SOCIETY OF ACTUARIES
INTERNATIONAL SECTION

International News

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International News

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To join the section, SOA members and non-members can locate a membership form on the International Section Web page at http://www.soa.org/International/

Publication Schedule
Publication Month: September 2017
Articles Due: June 13, 2017

Editor’s Note

By Qi Sun

DEAR READERS,

Greetings from the May issue of *International News*. This is my first time leading the editing work of the newsletter, and I am grateful to have so many good quality articles on diverse topics from our volunteer contributors. Our newsletter reflects the increased interest from our section members and readers, and I hope all of you enjoy this issue. Don’t hesitate to contact Arpita Das or myself if you have any comments or feedback.

Retirement Replacement rates are commonly used as rule of thumb to gauge the retirement income adequacy. 70 percent is generally considered as the target while experts are continually debating whether 50 percent will do or 80 percent to 100 percent is a better target. A recent study conducted by Dr. Bonnie-Jeanne MacDonald finds that the old rule of thumb is definitely not for everyone. In this issue, we are honored to invite Dr. MacDonald to talk about her study and to introduce a new, more personalized way to measure how your lifestyle in retirement will differ from your working years.

Many of our members are aware that a Latin America Committee (LAC) was created in late 2016 under the SOA International Committee to enhance the SOA’s presence in Latin America. We are thankful to have Linda Prieve and Jim Toole to walk us through the exciting times that face the Latin America Committee and the Latin America Strategy.

We are close to a new IFRS insurance contracts accounting standard. IASB sets January 2021 as the effective date of IFRS 17 (previously referred to as IFRS 4 Phase II). The proposed changes are likely to be challenging. Graydon Bennett shares his view on this topic in his article “Insurance Accounting: The Shape of Things to Come.”

“Business Management Actuaries in the C-Suite” is an interesting read. It recaps an interactive forum session held at the 2016 SOA Life & Annuity Symposium that focuses on how actuaries get prepared and bridge the gap before moving into corporate executive roles.

The article on the purchase accounting under China-GAAP in the January issue received great feedback. In this issue, Vincent Tsang, Bonny Fu and Florence Ng continue their discussions on that topic and provide more insights on a few practical issues.

On the Pension side, IBM has recently been ordered to pay more than $23 million to its active and retired employees at its plant in Bromont, Quebec, Canada. This is a decade after the amendment of a clause in its defined benefit (DB) pension plan. In the article “The Samoisette Case: Sponsors May Not be Able to Amend a Pension Plan Whenever They Want,” Dominique Monet provides more context on that case and shares his view on the implication to other DB plan sponsors.

One of our newsletter objectives is to inform our readers on recent developments that affect actuaries around the world. In this issue, we are honored to invite Carlos Arocha, Gayane Arsenyan, Mohamed Amrani, Francis Gota, and Cathy Lyn to share with us their local actuarial society developments of Armenia, Morocco, Ghana as well as the results of 2016 International Association of Consulting Actuaries (IACA) awards.

Qi Sun, FSA, CFA, is a Regional Actuary at Prudential Corporation Asia in Hong Kong. He can be contacted at *qi.q.sun@prudential.com.hk*.

Chairperson's Corner

By Graydon Bennett

Spring is a time of renewal and rebirth; an opportunity to look eagerly towards the summer and the fulfilment of a promise. Although, depending on who you ask, a dark four-year-long winter has only just begun … as we begin to work towards implementation of IFRS 17 in 2021.

As animals awaken from their winter slumber, financial reporting actuaries begin to emerge from their year-end bunkers. Rest assured, your council has not been hibernating over the winter months. We have been busy organising a number of sessions for the Life and Annuity Symposium which will take place shortly in Seattle. We are also planning for the 2017 SOA Annual Meeting & Exhibit to be held in Boston in October. We are on track to bring you a variety of sessions from around the globe, including two regions where the SOA has been focusing its international efforts: China and Latin America.

James Xu and Jack Zhu have been busy supporting the SOA Regulatory Resource team by sourcing regulatory information from all over the world. Regardless of your practice area and your location, I encourage you to pay a visit to this valuable and growing resource. If you notice that your local regulations have been omitted or overlooked, please get in touch with James or Jack who will be more than happy to enrich the resource by including a link. *https://www.soa.org/resources/regulatory-resource/default/*

I would also like to welcome Arpita Das to the council. Arpita is based in Ireland and brings to the council another truly international perspective; she is also one of the co-lead editors of *International News*. Arpita will be filling the vacancy created by the departure of Athena Tsouderou. My thanks goes to Athena for her contributions to the section during the time she spent on council.

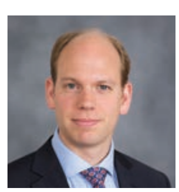
This edition of *International News* also marks the midpoint of the SOA sessional year. I hope to meet many of you at the SOA Annual Meeting & Exhibit. This meeting will also mark the end of my term on your council, along with Quintin and Arpita. If you have an interest in volunteering for the SOA and helping to move the International Section forward, I encourage you to run in the council elections. Council members serve for a three-year term, from October to October. It is a valuable way to build governance experience and to gain a deeper understanding of how the SOA functions. If you are interested in running for the section council, fill out the expression of interest form here: *https://www.soa.org/elections/section-member-interest-form/* before May 30, 2017.

Finally, I am delighted to announce the appointment of new Ambassadors around the world since our last update on the Ambassador Program:

South Korea:	Deok Jung Kim (Ambassador) Joseph Kim (Deputy Ambassador)
Hong Kong:	Simon Lam
Japan:	Jeffrey Simone

I would like to thank the retiring Ambassadors in these countries for their efforts over the last few years in promoting the actuarial profession in general and the SOA in particular, and for providing assistance to our members in those countries.

I wish you all the best for the summer! ■



Graydon Bennett, FSA, is a senior manager with BWCI Group in Guernsey in the Channel Islands. He can be reached at *gbennett@bwcigroup.com*.

Global Actuarial Mentorship Program: **Seeking Mentors Worldwide**

Actuaries Without Borders® (AWB) is seeking volunteers among qualified actuaries and academics to participate in a global remote mentorship program.

As a mentor you will:

- Participate in the development of the actuarial profession in countries with a lack of such resources.
- Build awareness of the actuarial profession and education through one-on-one relationships.

How it works:

- Mentors and mentees will be matched through a worldwide application process.
- Communication will take place remotely across applications of the mentee and mentor's choice. No travel required.
- Rules, guidelines and support will be provided by AWB and mentee's local actuarial association.

Note: This program is not intended to provide free consulting service, executive coaching, personal life coaching, nor career coaching, etc. It is restricted to non-commercial use.

Who can apply:

- Qualified actuaries and academics. No geographical restrictions.
- Priority will be given to current AWB members. Non-members are encouraged to apply for AWB membership prior to application.

Application:

Application forms and further details are available at the following URL: ***http://www.actuaries.org/index.cfm?lang=EN&DSP=AWB&ACT=GLOBAL_MENTORSHIP***

Complete the mentor application form at the above link and return to AWB (***AWB-MET@actuaries.org***).

If you have any questions or contacts (individuals and organizations) in developing countries who could benefit from this program, please do not hesitate to contact the AWB executive director, Renata De Leers (***awb-ed@actuaries.org***), or the project manager, Bosco Chan (***bosco.chan@prudential.com***).

Replacing the Replacement Rate: A Better Way to Determine Retirement Income Adequacy

By Dr. Bonnie-Jeanne MacDonald

The final earnings replacement rate—where 70 percent is often advocated as the "right" target—has been a longstanding and widespread measure of retirement income adequacy. Financial planners use this benchmark, as do actuaries and other pension plan advisers, academics, and public policy analysts. It underlies pension systems, drives research that determines whether populations are prepared or not prepared for retirement, and the backbone of retirement planning software.

But does it do the job that it is supposed to do? Will 70 percent of a worker's final annual employment earnings sustain living standards after retirement?

THE PROBLEM

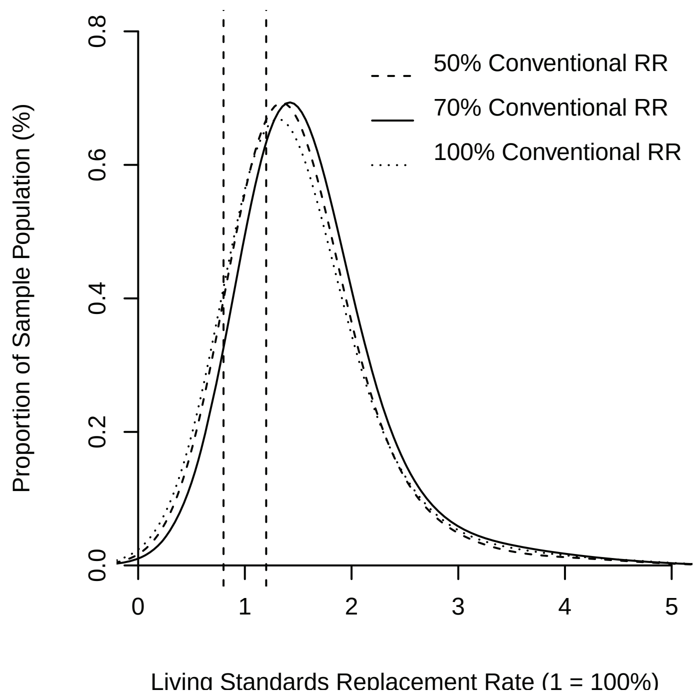
After an extensive SOA-funded literature review in 2009, I was unable to locate any empirical demonstration that the earnings replacement rate accomplishes its goal. That is to say, there is no study that shows that for a sufficient sample of real workers who hit the prescribed target of 70 percent, living standards are, in fact, approximately maintained after retirement. We therefore decided to test it ourselves.

