Services methodology (MoS) in addition to the use of current assumptions. There is a risk profile concept determining the release of profits, similar to the services to be provided under MoS. The CFO Forum writes in terms of services in BC3, "Since the main service … is the mitigation of risk, entities … should recognize accounting profits … in line with the reduction of risk." Also, the CFO Forum's different handling of financial and non-financial assumption changes is analogous to that under MoS. ☐

Brian Holland, FSA, MAAA, is a senior actuary in the Division Life & Health, Valuation Department with Munich Reinsurance Company in Munich, Germany. He can be reached at brholland@munichre.com.

Country Update—Jamaica

by Janet Sharp

The insurance and financial landscape of Jamaica, like the landscape of the country, has its peaks, valleys and plains. The life insurance and banking sectors have emerged from the financial meltdown of the '90s, smaller, leaner and stronger. Following on the heels of life insurance and banking, the pension sector has entered the world of tighter regulation. And the P&C industry faced its first insolvency in 2004, due to the catastrophe of Hurricane Ivan in Cayman. Along with the myriad of financial regulatory standards, the country has adopted International Financial Reporting Standards (IFRS), an evolving and technically challenging environment.

Dunns River Falls, Jamaica

Reprinted with permission from Ray Chen.

Life and Health Insurance

Life companies are regulated by the Financial Services Commission (FSC) under the Insurance Act and Regulations, 2001. There are four major players in the market, all with non-Jamaican majority owners, from other Caribbean countries and Canada. Risk capital and solvency ratios are very healthy. Life Gross Premium Income has shown steady growth in recent years, but number of policies has remained stagnant. Health premium income has shown steady growth, overcoming the threat of a consumption tax on health premiums that was enacted in 2003, but repealed in 2004. The health sector has experienced renewed interest via the entry of one new player, an agreement for the acquisition of another, and the establishment by the government of a National Health Fund covering chronic illnesses, and a Drugs for the Elderly Program covering prescription drugs for senior citizens. Recent areas of executive strategic focus have been on Corporate Governance and Enterprise Risk Management.

Actuarial practice in this sector is guided by the Insurance Regulations, 2001 that is modelled from Canadian laws and speaks to a gross premium valuation methodology with best estimate assumptions and margins for adverse deviation, dynamic capital adequacy testing of the future financial position, minimum continuing capital and surplus requirements, and asset/liability management.

Accounting practices have proven particularly challenging due to both new and evolving standards and to the plethora of new disclosure requirements. Noteworthy standards are IFRS 4 on insurance contracts, International Accounting Standard (IAS) 32 & 39 on financial instruments disclosure, presentation, recognition and measurement, IAS 36 on impairment of assets, and IAS 38 on intangible assets.

Pensions and Annuities

The Pensions (Superannuation Funds and Retirement Schemes) Act, 2004 was passed by Parliament on Sept. 21, 2004. This Act includes the following provisions:

- Registration and Approval of Superannuation Funds and Retirement Schemes.
- Licensing of Administrators and Investment Managers.
- Registration of Trustees and Responsible Officers.
- Solvency standards.
- Winding-up of Approved Superannuation Funds and Retirement Schemes.
- Amendments to Trust Deed and Plan Rules.
- Fit and Proper Criteria.

continued on page 32

The Pension Regulations 2006 were passed in March 2006 and include the following:

- Registration, Licensing and Reporting Regulations.
- Governance Regulations.
- Investment Regulations.

Not all pension regulations are yet in place. In draft form and of significance are the pensions funding and solvency regulations that will impact significantly on the Jamaican pension actuarial practice and the continuation of defined benefit plan sponsorship. The Jamaican chapter of the Caribbean Actuarial Association has, in the public interest, been very active in commenting on the legislation, in making submissions to the Jamaican Parliament, and in continuing to propose improvements to regulations that are still outstanding.

In the accounting arena, IAS 19, Employee Benefits has been adopted and requires that all costs, gains or losses related to pension obligations, post-retirement benefit obligations, and employee entitlements are recognized in the income statement of the employer. This requires annual actuarial valuations for all employers offering employee benefits.

