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International News

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Editor's Note

By Arpita Das

Welcome to the May 2018 issue of *International News*. As I write this note, I cannot help but reflect on how quickly 2018 has passed us by and on the many changes that have taken place here at the newsletter. With this issue, my fellow co-editor-in-chief **Qi Sun**, marks his departure as he moves on to *The Actuary* magazine. Personally, it has been a true pleasure working with Qi and partnering with him to expand the scope of this publication over the last two years. It is fulfilling to see how the newsletter has evolved and this is no small part due to Qi's initiative. *The Actuary* is fortunate to have Qi on their editorial board and we wish him every success. This issue also marks the entry of **Milanthi Sarukkali** as deputy editor-in-chief. Readers may be familiar with Milanthi as a long-time member of our editorial board, a regular contributing author to *International News* and an International Section Council member. Milanthi has consistently demonstrated her talent as we've worked together on multiple fronts. I am delighted to welcome her into her expanded role and am confident she will continue to shape the newsletter.

Turning to this issue, I am excited to bring to you a global perspective on actuarial issues, with articles spanning over 15 countries, across all continents. In particular, I would like to thank all participants of our 2017 Country Feature Article Call for Papers. We have continued to feature articles from the competition in this issue. We began by publishing our winning article "An Island Paradise: The Country with the Most Actuaries per Capita" by Graydon Bennett in January. In this issue we publish our runner-up, "Lifetime Annuity Income is the Key to Life" by Ronald Klein. We also present "Life Insurance Development in Vietnam" by Albert Li and "Australian Retirement Incomes: What's Next?" by David McNeice, two articles that were submitted as a part of the competition.

Finally, I am looking forward to meeting several of you in Berlin in the next few days. The annual International Association of Actuaries Council & Committee Meetings and the 2018 International Congress of Actuaries will be held from May 30 to



June 8 in Berlin. Many of us from the *International News* family will be in attendance including Milanthi and myself as well as numerous contributing authors. The SOA will sponsor a lunch event on Monday, June 4. Further, a casual get together is in the works for the evening of Wednesday, June 6, organized by our members based in Europe. Details will be shared over the next few weeks. I hope to meet many of you in person at one or both of these gatherings. Please feel free to contact me directly ahead of time so we can make sure to cross paths. Whether you are a reader, author or editor, it would be wonderful to meet in person and get your feedback on how we can continue to add value through this publication. ■



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Chairperson's Corner

By Vincent Xuan

Here comes my favorite part of the year! Aside from those who live in ever-warm locales, you know what I mean. Saying goodbye to the long winter, we welcome the spring sunshine, aromas from blooming flowers, and the freedom to explore outdoors. For many actuaries, the month of May means the ending of year-end and first quarter reporting—and a good time to take a break!

As you plan this year's summer trip, don't forget to check out actuarial networking events in your area. One of our new initiatives for this year is to offer more opportunities for you to socialize with other actuaries. In March, following the Investment Symposium, we co-hosted the second networking event in New York City (you can read Vice Chair Wendy Kwan's report on the event in this issue). We are also organizing networking events outside the United States, for example, at the 2018 International Congress of Actuaries in Berlin. The International Section will have a host role in an SOA-sponsored lunch on Monday, June 4 and our members based in Europe are organizing a casual get together for the evening of Wednesday, June 6. Keep an eye out for more details which will be announced shortly.

On the educational side, our council is busy preparing for the 2018 Society of Actuaries (SOA) Annual Meeting & Exhibit in Nashville, Tennessee. We're excited about the number of proposed sessions with high-profile speakers, which tentatively include actuaries in banking, implementation of Solvency II in Latin America, regulatory capital paradigm in Switzerland, and InsurTech developments across the ocean. In addition, we are proposing an evening networking event and a breakfast information session for our section. We hope you can join us in Music City!

As part of our community advocacy, our tradition has been to help promote research on international topics. As a result,



the council has voted to sponsor US\$1,000 for the Actuarial Research Conference in London, Ontario. The council is also actively evaluating other sponsorship opportunities to broaden our visibility and influence in international actuarial communities, such as the Pacific Rim Actuaries Club.

Every spring, all section leaders gather at the SOA headquarters in Chicago to discuss our vision, mission, challenges and opportunities. We share the pains and gains across all SOA sections, and find ways to enhance member benefits and promote member engagement. I will attend this year on behalf of the section, and will share the insights with you in the next issue. If you want to read the update before then, visit our section webpage at soa.org/international for our most recent news. The council strives to better meet our purposes of networking, education and advocacy. As a loyal member of our section, I invite you to share any ideas that may help us better serve our members. Thank you all for your engagement and I look forward to hearing from you. ■



Vincent Xuan, FSA, MAAA, is vice president and actuary at Prudential Financial. He is based in Newark, New Jersey and can be reached at xu.xuan@prudential.com.

All Work and No Play . . .

By Wendy Kwan

. . . makes for dull actuaries, but these certainly weren't the actuaries who joined us for International Section's second networking event in New York City! The intimate gathering of roughly 25 actuaries was co-hosted with Entrepreneurial & Innovation (E&I) and Actuary of the Future (AOF) sections at a delightful bar in Hell's Kitchen, Latitude Bar and Lounge. Whether by reminiscing over the last great vacation or dueling in a friendly game of pool, colleagues forged new friendships over great drinks and light bites. In addition to the local attendees working in the New York City Area, we also welcomed out-of-town colleagues from *exotic* places such as

Toronto and Philadelphia who joined us after an intense day of learning or presenting at the Investment Symposium. The International Section hopes to continue hosting networking opportunities for actuaries to connect; stay tuned to hear about our next event!