In MacDonald, Osberg and Moore (2016),[1] we tested the conventional earnings replacement rate using one of the world's largest dynamic micro-simulation models of society—Statistics Canada's LifePaths dynamic population micro-simulation model. We asked whether those individuals from the 1951–58 Canadian birth cohort who attain roughly a 70 percent final employment earnings replacement rate at retirement actually achieve approximate continuity in their living standards.

We found that the conventional replacement rate is a poor metric of retirement income adequacy. Workers who hit this target were found to experience a wide range of living standards continuity after retirement, and we were unable to locate a 'type' of worker for whom the 70 percent target accurately predicts standard of living continuity.

Regardless of whether we looked at workers who hit a 50 percent earnings replacement rate at retirement, or a 100 percent earnings replacement rate, the distribution of living standards continuity into retirement looked nearly identical (see Figure 1). In fact, we found that the correlation between a worker's earnings replacement rate and living standards continuity after retirement is only 11 percent, making it an unreliable benchmark for retirement income adequacy.

Figure 1: Living Standards After Retirement



Source: MacDonald, Osberg and Moore (2016)

The issue is not intended to debate whether 70 percent is too high or too low. The earnings replacement rate fails because **a single year's employment earnings are not a reliable representation of a worker's living standard**—it relies on an inadequate measurement period (only one year), does not incorporate important components of consumption sources (such as home equity), and ignores household size (particularly children). These omissions are crucial in calculating living standards. These omissions interact, moreover, and the effect of improving one may not emerge without the others. Indeed, it is primarily owing to these significant and interacting omissions in the earnings replacement rate formula that there has been such a wide range of (often conflicting) reports on the retirement preparedness of populations and pension system reform impacts.

THE SOLUTION

After concluding that the conventional earnings replacement rate is not fit for purpose, I was committed to come up with an alternative, more accurate way of measuring retirement income adequacy that practitioners and analysts could adopt. I developed the Livings Standards Replacement Rate (LSRR).

Drawing from best academic practices, the LSRR determines how well a worker's living standards will be maintained after retirement by **comparing how much money a worker has available to support their personal consumption of goods and services before and after retirement.**

$$\text{LSRR} = \frac{\text{Money available to spend on personal consumption in retirement}}{\text{Money available to spend on personal consumption while working}}$$

The target then becomes 100 percent. At an individual level, some people will want to target a better standard of living after retirement (perhaps more travel), or will anticipate higher expenses after retirement (notably medical)—in this case, the target would be higher than 100 percent. On the other hand, many workers will decide to reduce spending after retirement (such as by shopping with greater efficiency and eating more at home), in which case they would target less than 100 percent. For general assessments of retirement income adequacy at a population level, however, the general goal is to ensure living standards continuity (that is, an LSRR = 100 percent).

The LSRR framework (outlined in our paper) is intended to provide a guide for academics, financial planners, employer pension plan advisers and policy makers to follow when analysing questions of retirement income adequacy for individuals or populations. Analysts invest time and effort in the study of retirement income adequacy, but an unreliable benchmark for "adequacy" not only effectively invalidates that effort, but it can lead to misleading conclusions. The LSRR offers a real alternative to the conventional replacement rate, and is bridging the gap between good science and industry need.

The LSRR calculation considers the entire family, includes consumption components comprehensively and covers a representative number of years. Having this framework available for analysts to reference will enable a more consistent measure of retirement income adequacy, so as to facilitate the interpretation, comparison and integration of findings across different analysis (between authors, over time and across nations). This would help the study of retirement income adequacy to move forward.

The LSRR provides an accurate, understandable, and consistent measure of retirement income adequacy, and this concept has

> Population ageing has led to widespread concern regarding retirement income adequacy, and now is time to adopt a better measure.

proved extremely useful to practitioners in serving their clients. In Canada, the LSRR is already being used in the financial industry—for example, Eckler Ltd. has employed the LSRR to evaluate plan designs and financial outcomes for over 100,000 Canadians (for an example of the LSRR being implemented in industry, see *https://www.eckler.ca/subpage-3-lsrr)*.

This work has been recognized for its academic merit, having won the 30th International Congress of Actuaries' Pension, Benefits and Social Security Scientific Committee Award Prize for Best Paper in 2014. It has also been published in a significant peer-reviewed academic journal, which can be downloaded without fee: *http://dx.doi.org/10.1017/asb.2016.20*.

The academic paper goes into much more depth and will interest readers wishing to know more about the LSRR and retirement income adequacy in general.

Population ageing has led to widespread concern regarding retirement income adequacy, and now is time to adopt a better measure. The LSRR has penetrated the Canadian financial industry, and has gained considerable traction internationally. If the LSRR can create the necessary paradigm-shift within the pension industry and study of retirement income adequacy, the benefit to the public is incalculable. ■

Dr. Bonnie-Jeanne MacDonald, Ph.D., FSA, is an academic researcher at Dalhousie University in Halifax, based in Canada. She can be reached at *bonniejeanne_macdonald@hotmail.com.*

ENDNOTES

1 Bonnie-Jeanne MacDonald, Lars Osberg and Kevin Moore. (2016). "How Accurately does 70% Final Earnings Replacement Measure Retirement Income (In)Adequacy? Introducing the Living Standards Replacement Rate (LSRR)." *ASTIN Bulletin - The Journal of the International Actuarial Association*, 46(3), pp 627–676, DOI: 10.1017/asb.2016.20. This paper is 'open access' meaning that there are no fees to access.

Latin America Committee

By Linda Priebe and Jim Toole

COMITÉ LATINOAMERICANO: EL DESARROLLO DE LA PROFESIÓN ACTUARIAL EN NUESTRO MISMO HEMISFERIO

Exciting times face the Latin America Committee as the SOA pivots to engage the southern hemisphere in key countries.

The Latin America Committee (LAC) was formed in late 2016 to implement the SOA's strategic objectives in the region. In 2014–2015, the Latin America Working Group performed exploratory research on insurance markets in the region, looking to identify potential opportunities for the SOA to participate and strengthen the profession. The group identified four countries to focus on initially (Argentina, Brazil, Chile, and Colombia)[1] and presented its recommendations to the SOA Board in March 2016, which were adopted. Later that year, the LAC was formed and had its first face-to-face meeting in Buenos Aires.

The committee will promote the profession and foster closer relationships in Latin America through joint projects that are of relevant and of mutual interest.

Latin America was chosen for a number of reasons.

- While the Latin American region includes significant emerging economies and financial services activities, it has a relatively small number of actuaries. Local associations vary in scope and availability of resources. This allows the SOA to have a "greenfield" that presents opportunities and challenges.
- It is geographically close to the SOA's primary base of operations in North America.

Committee members assemble on the steps of the University of Buenos Aries after a long day's work.

- It is a significant market for many North American employers.
- In contrast to other regions such as Asia, there is no significant presence of other international actuarial organizations.

Compared to the China Strategy, which was adopted by the board in 2014, Latin America presents a very different set of circumstances. Situations differ by country, but generally speaking, the actuarial profession is still growing and its recognition by national regulators varies greatly.

The committee will promote the profession and foster closer relationships in Latin America through joint projects that are of relevant and of mutual interest. The LAC will identify and flesh out professional development opportunities that further the actuarial profession in Latin America; develop and participate in research studies that are relevant to Latin America; and participate in meetings and events that raise the profile of the SOA in Latin America, Latin America within the SOA, and across regional actuarial and industry associations.

The objectives of the Latin America Strategy are as follows:

- Increase awareness of the SOA,
- Enhance skills of actuaries and the actuarial profession,
- Enhance the reputation and visibility of the profession, and
- Enhance the influence and effectiveness of actuaries in the region.

The committee identified its primary stakeholders as universities and its constituent students, employers, regulators, and professional trade associations. By building relationships with these groups, the committee believes that the SOA's objectives in Latin America will have a high probability of success. None of these objectives can be achieved without collaboration with local associations. These relationships are vital to the Latin America Strategy to enhance the SOA's presence in Latin America and strengthen its credibility to its Latin American audience.

The LAC is a subcommittee of the SOA International Committee. As such, it will collaborate with the International Section and the China and Greater Asia regional committees. The LAC has representatives from Argentina (Eduardo Melinsky), Brazil (Ronald Poon-Affat), Chile (Ramon Galanes), and Colombia (Luis Caro), and five members working in the USA (Gabriela Dieguez, Lisa Kuklinski, Linda Priebe, Ed Robbins and Jim Toole, Chair). Notably, the team includes three Ambassadors, including regional ambassador coordinator Javier Campelo.

It is no surprise that the LAC brings an expansive list of ideas. But like any organization, we face limited resources of time, efforts and budget. Prioritizing and managing the scope of our projects is essential.

Thus, the LAC formed four work-groups that enable us to focus on the responsibilities:

- Starting with basic education, we will understand local demand for pursuing SOA exams. This involves identifying and mitigating barriers to pursuing SOA credentials.