Property and Casualty Insurance

Property and Casualty or General Insurance companies in Jamaica, are regulated by the Financial Services Commission under the Insurance Act and Regulations, 2001. The Act now requires that general insurance companies appoint an actuary to value the actuarial liabilities. There is stiff competition in this market that is served by 11 companies. Premiums are under pressure and constrain the profitability of these companies. Some consolidation has taken place, one of which was forced in 2004, by the industry's first insolvency. This insolvency resulted from the

Bank of Jamaica and Bank of Nova Scotia Jamaica Limited

Reprinted with permission from Ray Chen.

devastation wreaked by Hurricane Ivan in Cayman and the huge losses sustained on the Caymanian property and motor vehicle insurance portfolio. The Jamaican portfolio was subsequently acquired by another Jamaican P&C Company. Only one other company has been acquired by another, and there is the view that further consolidation will come.

Other Regulatory Developments

The Financial Services Commission has recently circulated a Discussion Paper on the establishment of a Compensation Fund for the non-bank financial services sector. It has been recommended by consultants to the FSC that priority be given to establishing a solvency compensation fund for life and general insurance companies and defined benefit pension fund plans. The banking sector already has the Jamaica Deposit Insurance Fund that protects deposits up to a certain limit in the event of insolvency. There also exists the Jamaica Stock Exchange Compensation Fund, the purpose of which is to compensate clients of securities dealers against the loss of securities being held by the dealer in the event of fraudulent misuse of funds, insolvency or some other "non-market" reason.

Economic Environment

Jamaica's economic environment is a fragile and volatile one. Overall, during 2005, the Government of Jamaica missed its most important economic targets. The plans for a balanced budget, 3.6 percent growth and single-digit inflation were unmet due in part to the external shocks of Hurricanes Dennis and Emily and higher fuel prices, and because revenue targets fell far short of projections. Although unmeasured, the economic effects of escalating crime and violence are negative, and have resulted in declining levels of business and investor confidence.

In 2005, the Bank of Jamaica continued the interest rate cutting strategy begun in 2004, but at a slower pace in order to manage the economic variables. By the end of 2005, 182-day Treasury Bill yields were 13.55 percent, and BOJ Repo rates were 12.6 percent. For the third straight calendar year there was double digit inflation of 12.88 percent that narrowed real returns considerably. The weighted average J$/US$ exchange rate declined by 4.55 percent to close at 64.38065. Stock market returns were negative 7.2 percent in contrast to the phenomenal 66.3 percent growth in 2004.

Despite the disappointing performance of 2005, economic expectations for the economy remain positive. In February 2006, the rating agency Standard & Poor's, maintained its "B" (stable) rating for Jamaica in recognition of the government's ongoing commitment to fiscal discipline and debt reduction amid external shocks. Also in February 2006, Moody's Investor Service maintained its "B1/Stable" rating on Jamaica. ☐

Janet Sharp is executive vice president and resident actuary with Life Of Jamaica, Ltd in Kingston, Jamaica. She can be reached at jsharp@life-of-ja.com.

Hong Kong Ambassador's Report—August 2006

by Thomas Lee

Hong Kong, positioned as Asia's world city, is located in south China. This cosmopolitan city serves as the gateway to mainland China and the hub for business throughout the Asia-Pacific region. Since its return to China in 1997, Hong Kong has continued to demonstrate its strengths through good and bad times. Its continued economic success is not only due to the hard work and commitment of 6.8 million people, but also the power of freedom and openness.

One Country, Two Systems

Hong Kong continues to enjoy a high degree of autonomy with executive and legislative powers. The legal and economic system remained unchanged after the return to mainland China. Laws, currency, taxation system and way of life separate it from mainland China. Hong Kong continues to participate in international forums in its own right (e.g., WTO, APEC, WCO, FATF). Both Chinese and English are official languages in Hong Kong.

Business Environment

Hong Kong is one of the world's freest economies—free flow of capital, free trade, free market, no investment restrictions, and no foreign exchange control.

Hong Kong successfully serves as an international business hub:

- Level playing field—local and international companies compete on an equal footing.
- Regional transport hub—air and sea.
- Regional corporate hub—1167 regional headquarters and 2631 regional offices.
- Regional arbitration centre to handle more cases than Japan, Singapore, Malaysia and Korea combined.
- Regional communication and broadcasting hub.