- For professional development, we will identify relevant continuing education events. We will leverage the SOA as a sponsor and seek SOA speakers and subject matter experts for these events.

- In the area of research, we will update regional mortality tables, seek to establish joint longevity research, and initiate other relevant projects of mutual interest.

- With ongoing communications, we will write articles in different publications, usher a survey to understand the issues facing candidates pursuing SOA credentials, and report back to the SOA board.

Meaningful progress towards the objectives of the LAC takes time and effort. We recall the earlier days of a similar initiative, 30 years ago, when Harry Panjer taught his first class in China. As the saying goes in Spanish, "Cosechando los beneficios de trabajo arduo." Reaping the benefits of hard work. ■

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ENDNOTES

1 Mexico is not included in this effort as the SOA is grateful to have longstanding, strong, and frequent interactions with the Mexican actuarial profession through NAAC and other organisations.

Insurance Accounting: The Shape of Things to Come

By Graydon Bennett

Accounting standard setters have been debating the structure for accounting for insurance for many years. The International Accounting Standards Board have now voted that a new standard, IFRS 17, should be effective from January 2021.

This may seem like a long time away, but the changes required are substantial and prior year comparatives will be expected. Therefore, it is prudent for those involved in insurance to be aware of the issue and the potential implications.

PERCEIVED NEED FOR CHANGE

The current standard, IFRS 4 for insurance contracts, is an interim standard and permits a wide variety of practices. It includes a temporary exemption from the requirement that accounting policies should be relevant and reliable.

The limitations of the current approach include a lack of transparency and comparability between products, companies and across jurisdictions.

HISTORY

The potential changes have been through an extensive process of review and consultation.

In effect the development has taken around 20 years (to date) which reflects the concerns over the complexity of the requirements and the potential impact.

In view of this sensitivity, the process still will involve an extensive review of the final proposals. The standard is expected to be issued in the first half of 2017 which should give a minimum of 3.5 years for entities to prepare for implementation.

NATURE OF THE CHANGES

The changes will ultimately be defined when the standard is issued. However, the key principles have been debated in the various draft documents hence the outline is reasonably clear. The standard contemplates three models depending on the nature of the contract written. They are:

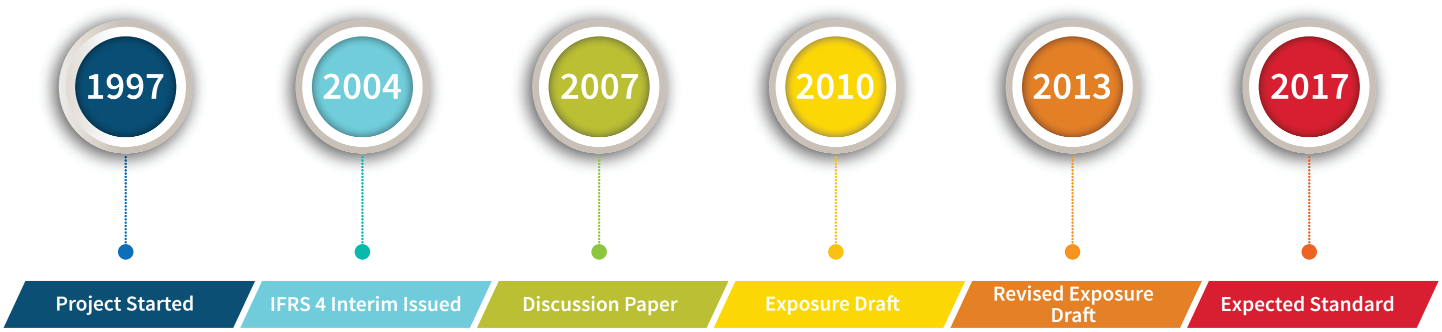
- A building block approach that will be the default and cover most long-term business
- A premium allocation approach that will probably be used for short-term business
- A variable fee approach that may apply to contracts which participate in specific pools of assets and will probably be used for both unit-linked and with-profit contracts

The building block approach has many similarities to Solvency II in requiring discounting with allowance for risk and market consistent valuation of options and guarantees.

However, it is likely that there will also be differences of interpretation and application. For example, day one profits may be eliminated under IFRS 17 unlike the position under Solvency II.

It is also worth noting that insurers may elect to defer implementation of IFRS 9 (Financial Instruments) to coincide with their implementation of IFRS 17.

Figure 1



CHALLENGES

The changes proposed are likely to involve challenges for all those involved in creating and using insurance accounts. The producers of accounts will have to adapt to a new regime with requirements very different to the current regime. Given the differences, there will be a need to collect additional data and complete new calculations.

It is likely that for many companies, the process of collecting additional data could take some time. The precise data needed will have to be defined and the collection process specified and tested. Companies will the then need to specify the new accounting calculations which will also need to be tested.

While some elements of the new regime bear some resemblance to Solvency II, the approaches are not the same. In addition, the application of the new standard will encompass insurance companies not currently required to report under Solvency II.

The new style accounts may offer greater consistency and comparability for users. However, the process is more complex and the user will need to understand the reasons for changes and the implications.

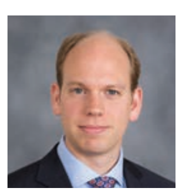
SUMMARY

The evolution of the new accounting requirements for insurance companies has already taken over 20 years. This reflects the complexity of a project that has to meet the needs of varying types of insurance.

The expected changes are summarised above but will only be finally known when the details are published.

For long-term business, the changes are likely to be fundamental and akin to the changes needed for Solvency II. For short-term business, the changes to adopt the premium allocation approach may not be so dramatic but will still require review.

Implementation is still around four years away, but given the challenges, those involved would be wise to start considering the issues once the final terms are issued.



Graydon Bennett, FSA, is a senior manager with BWCI Group in Guernsey in the Channel Islands. He can be reached at *gbennett@bwcigroup.com.*

Actuaries in the C-Suite

By Bill Rearden

Laura Bennett, FSA, CFA, presents at the "Actuaries in the C-Suite" interactive forum session.

Editors' Note: This article originally appeared in The Stepping Stone, Issue 65, copyright © Society of Actuaries. Reprinted by permission.

At the 2016 Society of Actuaries (SOA) Life & Annuity Symposium in Nashville, Tennessee, the Entrepreneurial & Innovation, Actuary of the Future, International, and Leadership & Development sections co-sponsored the "Actuaries in the C-Suite" interactive forum session. A guest panel of actuarial leaders presented the challenges and opportunities associated with managing a company in today's global marketplace.

In order to move into corporate management roles, actuaries must bridge the gap between day-to-day firm activities to take an overarching view of the corporation. This session included discussion on balancing the needs of internal vs. external stakeholders, as well as responsibilities such as setting company goals, formulating appropriate strategies, and understanding the organization's presence internationally. Following are highlights from the session.

PANELISTS

- Jason Alleyne, FSA, FCIA, FIA, Co-Founder and COO, Besurance Corporation
- Laura Bennett, FSA, CFA, Co-Founder and CEO, Embrace Pet Insurance
- Michael Smith, FSA, CFA, MAAA: CFO, Voya Financial

MODERATOR

Kelly Hennigan, FSA, CFA, 2015–2016 SOA Leadership & Development Section chairperson.

COORDINATOR

Bill Rearden, ASA, Co-Founder and strategy consultant at Ironbound Consulting Group.

ACTUARIAL ROLES

Q: What are the obvious C-suite roles for actuaries? What are the less obvious but still possible roles?

Michael: The obvious roles, many of which actuaries have held, are chief risk officer and chief financial officer. However, I don't view the actuarial designation as what drives where you might have the potential to go in the C-suite. I think it's more about what you aspire to achieve. It starts with how you build on your skills as an actuary, and then grow from there.

Q: How frequently do you see actuaries in board and C-suite positions?

Laura: This is the Life & Annuity Symposium and this insurance area is definitely dominated by actuaries in senior positions. In other insurance areas, like property/casualty, there are far fewer actuaries in the C-suite. It's not, "you're an actuary; therefore you can think of yourself as being entitled." Culture is important and what you bring to the role.

Q: If you have an interest in being on a board, or ultimately getting on a track to be on a board, are there any tips as to how to go about doing so?

Michael: I'd suggest starting with ways you can begin to build the experience of what it's like to be on a board. There are many opportunities to get that experience, such as a condominium association or a nonprofit board. Many boards are looking for people with experience and skills that can add value to the organization. Think about how and what you can bring to add that value to the board, whether it be your understanding of finance, insurance or other professional skills. From those initial board memberships, you can look for industry and professional opportunities. Not unlike networking to advance your career, think about ways you can leverage your network to learn about and pursue board opportunities. It's harder to get onto one if you're just a name on a piece of paper, because there are a hundred names on a list, so networking is really important.

SKILLS AND EXPERIENCES

Q: How do you get leadership experience, especially working in a technical role while going through the exam process?

Jason: Think through what skills you can take from one field, and look at their analogy or application in another field. A lot of leadership training is looking outside of oneself and looking at lessons learned in other areas. What you'll find is that leaders have a vision of how their team wins.

Q: Do you think the days of being a technical actuary are numbered?

Laura: Gone are the days of the technical person who knows nothing about broader business. I do think that even if someone is very technical, they must have a broader understanding and provide the best work in context.

Q: Are there any additional designations or qualifications that you think make actuaries more attractive?

Jason: Whatever journey you are on, the journey will define what you need to learn. I did a lot of traveling; I have worked in Barbados, Jamaica, Canada, U.S., U.K., and stints in Scotland. The journey is whatever it is. Even if you don't get the designation, but all you did was read the materials and started to speak the language of the communities you were in, that is going to advance how people perceive you. I worked in all these countries that speak English, but they speak English differently, and use technical terms differently. They speak with their own colloquial perspectives. Learning is very community-focused.

Q: During the first decade of your career where do you draw the line between diversification and specialization in a career?

Laura: I'm a big believer of gathering experiences, which is why I strongly urge people to go international for a bit. There's nothing better than that kind of experience to open your eyes. You learn a lot, but also your reputation is enhanced. At some point you have to decide what direction you are going, and what it is you really want to do. It could be general, such as "I would like to run a company," "I want to be in the C-suite," or "I prefer to leave and work at a consulting firm." Whatever it is, you can take what you have done and start to hone it more directly to what you want to do.

Michael: What Laura says is really true. Figure out what you want to be. What has driven me is the desire to learn new things, so that has led me to a fairly diverse background. I didn't set out to be what I am doing today; I set out to learn new things, and it led me here. The other thing I would say is: Be patient. It doesn't happen overnight. I was in mostly technical roles for the first 12 years of my career, and then I found myself taking on broader leadership roles.

Q: Beyond technical skills, what advice or insights can you share in transitioning from a very technical actuarial role to a more high-level position?

Michael: Everybody's "how" is different. I think people with a technical background reach a plateau and think the only way to make more money or get more responsibility is to become a manager. If you want to be a good manager, then you have to take the time to invest in it. You'll need to be focused on making sure your people are in the right jobs, that they are growing and developing, and that you are creating a team. Recognize that as you move into a leadership role, all the technical stuff—to a certain extent—kind of goes away. It gave you a strong foundation and will serve you well in the future, but it will no longer be the only thing you are going to be able to rely on as you advance in your career.

> Gone are the days of the technical person who knows nothing about broader business.

Laura: I would just add—with any role—whatever your next step is, to just start doing it so that people see you that way. You have to be perceived as a leader before you can be one.

Michael: I would really echo that. As someone who tries to evaluate talent now and assess who is going to be able to take on new roles, that is a big part of it. If I look at someone and can't see them standing in front of a room of 400 people leading them through a business situation, then I'm not going to promote them. If leading large teams is something you aspire to achieve, look for the opportunity to build that experience and seize the opportunity when it comes, because it isn't going to be just given to you.

Jason: Just to pick up on some of that, I like the idea that you start at the beginning, start small, start where people are willing to give you a bit of a forum. Accept that things are not black and white, and bring insight. The personal journey is what makes the insight.

Q: Are there any particular experiences you would recommend actuaries seek out?

Laura: We [actuaries] are very strong in what we know, and not so strong in the things we don't know. But I don't know if we know what we don't know. You have to stretch yourself. I think that is one of the best things you can do, and then you realize what you don't know. Taking an international posting is a bit more of an extreme version of that, but it keeps you on your toes; you have to think about things differently.

Michael: Learn to distinguish the general, nice feedback from real, genuine feedback, and cultivate the latter. Take it to heart. It is hard to get people to give honest, direct feedback. Find people who will give you that, find companies that cultivate a culture like that, and use it to better yourself. That is really important as you go forward.

Laura: When I qualified as an actuary I was petrified of speaking in public. You wouldn't think it now, but I really was. I had no experience at it and avoided it like the plague. So I ended up taking a class at a local high school, actually in Ireland, where no one would know me. Public speaking will help you in speaking to anyone who causes you nerves and anxiety. Whether it be presenting to the senior management or in front of a board, just being able to speak is very helpful, and I would do it sooner than later.

NETWORKING

Q: In smaller companies, certain roles and responsibilities may come faster than in larger organizations. How does one balance level of responsibility vs. years of experience?

Jason: You have to reach out to your network. When I took this role three years ago, I literally met as many CEOs as I could. You need to look to other people and look for those other people—the experts who are going to help you be a better you.

Laura: Find a variety of people, because each one will have their own value. Just ask. People are very generous when you say, "This is what I'm trying to do, and I would love to take you for coffee and talk about it."

Q: Laura mentioned people are willing to network and volunteer their time to talk to others. How does one best prepare for those conversations?

Jason: Michael made a good point earlier—first start with what you want, a vision of the next five years, or even the next three years first and then the next five years. I prepared my map by writing and reading, then I started to ask people in my own network, "I want to speak to someone like this. Do you know this type of person?" or "Would this type of person be willing to speak to me?" What I found, to Laura's point, when you put those feelers out, people actually respond. I met with at least five CEOs in a short period of time just by asking them.

CAREER PATH

Q: We have talked here about developing skills when taking on new roles. To what extent have you needed to de-emphasize your actuarial credential?

Jason: As you work through different communities, whether leadership communities or executive boards, or whatever management team that you are in, there is a language of that group. It is not about de-emphasizing; it is more about speaking the language of the community.

Michael: I happen to have an actuarial background, but my professional path has taken me to a different place. So I agree completely with Jason–don't worry about it as de-emphasizing or avoiding. You are the culmination of everything you have done up to that point. Take advantage of what you have.

Q: Can you share with us a difficult challenge or choice that you made?

Laura: Starting a company from scratch while raising a family; I can't think of anything more challenging. I think as actuaries our skills are very well-suited to new ventures—you have to work with very little information.

Michael: Careers take any number of paths and are influenced by not hundreds but thousands of things. My degrees are in Russian studies and economics, and the path I took was certainly not linear, but it began by pursuing what I was passionate about and what I liked to do. Learn what makes you tick, then make your career a part of that. If being in the C-suite is something that makes you tick, great, but think about it as a journey.

INDUSTRY

Q: How do you stay on top of your competitors? How do you keep track of current news and current events?

Jason: Whenever we see a new a startup, or a new competitor, or even an incumbent, we map ourselves against them as a differentiator, being very clear on how our vision and execution connect. That is what we think and talk about a lot every day.

Laura: We came into our industry when there were seven other companies doing pet insurance, even though it was not very well-known. We designed our product and service to be valuable, where people have an amazing experience, and a very personal and not transactional relationship. We have these conversations as a company, because everybody at every level of our organization is hearing the comments about what competitors are doing and what their products are.

Q: Any thoughts or comments on technology, social media and external forces, and how they impact your business view? How do you adapt to them?

Michael: Technology has unquestionably impacted our industry. Some may find this disruption uncomfortable, but it can add value to the work we do and to the customers we serve. We are here to help people navigate through really difficult situations. Technology gives us an opportunity to expand how we think about the consumer of insurance, the person helping that customer and what would make their experiences better. If we continue to view technology as something that can enable how, where and when we help our customers, then we can take advantage of the disruption.

Laura: Technology in general has just changed the world so much, even just the ease of doing business. People want things to be very easy, to control their experience, the products they buy, and to personalize it. That changes everything. People are much more likely to believe a review site than anything a company has to say, whether or not it is an actual portrayal. So, we spend a lot of time managing our online presence.

The Entrepreneurial & Innovation, Actuary of the Future, International, and Leadership & Development sections thank Jason, Laura and Michael for joining us at the 2016 SOA Life & Annuity Symposium for the "Actuaries in the C-Suite" session. We look forward to sponsoring similar future sessions at SOA meetings in 2017 and beyond.

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Actuarial Development in Armenia

By Carlos Arocha and Gayane Arsenyan

From the left to the right: Grisha Khachatryan, Armen Vardanyan, Lilit Khachatryan, Carlos Arocha, Gayane Arsenyan, Anahit Gulyan, Nshan Potikyan

Amidst the highlands surrounding the mountains of Ararat in Central Asia, lies Armenia, a fascinating country, rich in history and tradition. Modern Armenian economy is based on industrial services, such as textile manufacturing, machinery, and electronics. It also relies on the support from Armenians living abroad. Your co-author (Arocha) would witness a vibrant urban life in Yerevan, the country's capital, despite the subzero temperatures of January 2017. He was honored to conduct a five-day seminar to help prepare local actuaries for SOA Exam C,[1] "Construction and Evaluation of Actuarial Models."

Let's take a step back. The actuarial profession in Armenia is not fully developed. In 2008, USAID in association with Central Bank of Armenia and the Institute and Faculty of Actuaries (IFoA) implemented "Actuarial Education," a program in two stages: basic education (eight modules) and advanced education (12 modules). All but three modules were taught by IFoA actuaries; the rest were delivered by local experts. Most students that graduated from these courses now work in the Armenian financial sector. Some of them work as appointed actuaries; others are employed in government agencies; and a few perform risk management functions in the banking industry.

As is the case in many countries in the world, one of the fastest ways to start building actuarial capacity is to motivate junior actuaries and young graduate students to write the preliminary SOA exams. The fact that a few exams are administered via computer-based testing[2] makes it easier for candidates to engage in this venture. Even if candidates do not complete the ASA requirements, they typically find it useful to apply the gained knowledge to their day-to-day work, and enrich their experience.

Several universities are planning to offer actuarial studies at the graduate level, but currently actuarial undergraduate and graduate programs are available only in the Yerevan State University, Faculty of Mathematics and Mechanics. Local actuaries belong to the Actuarial Society of Armenia,[3] an associate member of the International Actuarial Association. Notably, an Armenian actuary (and your other co-author, Arsenyan) has served on Actuaries Without Borders[4] (AWB), a section of the IAA. She started with AWB in 2013 and now is the vice chair.