Actuarial Profession

Professional organization—Actuarial Society of Hong Kong (ASHK) was established in 1968 (formerly known as Actuarial

Beautiful view of the Hong Kong skyline

Reprinted with permission from Photos.com.

Association of Hong Kong) and was duly incorporated in 1994 as a professional body in Hong Kong. Since 1999, ASHK has become a full member of the International Actuarial Association. ASHK celebrated its 38th birthday in 2006. As of July 2006, ASHK has 557 members (290 Fellow members, 109 Associate members, and 158 Student members).

Currently, ASHK does not organize its own examinations. Rather, it relies on the examination system of various overseas bodies. Any person who is a fellow member of at least one of the following organizations is qualified to become a fellow member provided he/she is nominated by two fellowship members: Society of Actuaries (U.S.), Casualty Actuarial Society (U.S.), Institute of Actuaries (England), Faculty of Actuaries (Scotland), Institute of Actuaries of Australia (Australia).

Regarding the practice areas of the members, about two thirds are working in insurance companies and one fourth is working in consultancy, the rest are working in reinsurance companies and other areas.

Professional activities of ASHK—ASHK actively pursues the maintenance and improvement of the standard of the actuarial profession in Hong Kong. For this purpose, a number of Professional Standards and Actuarial Guidance Notes have been introduced to assist our members when performing their duties.

There are two Professional Standards in use:
Professional Standards 1—which provides guidance to appointed actuaries of life companies on factors that should be taken into account when performing their duties as appointed actuary.

Professional Standards 2—which provides guidance in respect of factors to be taken into account when preparing reports and signing actuarial certificates for occupational retirement schemes.

In addition, there are 6 Actuarial Guidance Notes:
AGN3—Additional Guidance for Appointed Actuaries.
AGN4—Outstanding Claims in General Insurance, Note on Professional Practice.
AGN5—Principles on Life Insurance Policy Illustrations.
AGN6—Continuing Professional Development.
AGN7—Dynamic Solvency Testing.
AGN8—Process for Determining Liabilities under the Guidance Note on Reserving Standards for Investment Guarantees as issued by the Office of the Commissioner of Insurance.

Hong Kong has an Appointed Actuary system whereby the Office of the Commissioner of Insurance relies on the Appointed Actuaries for the financial management of the life insurance companies.

Currently ASHK is not a statutory recognized professional body in Hong Kong and there are no specific requirements for appointed actuaries to be members of the ASHK provided he/she meets the qualification requirements. Currently the actuarial designations from the following bodies are officially recognized in Hong Kong:

- Institute of Actuaries, England
- Society of Actuaries, U.S.A.
- Faculty of Actuaries, Scotland
- Institute of Actuaries Australia

In addition to issuing Professional Standards and Actuarial Guidance Notes, the Actuarial Society of Hong Kong annually organizes a one-day conference for Appointed Actuaries. The 6th Symposium will take place in November 2006. The purpose of this conference is for Appointed Actuaries to discuss matters of mutual interest and to highlight any issues that may require action from Council.

Activities of the Society of Actuaries in Hong Kong—There are 212 FSAs and 157 ASAs of the SOA in Hong Kong. ASHK has organized a number of joint seminars on various topics with the Society of Actuaries to enable students to acquire the PD credits that are necessary for their qualifications. Hong Kong was chosen as the first place outside North America to hold the Fellowship Administration Course (FAC). The first FAC in Hong Kong was successfully completed on July 6-7 this year. There were 39 newly qualified fellows who graduated from this course. Out of them, four newly qualified fellows were from mainland China, 11 were from Hong Kong and the rest were from North America, U.K. and other Asian countries. □

Currently ASHK does not organize its own examinations. Rather, it relies on the examination system of various overseas bodies.

Thomas Lee is vice president and actuary with American International Assurance Company (Bermuda) Ltd. in Hong Kong. He can be reached at Thomas-mn.lee@aig.com.

Pacific Rim Actuaries Club: Executing the Vision

by Marjanne Lyn

The April 2005 edition of *International News* contained an article about the vision of the Pacific Rim Actuaries' Club of Toronto (PRAC) and the type of business training offered to its members. As we approach year three, we would like to share our experience in developing the workshops.

How Did We Start?