The Exam C preparation course was a remarkable experience. The audience was quite familiar with the topics included in the exam syllabus, so the emphasis was geared to problem-solving, and the discussion of exam-passing techniques. A few R scripts were also presented to pique the attendees' interest on actuarial applications and insights. Credibility Theory motivated lengthy but intellectually rewarding reviews.

It is evident that this preparation course was not an isolated project, but part of a large effort to grow the profession. It is expected that a few candidates will successfully pass some of the preliminary exams in 2017, and one or two candidates will be awarded SOA associateship within the next couple of years. ■

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ENDNOTES

1 Exam C will be replaced on 1 July 2018 with the "Short-Term Actuarial Mathematics" exam.

2 Currently, exams P, FM, MFE, and C are offered via computer-based testing. Effective 1 July 2018, these exams will be renamed and their content will be adjusted, and a fifth exam, "Statistics for Risk Modeling" will also be offered under this modality.

3 *http://actuaries.ysu.am/*

4 Actuaries Without Borders is one of the sections of International Actuarial Association, which promotes the public good globally, focusing on countries that lack the actuarial resources needed to create productive, sustainable, and stable markets for insurance and other risk mitigation, and the means to develop the actuarial profession, in support of a strategic objective of the IAA to support the development, organization and promotion of the actuarial profession in areas of the world in which it is not present or is not fully developed.

Purchase Accounting for Insurance Business Combination under China-GAAP from an Actuarial Perspective – Part II

By Vincent Y. Tsang, Bonny Fu, and Florence Ng

BACKGROUND

In Part I that was published in the January issue of *International News*, we discussed several theoretical topics regarding purchase accounting under China-GAAP. In Part II, we will discuss the following practical issues:

- Differences in product classification under China-GAAP and IFRS,
- Unbundling of insurance contracts,
- Allocation of acquisition expenses among components of the unbundled contracts,
- Relationship between residual margin, best estimate liability (BEL) and risk adjustment (RA) due to assumption changes,
- Grouping of value of business acquired (VOBA) for amortization, and
- Shadow accounting

PRODUCT CLASSIFICATION UNDER CHINA-GAAP

Under China-GAAP, insurers are required to perform a test of significant insurance risk for all of its insurance policies upon sales and subsequent reporting periods. Such tests should be performed separately for base policies and riders. If an insurance or reinsurance policy passes the test, it should then be accounted for using accounting standards for insurance contracts. Otherwise, other applicable accounting standards should be applied.

To perform the test, the insurer must first determine whether the risk transferred by the policy is a pre-existing insurance risk with commercial substance. If the transferred risk is not an insurance risk, such contract cannot be considered as an insurance contract. Second, the insurer calculates an insurance risk ratio[1] for each non-annuity contract.

If the insurance risk ratio at one or more renewal years equals or exceeds 5 percent, the insurance risk is regarded as significant and the policy is qualified as an insurance contract under China-GAAP.

For annuity policies, longevity risks can be significant. Therefore, for practicality and simplicity purposes, policies that transfer longevity risk are usually categorized as insurance contracts.

For reinsurance policies, the test is slightly different from that for insurance policies. The ceding company first determines whether the transferred risk is a pre-existing insurance risk with commercial substance. Then, the insurer computes the reinsurance risk ratio.[2] If the above ratio equals or exceeds 1 percent (not 5 percent as used for direct business), the reinsurance policy is qualified as reinsurance contract under China-GAAP.

Even if a policy is considered as an insurance contract at inception, the insurer is required to continually monitor the policy's status at each subsequent valuation date. If warranted, the insurer may re-classify the policy as a non-insurance contract.

As indicated in one of the examples illustrated by China Insurance Regulatory Commission (CIRC), if the insurance company expects most of the insureds would choose the annuitization based on the guaranteed annuitization rate, the company is subject to longevity risk and the policies are considered insurance contracts.

Based on emerging statistics and external interest rate environment, the company recognizes at a subsequent date that most insureds would not choose the annuitization option due to low guaranteed annuitization rate. The insurance company may re-evaluate the significance of the longevity risk of the policies and consider them non-insurance policies.

PRODUCT CLASSIFICATION UNDER THE 2010 AND 2013 IFRS 4 PHASE II EXPOSURE DRAFT

There are minor differences between product classification guidance under China-GAAP and that in the 2010 and 2013 IFRS 4 Phase II exposure draft ("2010 ED" and "2013 ED" respectively). Paragraphs B1–B22 of 2010 ED provide guidance on the definition of an insurance contract by addressing items such as "uncertain future event," "payment in kind," "insurance risks and other risks." These guidance assists insurers to determine the commercial substances of a policy.

Paragraphs B23–B31 of 2010 ED further provide guidance on the criteria to determine the significance of insurance risk. According to paragraph B24,

> *"Insurance risk is significant, if and only if, an insured event could cause an insurer to pay significant additional benefits in any scenario, excluding scenarios that lack commercial substance (i.e., have no discernible effect on the economics of the transaction). If significant additional benefits would be payable in scenarios that have commercial substance, the condition in previous sentence can be met even if the insured event is extremely unlikely or even if the expected (i.e., probability-weighted) present value of contingent cash flows is a small proportion of the expected present value of all the remaining cash flows from the insurance contract."*

Thus, under 2010 ED, a policy can be considered as an insurance contract if the insurer can:

a. Identify one extremely unlikely scenario which can cause the insurer to pay significant additional benefits, or

b. Determine whether the ratio between (i) the expected present value of contingent cash flows; and (ii) the expected present value of all remaining cash flows is greater than a threshold percentage.[3]

Due to the differences in definitions of insurance contract, a policy recognized as an insurance contract under 2010 ED may not be recognized as an insurance contract under China-GAAP or vice versa.

Paragraphs 32–33 of 2010 ED specify that a contract that qualifies as an insurance contract shall remain as an insurance contract until all rights and obligations are extinguished. As mentioned earlier, under China-GAAP, an insurer is required to continually monitor the policy's status and may reclassify an insurance contract as a non-insurance contract, if warranted.

Due to these differences in product classifications, a company preparing China-GAAP for the first time due to purchase accounting should assess whether the product classification under its existing accounting policy is consistent with that under China-GAAP.

UNBUNDLING OF AN INSURANCE CONTRACT

Paragraphs 8–12 of 2010 ED provides guidance that an insurer should unbundle an insurance contract into different components if the investment and the service components are not closely related to the contract's insurance component. An investment component is considered to be not closely related to the insurance component if it reflects an account balance that meets the following conditions:

a. The account balance is credited with an explicit return; and

b. The crediting rate is based on the investment performance of the underlying investments such as a specific pool of investments for unit-linked contracts, a notional pool of investments for index-linked contracts or a general account pool of investment for universal life contract.

Examples of unbundled components include embedded derivatives that can be separated from the host contract in accordance with IAS 39 as well as goods and services components that are not closely related to the insurance component.

Based on the comments from the industry regarding unbundling, paragraph 10 of 2013 ED updates the unbundling guidance. An insurer should only separate an investment component from its host contract if the investment component is distinct. Paragraph 32(b) of 2013 ED further indicates that if the lapse or termination of one component in a contract causes the lapse or termination of the other components, the insurer should apply the Insurance Standard to the whole contract (i.e., not unbundling). Under this guidance, a universal life contract probably should not be unbundled. For more information, please see the illustrative example in paragraph IE3 of the 2013 ED.

Paragraph 10(d) and BCA208 of 2013 ED also prohibit insurers from separating components when it is not required.

China-GAAP guidance, on the other hand, requires an insurer to unbundle the contract into components if the insurance risk and the other risks can be separated and independently measured. If the components cannot be separated and the insurance risk is significant, the entire contract is considered as an insurance contract. If the insurance risk is not significant, it should not be recognized as an insurance contract.

The exact definition of "separable," however, is not provided.

We study the market practice in China and it appears that most companies follow the guidance provided in paragraphs 8–12 of the 2010 ED. That is,

- Universal life, unit-linked contracts and other contracts which have an explicit account value are unbundled into investment component and insurance component;
- Premiums, premium loads, contract charges and acquisition expenses are fully allocated to the investment component;
- Cost of insurance charges which are deducted from the account value are considered as cash inflows of the unbundled insurance component; and
- Whole life or participating policies which do not have explicit account value are not unbundled.

While we can debate which way is a better way to unbundle an insurance contract, the current market practice in China provides a head-up for companies preparing China-GAAP for the first time.

After a contract is unbundled into its investment and insurance components, the next step is to determine the BEL, RA and risk margin (RM) of the insurance component. For products which are priced with proper cost of insurance (COI) charges, the insurance component should be self-supporting. However, if the product is priced with low COI charges and that the investment spread is used to subsidize the COI charges, the insurance component may become an onerous contract and require loss recognition even when the contract, as a whole, is profitable.

When such a situation happens, an insurer may consider combining the COI charges with other charges collected from the policy as cash inflows for the insurance component so that the present value of the combined charges is greater than the present value of cash outflows (e.g., death benefits).

For products which are priced with minimal contract charges or no COI charges, using the method mentioned above may still result in onerous insurance component.