The difference between success and failure, of being first or second, is the ability to execute. In order to execute, you have to have the strategy, the people, the operations and the drive to get the ideas implemented.

The PRAC is an all-volunteer group of actuaries with the drive to get things done. The club knew that actuaries had to have a larger role to play in their organizations and that meant management proficiency would be an ideal skill to develop to complement the current knowledge base of mathematics, statistics and economics. In fact, the professional organizations were turning in that direction, so the club's committee decided to follow their lead. An actuary with a business orientation could make a much greater contribution to the total business.

The PRAC is an all-volunteer group of actuaries with the drive to get things done.

It took the PRAC six months from idea to execution to develop management workshops with a strong practical focus for its members. They started with an idea and refined the process with feedback from the attendees.

What Did We Do?

The workshops are offered twice a year, in June and early December, just after SOA exams. We try to keep each session to a maximum of 12 attendees so that they can comfortably interact with each other.

The workshops are designed to achieve the following objectives:

1. Provide **practical** managerial skills. Each two-hour session has a minimum of two interactive exercises.

2. **Networking opportunity** – The attendees work in teams on case studies or problems. They get a chance to see how people make decisions and apply knowledge that the group has just acquired. This is a different environment to meeting people at a cocktail party or on a golf course. It is much more than a social event.

3. **Fast pace** – The groups are populated with highly motivated individuals. Compared to other groups, this one is able to read, assimilate and present on a problem very quickly. To make the workshops more challenging, we have added pre-workshop reading. Participants have to come prepared to discuss and present.

4. **Variety of Learning Materials** – Lectures, case studies, video case studies and role-playing exercises are included.

5. **Opportunity to share learning, opinions, and own experiences** are bonuses!

The participants range from fully qualified actuaries with 10 years of experience to co-op students. The groups are diverse, including individuals from consulting firms, insurance, re-insurance and even actuarial software development. The common thread holding the group together is curiosity, a passion to develop one's self and the desire to enhance one's existing skill set and meet like-minded people.

Topics

Each session covers a new topic. We tend to focus on the soft skills such as leadership, communication skills, conflict management and presentation skills.

The leadership session garnered the most interest. We worked on a Proctor & Gamble case study. P&G is a $43 billion consumer products business with two very different leaders. One is mild-mannered and softer spoken and the other is flamboyant and revolutionary.

My personal favorite is the workshop on presentation skills. We identify the five problems with presentations: no clear point, no audience benefit, a lack of clear flow, too detailed and too long. We then examine how these problems can be remedied and wrap up with each person making a presentation. I was impressed with one presenter who folded her sheet of flip chart paper so that each side formed a slide as they unfolded the paper. Don't tell me actuaries aren't creative. This was an origami presentation!

Feedback

The PRAC executed quickly and then refined the workshops using a variety of feedback techniques. The length of the workshops and the idea for video presentations came from the feedback forms. We also get informal feedback from the members, as it is a close-knit group. The participants offer suggestions on workshop design and the topics and we listen to them. As a result, we have repeat attendees.

Key Learnings

I have observed the PRAC workshop attendees and compared them to other groups:

- They are highly motivated and come prepared. You might assume that they are shy because they do not openly participate when asked a question, but are keen observers and eager to present group case studies. They do have a point of view but they are more used to participating in a small group.

- They learn fast, therefore we had to make the workshops more challenging by moving quickly through more material than normal and requiring them do reading before the sessions.

- They want a safe environment to practice their skills. The ones who are more outgoing tend to be involved in a variety of volunteer and social clubs. Volunteer positions are an opportunity for people to develop leadership, communication and organizational skills and create independent networks outside of work.

- They are diverse, which is a plus since employers are seeking diversity in the workforce. The PRAC groups are more diverse than you may think. They are from Korea, China, Hong Kong, Indonesia, etc. Some are educated in their home country, some in England, some Canada. There are members who originate from the West Indies, Europe and Russia, and are attracted by the functions the club holds. There are homegrown Canadians, English and French speaking. English is the common but second language in most cases.

- Most attendees have excellent reading and analytical skills. However, many are not practiced at reading body language and nuances in conversation. This led to the use of video case studies. In one case study, participants are required to observe how two leaders interact with their teams, how they deal with difficult employees and prepare the teams for competitive presentations. We observe how the two leaders speak to their teams, their body language and the difference in the outcomes.