An insurer facing this issue may consider leveraging on the total assessment approach mentioned in the Statement of Position 03-1 under USGAAP for the guaranteed minimum death benefit (GMDB) of variable annuity contracts. Under the total assessment approach, the sum of the investment spread and other charges collected from the variable annuity contract is used as the revenue stream to reserve for the GMDB. For a universal life policy with low or no COI charges, the insurer may study the pricing document and identify the amount of interest spread which is priced to subsidize the COI charges. From an economic perspective, allocating an appropriate portion of investment spread as additional cash inflows for the insurance component and avoid loss recognition appears to be a viable solution. However, such practice is not common in China. Instead, companies would reprice the product and minimize the net amount of risk.

ALLOCATION OF ACQUISITION EXPENSES

An aftermath of unbundling components of a policy (e.g., universal life policy) is the allocation of premiums, acquisition expenses, charges etc. among the components. A common market practice in China is to allocate all premiums, acquisition expenses, and policy charges such as front-end load and administration charges to the investment component. The insurance component only receives charges (e.g., COI charge) from the investment component as cash inflows and pay the death benefits as cash outflows.

According to China-GAAP guidance on liabilities for non-insurance contracts, the liability of the unbundled investment component of a universal life policy is the account value less the unamortized net acquisition expense. The amortization is based on an effective interest rate method and the net acquisition expense is the acquisition expense at issue less the applicable initial policy charge such as initial premium load.

Normally, acquisition expense is greater than initial policy charge such that net acquisition expense is positive. If the policy charge is greater than the acquisition expense, the guidance does not specify whether the insurer can recognize the profit or capitalize it as an unearned revenue liability. As the insurer has yet to complete the earning process, the insurer may consider recognizing the negative net acquisition expense as unearned revenue liability.

In practice, many companies simply hold the account value as the liability and let the acquisition costs and policy charges flow through the P&L.

RESIDUAL MARGIN AND CHANGES IN BEL AND RA

In Part I of this article, we discussed two different ways to treat residual margins (RM) at the time of acquisition. One possible way is to maintain the existing RM and define book value of liability as the sum of best estimate liability (BEL), risk adjustment (RA) and RM. In this case, both the actuarial reserve and the VOBA will be inflated by the RM.

An alternative is to set RM to zero so that the resulting VOBA is not inflated.

The market practices in measuring RM in subsequent valuation dates vary among companies. Some companies follow the guidance in 2010 ED such that RM is determined at inception and is not adjusted subsequently. If there are any changes in BEL and RA in subsequent periods, the changes in BEL and RA due to assumption changes would flow through the income statement.

Some companies in China, on the other hand, do not follow this “locked-in” approach. Instead, they follow the guidance in paragraphs 29–32 of 2013 ED where changes in BEL and RA in subsequent periods could be absorbed by changes in RM. For companies which define RM as zero in the initial PGAAP balance sheet, it does not necessarily mean that RM cannot be positive in subsequent measurement. An acquirer must define clearly in its accounting policy whether it follows the guidance in 2010 ED or 2013 ED on RM. That is, whether the changes in BEL and RA due to assumption changes should be reflected in income statement or absorbed by RM.

GROUPING OF VOBA FOR AMORTIZATION

If the acquired company has many blocks of business, there could be many VOBAs for amortization. If the definition of the unit of account is at a lower level, the number of VOBA can be in thousands and it would be a practical issue for companies to amortize a large number of VOBAs and monitor their reasonableness.

For blocks with immaterial VOBA, the acquirer may consider assigning their VOBA to other major blocks of business for practical reasons as long as the inclusion of these small VOBAs would not materially affect the profit emergence of the bigger block.

RELATIONSHIP BETWEEN DISCOUNT RATE AND SHADOW RESERVE

As all assets and liabilities are marked to market at the acquisition date, the book values of the invested assets will be replaced by the market value at the acquisition date and the previous book yields will also be replaced. The change in book yield has important implication on the reserve of par business because the discount rate is based on the company’s projected future earned rates and reinvestment rate.

DISCOUNT RATE FOR PARTICIPATING BUSINESS

China-GAAP literature is silent on whether the discount rates for par business shall be based on the book yield or the market yield of the supporting assets. From a matching of investment income and interest expense perspective, it would make sense that the discount rates should be consistent with the yields on supporting assets based on their asset classification. That is, if all of the supporting assets are classified as held-to-maturity (HTM), the discount rates should be based on their book yields.

Due to the lack of clear guidance, if the supporting assets are a mixture of HTM and available-for-sale (AFS) assets, it is not clear whether the company should simply use the book yields of the supporting assets regardless of their classification or a blend of book yields and market yields. It would seem to make sense to discount the future benefits using the blended yield rates.

If the discount rates are based on blended yields, any unrealized capital gain or loss (URGL) would affect the market yields of AFS assets and the resulting discount rates. The change in reserve due to the change in market yield would partially offset the change in market value of AFS assets on other comprehensive income (OCI) and equity.

If the discount rate is based on book yields even when some of the supporting assets are classified as AFS, the URGL of the AFS assets would then directly impact the equity as the change in market yields would not affect the discount rate and the actuarial reserve.

NON-PARTICIPATING BUSINESS

The discount rate for non-participating business (such as insurance component of universal life or term insurance) is based on the 750 days moving average of Chinese national debt yield and liquidity premium. Thus, it is independent of the yield rates of the supporting assets.

If some of the supporting assets are AFS assets, the URGL would directly affect the OCI and the equity.

UNREALIZED CAPITAL GAIN/LOSS AND SHADOW ACCOUNTING

Shadow accounting is a common concept under IFRS to mitigate the impact of URGL on income and equity. Currently, there is no shadow accounting guidance under China-GAAP.

For participating business, if the URGL is recognized and the amount is expected to be shared between policyholders and shareholders, a company may consider setting up a shadow reserve adjustment (e.g., 80 percent of the URGL) to account for future dividend changes due to the URGL.

For non-participating policies such as term insurance, the URGL would not be shared with policyholder in terms of dividends. As there is no DAC under China-GAAP, the shadow DAC approach under US GAAP is not applicable. Thus, shadow accounting may not apply for non-par business and URGL may directly affect the OCI and the equity.

CONCLUSION

We are only at the initial stage of discussing issues related to preparing PGAAP under China-GAAP. The guidance from CIRC will continue to evolve and become clearer with more actual cases. In addition, CIRC may incorporate the updated provisions of IFRS 17 into the future China-GAAP. Refinements to the actuarial processes would be inevitable.

This article (Part I and II) is intended to initiate discussions among actuaries rather than to provide strict answers. Practitioners are encouraged to further discuss this subject in future professional publications and conferences.

Disclaimer: The views reflected in this article are the views of the author and do not necessarily reflect the views of the global EY organisation or its member firms.

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ENDNOTES

1 Insurance risk ratio = $\left(\frac{\text{Benefit paid by the insurer should the insured event occur}}{\text{Benefit paid by the insurer should the insured event not occur}} - 1\right) \times 100\%$.

The denominator refers to the surrender benefit or maturity benefit. For non-life contracts, it refers to surrender benefit or the amount paid by the insurer when the contract is terminated.

2 Insurance risk ratio for reinsurance policy =

$$\left(\frac{\sum \text{Present value of the losses suffered by the reinsurer under a net loss scenario x probability of the net loss scenario}}{\text{Present value of reinsurance premium received by the reinsurer}}\right) \times 100\%$$

3 The threshold percentage should be based on the insurer's internal accounting policy.

4 The sharing percentage should be based on the policyholder reasonable expectation.

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The life section wishes to welcome you to the Colloquium "Long-Term Saving in a Ageing World", run under the auspices of the International Actuarial Association. This event is to be held in Barcelona, Spain, 23 and 24 October 2017 and organized by the Col·legi d'Actuaris de Catalunya. While longevity may be heralded as great news for mankind, it nevertheless lays down a major challenge to both private and public pension schemes, the life insurance industry as a whole and therefore the actuarial profession itself. In this event, entitled; "Long-Term Saving in a Ageing World" we aim to take a closer look at the matter mentioned above and the repercussions implied by it. For this purpose we are privileged to count upon the participation of the following specialists on the subject: Dr. Nicholas Barr, Professor at the London School of Economics and Dr. Stéphane Loisel, Professor at the University of Lyon.

October 23–24, 2017

www.actuaries.org/barcelona2017/

The Actuarial Society of Ghana Celebrates its 20th Anniversary

By Francis Gota

Group picture of all participants including invited speakers and guest of honor for the Anniversary Convention, Commissioner of Insurance.

On February 2, 2017, The Actuarial Society of Ghana (ASG) held its 20th Anniversary Convention at the British Council Auditorium, Accra-Ghana with theme "The Role of the Actuary in Economic Development." The event was graced with the presence of the Commissioner of Insurance, Miss Lydia Lariba Bawa.

In attendance were 118 participants from the insurance, pensions and banking industry in addition to the academia and development partners. Representatives of sister actuarial associations in the sub-region such as Togo, Burkina Faso and Nigeria were are also present at the convention.

Renata De Leers, Executive Director of Actuaries Without Borders (AWB), a section of the IAA, presented on the Overview of AWB and how it operates. Speaking on national development issues, Schalk Van Tondar of Milliman, the keynote speaker delivered "The Role of Actuaries in Value Creation and Sustenance of Developing Economies," whereas Joseph Poku of Social Security and National Insurance Trust (SSNIT) and Seth Eshun of the National Insurance Commission (NIC) presented on the "Ghanaian Mortality Table, Status and Way forward" and "Actuarial Capacity Development in Ghana" respectively. Participants were highly interested in these insightful sessions, which attracted a lot of questions and comments. Ortopah Kojo Botchey from SCOR Switzerland talked on "Critical Consideration of Non-Life Insurance Reserving." Finally, the last two speakers, Kofi Sarfo Ntim and Kojo Essel-Mensah, presented on "Valuation Data Preparation" and "A Computable General Equilibrium Model for Banking Sector Risk Assessment" respectively.

In her keynote address, the guest of honor expressed her admiration for the milestone achieved by the ASG and the recognition that its members are gaining in the financial service market due to their significant contributions. She urged the insurance industry to take advantage of the abundant brilliant actuarial science graduates from Ghanaian universities and help develop the actuarial capacity necessary for economic development. She added, to lead the example, the NIC has set up an Actuarial Department to interface with the actuarial functions of the insurance industry. The Actuarial Department of the NIC is currently working on a Group Wide Supervisory Framework to help effectively supervise financial groups which are fast becoming a prominent feature on the Ghanaian financial series landscape.

In his address to the convention, the ASG President Stephen A. Yeboah, highlighted that the necessary steps are being taken for ASG to obtain a full member status with the International Actuarial Association (IAA). He also expressed his gratitude to all stakeholders including AWB and German Development Agency (GIZ) for their support to the association both in financing and capacity building. He added, the society had organized various seminars and training programs for its members with the support from SSNIT, GIZ, AWB of IAA, and Francis Yaw Bekoe Nketia, a devout member of the society. Notable achievement includes the collaboration between the ASG, GIZ, and AWB to provide

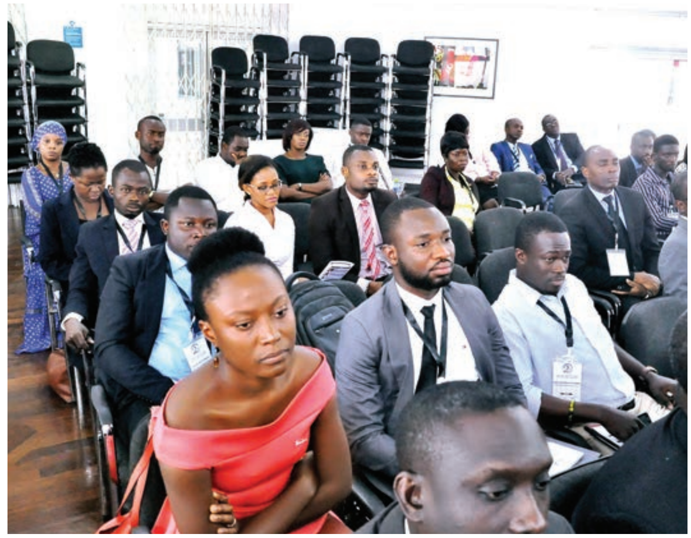
Anniversary cake cutting with past and present ASG presidents, current executives, Commissioner of Insurance, and the Executive Director of AWB.

exam tutorials for students and ASG members writing SOA examinations, establishment of Graduate Actuarial Training (GAT) Program, the setting up of the National Actuarial Examination Support (NAES) Fund and the regularization for the Professionalism Seminar and several other seminars. Additionally, the society continues to assist universities in the country (both public and private) that are offering actuarial science programs.

The president also acknowledged relentless offered support by past presidents of ASG whenever called upon in support of the progress of the society, and urged all members to commit to building a stronger actuarial profession to aid economic development.

According to Mr. Yeboah, the role of the actuary in the economic development of Ghana cannot be ignored. There have been national issues in the past which required the involvement of actuarial input and absence of that has resulted in policy failure. He added that the absence of an annuity market to augment the pension industry is of much concern as well. Finally, in prospective, he touched on the fact that the society looks forward to and will welcome its involvement in the establishment of the Government Actuary's Department to assist in resolving national economic issues that require actuarial input. The ASG thus opens its doors to the public and society in general in matters of actuarial concern.

The ASG 20th Anniversary Convention was made a success by the relentless effort of a five member planning committee chaired by Francis Gota, and with sponsorship from Milliman South Africa, Star Life Assurance Ltd., Enterprise Life Assurance Ltd, Vanguard Life Assurance, United Actuaries, and Stallion Consultants.



Participants attentively listening to the sessions.

Francis Gota is an associate member of the Actuarial Society of Ghana with an avid passion to develop the actuarial profession in Ghana, and Country Head for aYo Intermediaries Ghana Ltd.. He is also writing SOA exams. He can be reached at *fgota@icloud.com.*

The *Samoisette* Case: Sponsors May Not Be Able To Amend a Pension Plan Whenever They Want

By Dominique Monet

The Québec Superior Court judgement in *Samoisette* v. *IBM Canada Ltd.*[1] certainly provides considerable food for thought to the pension community in Canada and invites caution in dealing with pension plan amendments that reduce or suppress future employee benefits. It is generally understood that pension plan amendments cannot reduce or suppress retirement benefits that have already vested and accrued in favour of participating employees for their past service and retirees who receive retirement income. The particular feature of the *Samoisette* case, however, is the recognition that past events and representations made to active employees can create a crystallisation of future rights which arguably have not yet vested in the traditional sense. In so doing, the power of sponsors to amend their pension plans can be affected.

> Pension law practitioners often refer to the creation of vested rights as "crystallisation."

BACKGROUND

The case deals with a class action brought on behalf of approximately 450 persons affected by a pension plan amendment which, in 2007, eliminated the early retirement monthly bridge benefit available upon attaining the age of 55 or reaching 30 years of service. In the result, the Superior Court ruled that the employer could not legally amend the plan to remove bridge benefits for the group in the class action and found in favor of the plaintiffs in the amount of CND $ 23.5 million.

The employer had given all employees a 24-month notice of the eventual change. However, plaintiffs were unable to qualify for early retirement because they fell short of attaining the age of 55 or reaching 30 years of service when the amendment came into effect. The average length of service in the class action group was 27.2 years of service and the average age was just above 53 years. The bridge benefit would have allowed them to receive, upon taking early retirement, a supplement to their early retirement pension payable for the entire period between the date of their early retirement and the date they attained the age of 65.

The employer's pension plan was composed of a defined benefit component and a defined contribution component. The class action plaintiffs and the monthly bridge benefit belonged to the defined benefit component. In fact, the defined benefit component had been closed to new participants since 1995. As we shall see, the plaintiffs had elected at the time to remain in the defined benefit component and their choice in this regard was key to their success in keeping their bridge benefit in Superior Court more than 20 years later.

THE GHOST OF A PAST PENSION PLAN REFORM

As mentioned, the employer undertook a significant pension plan reform in 1994–1995. Previously, it had operated a strictly defined benefit plan. In essence, the restructuring involved the closing of the defined benefit and the introduction of a defined contribution component for new employees. This type of restructuring was fairly common in Canada in the 1990s and early 2000s as a number of pension plan sponsors wished to move away from the financial liability associated with deficits in defined benefit plans.

The employer conducted many internal sessions to explain the pension reform to employees. Although participants in the defined benefit component were allowed to continue to grow and accrue their defined benefits post restructuring, their employer, IBM Canada Ltd., nonetheless encouraged them to migrate to the new defined contribution component for their future service. Accordingly, the employer offered the current participants in the defined benefit component of the plan to increase the commuted value of their accumulated pensions by 40 percent in order to induce them to migrate to the new defined contribution component. In a written manual given to these employees during the campaign, the employer made the following statement:

> *"If you decide to join the new plan, your initial account will be credited with 140% of the value of the rights you accumulated under the defined benefit plan. The value of your rights corresponds to the commuted value of your pension at the end of 1994, taking into account your life expectancy and interest rates. The 40% supplement is meant to compensate*

for certain differences between both plans such as the update of the reference period and the bridge benefit for persons who retire before the age of 65." (The translation is ours)

The class action plaintiffs were employees who had refused the 40 percent increase and who had chosen to remain in the defined benefit component in the 1994–1995 restructuring. In their testimony, a number of them explained they preferred the stability of a defined benefit pension, that they counted on the bridge benefit as a factor in their decision and that the bridge benefit was important in planning their eventual retirement. The evidence also revealed that the employer had provided employees during the phase-in period with a software program to calculate the value of their defined benefit pension and this program included the value of the early retirement bridge benefit in the calculation. The employees forfeited the 40 percent gross-up to keep their defined benefit pensions.

In these circumstances, the Superior Court held that the employer no longer had the right to remove the bridge benefit for these employees in the future nor the ability to use its power to amend the pension plan to achieve such a purpose. The representations made during the 1994–1995 reform were construed as a clear assurance that the bridge benefit would be maintained for early retirees who opted to remain in the defined benefit component and forfeited the 40 percent increase. Any other conclusion would be unfair and abusive.

A NEW APPROACH TO VESTED RIGHTS?

In Canada, the traditional approach to vesting and the notion of "vested rights" is based on the celebrated Supreme Court of Canada decision in *Dayco*.[2] Pursuant to this decision, it is generally understood that rights and benefits vest at the date of retirement of the individual. In regard to pensions, it is also generally understood that the accumulated credited past service of a participant under the terms of a pension plan is a vested right. Future or contingent expectancies and interests are not, however, considered to be vested rights. Pension law practitioners often refer to the creation of vested rights as "crystallisation." Typically, there is no crystallisation or vested rights for matters where specific contractual conditions are not met.