- Challenging – These workshops have forced me to grow as a facilitator to make the sessions interesting and rich for the participants. The attendees are highly motivated, highly trained and curious to learn. The attendees drive the quality of the workshops, as we could not have done it without their feedback. I would be curious to see where these attendees make their way over the next 10 years as this group of actuaries will be the first to have the advantage of formal management training.

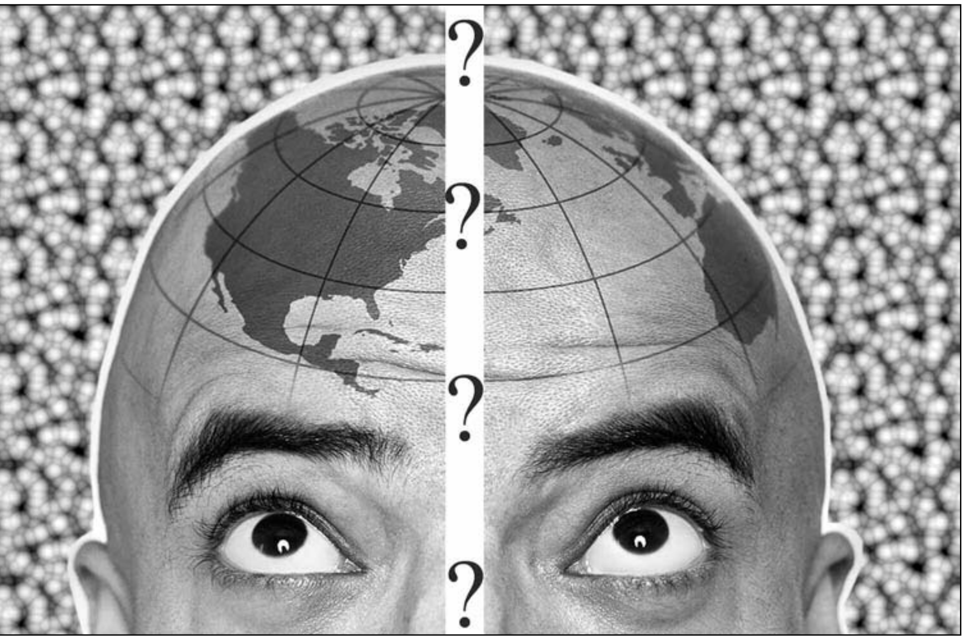
- Execution – At the end of the session, we pose a real work problem for the participants to apply their newly learned knowledge and personal experience to craft a solution. Maximizing knowledge is important but as Bossidy and Charan state "the biggest obstacle to success is the absence of execution."

The next PRAC workshop will focus on how to develop and utilize a network. The workshop will be held in early December. Information can be found on *http://www.pacificrimactuaries.com/* ☐

Marjanne Lyn is director, product development/quality control at Nelvana Ltd. in Toronto, Canada. She can be reached at Marjanne.lyn@corusent.com.

Mind the gap ...
... and how to bridge it

by Laura Brown and Neil Wharmby



Editor's Note: The paper reflects the views of either or both of the authors and does not necessarily reflect the views of Watson Wyatt LLP. It is reprinted with permission by the Staple Inn Actuarial Society, May 3, 2005. This is the third of a three-part series.

The paper is meant to encourage jovial, but perhaps thought-provoking debate. As both the authors work in the retirement benefits field, it is inevitable that this paper will be flavored by pensions. However, we would hope that this will not prevent the non-pensions actuaries from joining the debate. We would like to make it clear that in presenting this paper, we do not intend to be critical of any particular actuary, firm or professional body.

Chapter Five

You've got to educate to accumulate

Aristotle: "Education is the best provision for old age"

Clearly, actuaries are not responsible for the lack of general financial knowledge of the population nor are we responsible for remedying this. However, a better level of financial education could have a positive impact on us both directly, in terms of the users of our advice such as pension scheme trustees, and indirectly. After all, if the public are better informed, they will have less cause to blame the actuary when things go wrong.

A recent survey by YouGov found that 87 percent of those questioned felt financial literacy should be introduced as a compulsory topic in schools. 98 percent of teenagers consider it valuable to their future to learn about managing their money—that's nearly all of these teenagers actually wanting to learn something! The stormy tides of public opinion and government focus are turning on this and perhaps the actuaries of tomorrow will find a population better equipped to make some financial sense of their own futures.

Since 2002, financial literacy has featured in teaching of personal and social education but it is not clear that there are many teachers with sufficient knowledge to cover this. More interestingly still, the recent White Paper on 14-19 year old education states that they are considering including financial capability in the GCSE mathematics curriculum. Clearly, we know how to set exams on this topic. We know that covering basic compound interest relating to loans and mortgages or basic investment instruments could be easily accessible and practically useful. The aim should be to reduce the level of mystery in finance and to provide sufficient understanding that, for example

- bond yields go down when the price of a bond goes up
- cash back mortgages might prove more expensive in the long run, despite the front end benefit
- at some point in time, someone has to pay for a lifestyle which includes studying/backpacking until age 25, then retiring at

50 and living until 100—ie in basic terms, can they live off a quarter of the earnings received between age 25 and 50 so that the other three-quarters can be used to pay for the period of their life when they are not working?

So we ask, in part as an investment in our own future, is there a role for the profession (alongside the Financial Services Authority and others) in offering our experience for setting this education strategy?

Jamie's School Dinners[1]

The recent Channel 4 series has provoked such interest that nearly 300,000 people signed a petition and the government has pledged £280 million over three years to advance the cause of healthy eating and banish the turkey twizzler from the school canteen forever. Television and the strategic involvement of the appropriately appealing celebrity are rapidly becoming the best way to make any topic interesting to the public.

Thinking along similar lines for our sort of work, a quick straw poll revealed that the only famous figures associated with the financial services industry that a group on non-actuaries could think of were Nick Leeson and Howard Brown (the star of those notable Halifax television adverts). So, we have a dodgy dealer (entirely consistent with the public's general expectations of the financial services industry I guess) and a loveable gentleman who rides atop giant birds in adverts.

There seems to be some kind of gap in the market here, not necessarily to make finance cool (heaven forbid) but possibly to bring it to a wider audience. The plethora of reality TV on so many subjects from cooking to entrepreneurial skills to home buying leads the authors to wonder whether there is space in the market for some kind of investment competition show—'I'm a Celebrity, Get Me Stocks and Shares' has a certain ring to it. There are already a number of such schemes and competitions operating for school children. Perhaps it is time to take it to the masses, show that pensions can be pukka and push out some basic messages through the glorious medium of television?

What kind of choice?

There is a serious point here. No, really. We are moving towards an environment where the public will need complex knowledge to make the right decisions for their financial futures. Gone are the days of the job for life where the paternalistic employer looked after the honest working man during his short window of opportunity for a life of leisure in retirement. The decreasing presence of the defined benefit pension scheme and the upsurge of defined contribution options have left a poorly prepared public struggling to comprehend the choices available.

A recent survey of pension plan design found that although two-thirds of defined contribution plans offer more than 5 choices of investment fund, around 40 percent of their members express no preference and their money is invested in the default fund option. Many believe that the Pensions Commission's final report will recommend the introduction of some form of compulsory pension provision for the future, possibly of a defined contribution nature. If this happens, the problems actuaries currently face in communicating investment choices to trustees will become a national issue. Should we or can we do anything to help this situation? Would it be acceptable for nearly half of the population to invest their hard earned cash in a default option that they have not actively selected or thoroughly understood? Will people ever choose to save sufficient sums to provide for their retirement if the current dearth of financial education persists?

Pensions actuaries are in a great position to start addressing these issues by helping our defined contribution clients engage with employees and find ways to encourage a reduction in the number of members ending up with

continued on page 40

Can we help provide financial education to a wider audience?

[1] Jamie Oliver is a celebrity television chef. His recent television series Jamie's School Dinners showed how it was possible to change the food provided to school children from chips, burgers and turkey twizzlers to a less processed diet. This involved educating the children to appreciate good food as well as training dinner ladies to prepare it! Although an increased budget was required to cover ingredients of higher quality and the additional preparation time, the benefits were healthier and better behaved children.

the default option. There are obvious benefits to the client in dealing with the perennial issue of improving understanding and therefore appreciation of the reward package they provide. A 2004 survey into many aspects of reward and people practices found that three-quarters of employees being paid at above average levels thought that they were being paid at average or below average levels so it is not only communicating the pensions aspects that creates the challenge!