What is novel in the *Samoisette* case is the recognition that certain situations and representations can bring a Court to conclude that future expectations, such as the early retirement bridge, for which contractual requirements have not yet been satisfied have crystallised or become vested rights so as to place them beyond the scope of the employer's power of amendment.

Indeed, it is significant to note that none of the plaintiffs in the *Samoisette* case had actually attained the age of 55 or reached 30 years of service when the bridge benefit was removed from the plan. Furthermore, none of the plaintiffs were in a position to attain or reach those milestones in the course of a 24-month notice. Accordingly, the bridge benefit was merely something they could expect in the future providing they met the requirements at a certain point in time.

The employer's right to amend a pension plan is confirmed in legislation and in standard pension plan texts.[3] Normally, this power of amendment can be exercised to suppress or eliminate future expectancies or interests for persons who have not yet met the pension plan conditions for vesting. However the lesson of the *Samoisette* case is precisely that there are changes that employers cannot implement at all, no matter the right to amend or the notice given.

It could be argued that the factual situation and more specifically the 40 percent increase in *Samoisette* is unique and that a similar outcome is unlikely in future cases. There are aspects of the ruling, however, that are of general import and the Court expressly declared that the power to amend a pension plan could not be exercised in abusive fashion.

It remains to be seen what the impact of this Superior Court decision will be and both sides have launched appeals to the Québec Court of Appeal. There is no doubt that it is an interesting new development in Canadian Pension Law.

BUYER BEWARE

A further consideration relating to the *Samoisette* case arises in the field of commercial transactions and the necessary due diligence to conduct for pension plans.

One need only ponder the hypothetical situation of a buyer who would have acquired the business division or unit that was involved in the ruling and who, in good faith and without knowledge, would have proceeded to make the same amendments with a 24-month notice in 2007. That buyer would have been condemned to pay damages in the amount of CDN $23.5 million in 2016 for events that occurred 22 years earlier.

There is no question that it now becomes more important for a prospective buyer to get the clearest picture possible of the pension plan(s) which may be in effect in the business or company he intends to purchase.

I have little doubt that corporate and commercial lawyers will have the creativity to deal with these problems but they should at the very least be aware of them. As mentioned, there have been many pension plans that have been restructured in Canada in the 1990s and the 2000s, especially to move away from defined benefit models to defined contribution models. A complete and thorough due diligence ought to examine what representations or incentives, if any, were made or offered to employees to migrate from one model to the other. Such an exercise can allow the buyer to better appreciate if he can further amend the plan without the risk of any substantial financial liability going forward.

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ENDNOTES

1 2016 QCCS 2675, June 13, 2016

2 [1993] 2 S.C.R. 230

3 In *Samoisette,* the employer's right to amend was confirmed in section 204 of the Québec Supplemental Pension Plans Act, R.S.Q. c. R-15.1 and in articles 15.01 and 15.02 of the plan text.

The Moroccan Association of Actuaries Launches a New Website

By Mohamed Amrani

Recently, the Moroccan Association of Actuaries launched its new website www.ama.ma both in English and French. Visitors are welcome!

The Moroccan Association of Actuaries (AMA) is the unique professional organization of actuaries in Morocco. It is a full member organization of the International Actuarial Association.

Since its creation in 1998 on the initiative of a small group of actuaries, AMA has grown steadily to its present size of 125 members of which 25 are fully qualified. AMA members are mainly involved in insurance, health and pension areas of the actuarial profession, as well as in the financial sector, including banking.

The AMA manifests a proactive strategy in promoting the actuarial profession in the insurance sector and financial markets in Morocco. It is supported by the Moroccan Federation of Insurance and Reinsurance (FMSAR). Moreover, the association has been joined by seven institutional members—partners at the forefront of the association. Also, AMA has a strong partnership with the National Institute of Statistic and Applied Economy (INSEA, Rabat-Morocco) where the Association has been associated with teaching in the actuarial and financial field. ■

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2016 IACA Max Lander and Geoffrey Heywood Award Recipients

By Cathy Lyn

John Martin (right) receives the Max Lander Award from John Jolliffe (left) on the Isle of Wight.

The International Actuarial Association (IAA) Consulting Actuaries Section is pleased to announce the recipients of the 2016 Max Lander and Geoffrey Heywood awards. The intent of both of these awards is to help bring the consulting actuarial profession into the public domain and to encourage the successful development of consulting actuarial practices and actuarial literature.

THE MAX LANDER AWARD

In 2004 the International Association of Consulting Actuaries (IACA) inaugurated a "Consulting Actuary Lifetime Achievement Award." This award is named in honour of the late Max Lander who was a founding member of IACA and the initial IACA secretary/treasurer. The Max Lander Award is given to a member of the actuarial profession who has contributed to the public awareness of the work of the actuarial profession and the promotion of the business of consulting actuaries.

The 2016 award recipient is **Leonard John Martin**, ASA, FIA, FSS, FPMI, CBE (United Kingdom).

Leonard John Martin's actuarial career began at the National Mutual Assurance Company in 1947. He became a fellow of the Institute in 1954, and in the same year, he moved to R Watson & Sons, consulting actuaries. He became a partner in 1958 and was the senior partner from 1983 until his retirement in 1995. His work covered the provision of actuarial advice to many large pension schemes in the U.K. He was responsible for setting up the first overseas office of R Watson and Sons in the West Indies. He also acted for many years as honorary advisor to the United Nations joint staff pension fund.

He was both a tutor and an examiner in pension funds for the Institute of Actuaries. He was elected to serve on the council of the Institute, and served on a number of committees, selected to be a vice president until he became president in 1992 until 1994. He was also asked in 1979 to be actuary to the Institute's staff pension fund. John was deputy chairman of the U.K. Occupational Pensions Board and has served as chairman of the Occupational Pension Schemes Joint Working Group. He was chairman of the Association of Consulting Actuaries in the U.K. from 1985 to 1987.

He has been heavily involved in international actuarial work. He joined the Actuarial Association of Europe (AAE) at its inception in 1978 as the membre suppléant and subsequently became the membre titulaire, representing the Institute in the European Communities. In 1982 he became the vice chairman of the Groupe and was elected chairman in 1988. His commitment to European affairs is also shown in his role as advisor on staff pensions for the European Commission in Brussels.

He was included in the Queen's honours list in 1995, who presented him with the prestigious Commander of the Order of the British Empire (CBE) award.

John always maintained a heavy workload during his career as adviser to many large and well-known companies. He was highly regarded and respected by his staff and always found time to assist and advise his colleagues in respect of both work and other related matters. He was senior partner at the time of the significant growth and diversity in the provision of actuarial services worldwide as well as in the United Kingdom.

John received a commission in the Royal navy during his period of national service, and afterwards maintained this interest by joining the Royal Navy Reserve. He developed a great interest in flying, and often visited his overseas clients as well as clients in every corner of the United Kingdom by flying in his own aircraft. This included his attendance at the International Congress of Actuaries held in Australia in 1984, when he flew from his base in England to Sydney, Australia, and back.

THE GEOFFREY HEYWOOD AWARD

At the 2014 Congress, IACA inaugurated a "Young Consulting Actuary High Achievement Award." This award is named in honour of Geoffrey Heywood MBE who was the founding chairman of IACA. The Geoffrey Heywood Award is given to a young consulting actuary who has provided significant services to the public and the actuarial profession.

The 2016 Geoffrey Heywood Award recipient is **Chintan Gandhi**, FIA (United Kingdom).

Chintan Gandhi, 30, joined the U.K. actuarial profession in 2008, qualifying as a fellow of the Institute and Faculty of Actuaries in 2013. He works in Aon Hewitt's U.K Retirement and Investment practice and in this role he focuses primarily on advice to pension scheme trustee boards. His client portfolio includes schemes run by leading blue-chip firms, including those in the energy, utilities and construction industries.

Chintan Gandhi (left) receives the Geoffrey Heywood Award from Brent Walker (right).

Chintan is an active contributor to the Association of Consulting Actuaries (ACA). He was a member of its Public Relations Committee from 2014 and was appointed in 2015 as chairman of its Younger Members' Group—a group he established. The Younger Members' Group covers consulting actuaries with typically less than 10 years' post-qualification experience, with the aim of improving engagement within the actuarial profession amongst this group. Chintan's other aim in running this group is to promote awareness of the fields in which consulting actuaries can serve outside the traditional pensions, investment and insurance space.

One of the key things Chintan is keen to ensure is that ACA, and the U.K. actuarial profession as a whole, benefit fully from the perspectives and energies that younger consulting actuaries have to offer, and he hopes that this in turn feeds through to younger members playing an active part in contributing to public policy.

Following Chintan's success in attracting 70 newly qualified consulting actuaries to a special ACA sessional meeting geared towards younger members in September 2015, he oversaw the inaugural half-day Younger Members' workshop which ran alongside the ACA's main annual conference in February 2016, and both sessions have now become annual events. The 2016 workshop itself focused on possible reforms to the U.K.'s savings and pensions landscape, and received warm feedback from delegates for the opportunity it gave them to engage and contribute in ways which would have been more difficult in a more formal conference setting.

More information on these awards can be found at *http://www.actuaries.org/index.cfm?DSP=IACA&ACT=AWARDS&LANG=EN* ■

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