The problems facing actuaries and others in communicating risks and returns are compounded by an apparent fundamental problem with the public's ability to assess risk. There is so much in everyday existence to back this up. People are terrified of getting on a plane once a year but happily jump in their cars on a daily basis. The National Lottery has received £48 billion in ticket sales over 10 years. This is an astonishing amount invested given the odds for each individual. The traditional back of the envelope calculation reveals that this is equivalent to each British man, woman and child buying 80 tickets a year, or more than one a week! The beauty and colour of the stochastically generated funnel of doubt may show the way as an illustration of the spread of possible outcomes but do we think that individual members are ready to cope with this form of representation? Is there the appetite amongst schemes and actuaries for moving into this area or are restrictions such as cost restraining us? Should the Profession be encouraging the government to move down this route?

Dangers lie ahead if someone doesn't address this

Chapter Six

So, what have we said?

It's all in the technicoloured boxes, but for those who want it on one page, it's broadly as follows:

- Don't use technology where it's not needed. Simple, perhaps less accurate models illustrated on a blackboard may be a better communication tool.
- Don't be afraid to replace endless results with a professional opinion.
- Say in black and white what the numbers mean in terms of future action.
- Give the client a good show so that they're interested in what you have to say and tell a story that's entertaining.
- Separate compliance and advice and rethink the philosophy behind GN9?
- Allow time for others to get up to speed—remember you have had the luxury of a few chargeable hours and years of experience to understand the problem.
- Use standard terminology less and perhaps consider withdrawing GN26?
- Encourage the profession to influence and engage in financial education policy.
- Watch out for the hidden messages and the unintended subtexts of written advice. Clarify verbally if necessary.

Finally, it's worth remembering that whatever we do or say in public will affect the way in which others view the profession. Communications within the profession - papers presented to the Staple Inn Actuarial Society or to the Institute for example - will also influence the messages received by non actuaries. Secondary effects such as misinformed or out of context press coverage can and will have an effect on what clients think they may understand. These effects are probably the hardest to predict and control but perhaps the first rule of communication is to assess right at the start just how big the understanding gap is. Only then will you be able to judge how best you can bridge that gap.

References

Morris Review of the Actuarial Profession, Final Report, March 2005 (Crown copyright 2005)

Being Actuarial with the Truth, a paper presented to The Staple Inn Actuarial Society, 31 August 2004, Simon Carne

The Pension Regulator's Code of practice no. 4: Funding defined benefits (consultation document) March 2005

Consumer Understanding of Risk, A summary report prepared by Alan Goodman, Chairman of the Financial Consumer Support Committee, The Actuarial Profession Making actuaries less human, lessons from behavioural finance, a paper presented to The Staple Inn Actuarial Society, 18 January 2000, Nigel Taylor

Pension Plan Design Survey 2004, Watson Wyatt LLP

Total Reward Survey 2004, Watson Wyatt LLP

YonGov survey for Insight Investment in November 2003
(see *www.insightinvestment.com*)

www.teachernet.gov.uk

14-19 Education and Skills White Paper, presented to Parliament by the Secretary of State for Education and Skills by Command of Her Majesty, February 2005

Pensions: Challenges and Choices, The First Report of the Pensions Commission, 2004

www.natlotcomm.gov.uk

Lives of Eminent Philosophers, Diogenes Laertius

Laura Brown is a consultant with McKinsey & Company, in London. She can be reached at Laura_Brown@McKinsey.com.

Neil Wharmby is a consultant with Watson Wyatt LLP in Reigate, Surrey. He can be reached at neil.wharmby@ eu.watson wyatt.com.

SOA Ambassadors Wanted

Reprinted with permission from Photos.com.

In October 1993, the Society of Actuaries initiated the Ambassador Program, under the direction of the Society's International Section. The program was designed to keep our members residing abroad in touch with activities here in North America, as well as to introduce our North American members to the customs and practices, both professional and cultural, of other countries. There are now over 20 SOA Ambassadors on five continents. With the increased globalization of our profession, the need for this program has become more pronounced.

Key Objectives of the Ambassador Program

1. To assist in carrying out the Society's international activities.

2. To assist in identifying needs of SOA members overseas.

3. To serve as a member resource and link between the SOA and local actuarial organizations.

4. To help the actuarial profession grow.

Are You ....

1. A member of the SOA?

2. Expected to be in your host country for the next two years? Candidates who speak the language skills of the host country are preferred.

3. A self-motivated, sociable individual who possesses leadership qualities?

4. Willing to perform the basic duties of the position?

We Want You!

Those interested in becoming SOA ambassadors should submit an application, resume or CV and a work plan. The work plan should outline the applicant's approach to meeting the program's key objectives within his or her own country. The application and work plan are discussed and voted on by the International Section Council. A two-year appointment starts from the date of council approval. Interested parties should contact Martha Sikaras at *msikaras@soa.org*.

Duties

- Provide an annual progress report on the work plan submitted with your application.
- Write an article each on local developments in the financial industry and the actuarial profession in your host country, for publication in *International News*, the newsletter of the International Section.
- Take responsibility for creating or updating a country Web page.
- Assist the International Section in recruiting new members.
- Provide regular dialogue with the International Section Council on feedback and ideas to serve members better.
- Assist the International Section with sponsoring events.
- Conduct local projects that are of interest to you. These can include talks, member activities or establishing and promoting exam centers.
- Creative projects are most welcome—use your imagination!

Benefits

- Bring attention to your host country! Share, enlighten and inform the international actuarial community of the new and exciting things happening all around you.
- An SOA listserv is available for you to ask questions or share ideas with your fellow ambassadors and colleagues.
- Ambassadors receive one free meeting waiver per year to be used at the SOA Annual Meeting.
- Work with a dynamic council and expand your international horizons.

Boost Your Network and Apply Now!

International News Announcements

You don't have to be a member of the Society of Actuaries to join the International Section!

Participation in the International Section is no longer limited solely to members of the Society of Actuaries. The Section is welcoming other actuaries and interested persons to participate in its activities. The International Section is unique in that it defines itself not by professional specialty or organization, but by geography. Membership is only $25 (U.S.) annual and entitles you to:

- *International News*, the Section newsletter with topical articles from authors around the world.

- Invitations to participate in Section social and networking events.

- Mailing/e-mail communications announcing upcoming conferences, research, projects, continuing education events, and other activities.

If you are interested, please complete the form and fax or mail it to *lgoritz@soa.org* with your payment.
http://sections.soa.org/SOAMembershipForm.pdf

International Section to Sponsor Living to 100 Symposium

The International Section joins the growing list of sponsors for the Society of Actuaries Living to 100 Symposium scheduled for Jan. 7-9, 2008. With the increasing number of people living into their 70s, 80s and beyond, more accurate estimates of advanced age survival are required to design, price and value insurance products and to assure the solidity of government sponsored social insurance programs and private pension plans. This third triennial international conference brings together thought leaders from many disciplines to share ideas and knowledge on advanced age survival and the consequences of lengthening lifetimes. Actuaries, gerontologists, demographers, physicians, scientists and other professionals from around the world will gather in Orlando, Fla. to discuss the risks and solutions relating to the costs and quality of life of the increasing numbers of elderly.
To encourage leading researchers to produce and present papers at the symposium, a Call For Papers was issued on three broad topics:

1. Evaluation of existing advanced age mortality data sources.

2. Techniques for the modeling, projecting and analysis of advanced age mortality data.

3. Implications of an aging population for social, financial, health care and retirement systems and/or the impact on quality of life issues.

Support was also sought from numerous organizations to promote the Call For Papers in order to reach out to potential international participants. Interest has been high and the planning committee is currently considering the abstracts submitted for presentation.

Look for more updates soon as the conference program begins to take shape. For more information about the conference, please see:
http://www.soa.org/ccm/content/areas-of-practice/life-insurance/research/living-to-100-survival-to-advanced-ages--call-for-papers/

Revised International Experience Study now available on the Web

A revised version of the SOA International Experience Study (IES) is now available on the Web that includes detailed studies of mortality and persistency in Argentina, Brazil and Poland that were prepared using the SOA IES's new experience study "tool!" Go to the International Section Web page on the SOA Web site and look under Papers, Presentations, Research and Resources to find it. □