The event was made possible by several contributors, including Paul Wroblewski from First Actuarial Consulting Team LLC, Wendy Kwan and Vincent Xu from the International Section, Bill Rearden from the E&I Section, Emily Hsu from Actuary of the Future, and Pauline Reimer from Pryor Associates. The event also could not have been possible without the help of SOA staff members including Jane Lesch, Michelle Scherer and Beth Bernardi. ■



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International Congress of Actuaries 2018 in Berlin

Actuaries from around the world will meet in Berlin, June 4–8, 2018. The German Association of Actuaries, in conjunction with the International Actuarial Association, will host the 31st International Congress of Actuaries (ICA). The ICA 2018 features a high-class congress program with daily plenary sessions, around 50 invited speakers, over 280 contributed presentations for practitioners and academics coupled with an entertaining social program in the vibrant and historical capital of Germany.

In addition, the editors at *International News* would like to invite all SOA members and International Section members to the SOA-sponsored lunch on June 4. We would further extend this invitation to also include all *International News* readers, authors and editors to join us for a casual evening get together on Wednesday, June 6. Details and RSVP information to follow.

With more than 2,300 international participants and accompanying persons registered, all regular tickets for the ICA 2018 are already sold. For all actuaries who cannot join the conference in person, but still don't want to miss the first class scientific content, a new virtual web-based format—the Virtual ICA (VICA)—will be offered.

FIRST VIRTUAL ICA

Thanks to the support of a number of institutional partners from the actuarial community as well as several sections of the

IAA, many sessions from the stages in Berlin will be broadcast live online and provided as recorded sessions afterwards. This allows a much broader audience from all over the world to follow the high value content presented during the ICA and helps to secure this knowledge in a sustainable manner. Furthermore, due to the successful call for papers, the VICA will also feature many online presentations of qualified authors that the ICA could not offer a presentation slot in Berlin.

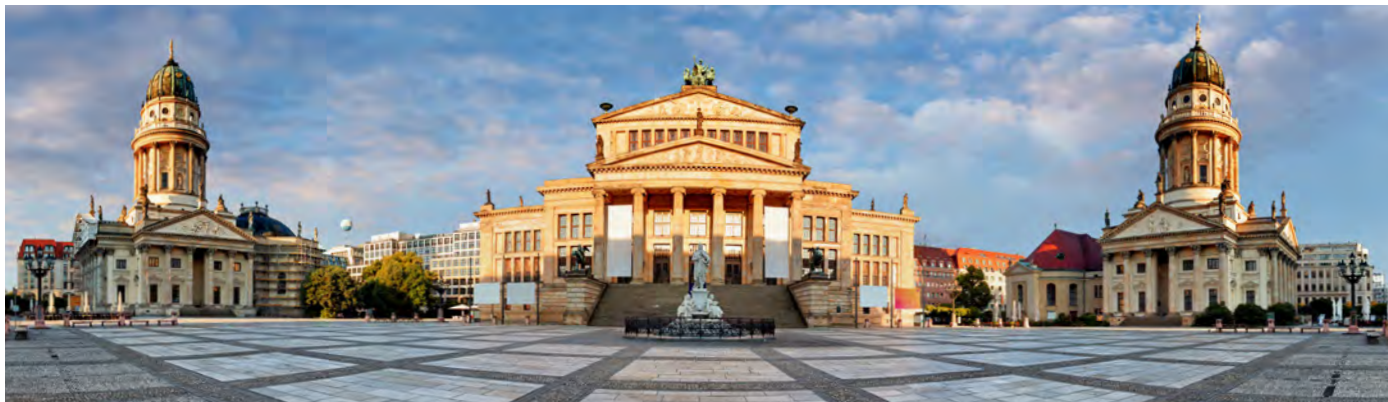
How to get access to the VICA

The IAA sections AFIR/ERM, ASTIN, IACA, and IAALS (LIFE) have already decided to become a partner of the VICA. This partnerships allows the members of these sections to access more than 100 hours of live streams and videos without any further costs.

Anyone who isn't a member of these IAA sections yet can apply for membership online for \$50. In addition to free access to the VICA, members of the IAA sections benefit from numerous offers of the particular section. For example, cheaper participation fees for colloquia and seminars, academic journals, access to online libraries and the possibility to communicate with colleagues from all over the world via online forums. Information on how to become a member of the IAA sections can be found on <http://www.actuaries.org>.

The Actuarial Society of South Africa, the Actuaries Institute from Australia and the Institute of Actuaries of Japan are partners of the VICA 2018 as well. Members of these partner associations will therefore get free access to the VICA. Organizers of the past and future ICAs support the VICA to establish a new web-based possibility to spread actuarial knowledge in the world.

The Deutsche Aktuarvereinigung e. V. (DAV) is not only looking forward to welcoming many colleagues in Berlin, but invites all section members and members of the partner associations to join the ICA online. For regular information about the ICA, please visit the website www.ica2018.org and register for the monthly ICA 2018 newsletter. ■



Actuaries Without Borders: Get Involved with a Mission of Global Outreach

Actuaries without Borders® (AWB) is a section of the International Actuarial Association (IAA) that helps provide temporary actuarial services in parts of the world where those services are lacking.

“Actuaries without Borders is a unique IAA section in that it doesn’t focus on a specific practice area but provides temporary actuarial education services in countries lacking actuarial resources,” says Doug Carey, chair of AWB. “Our focus is to help with projects around the world that fit within our scope.”¹

AWB’s mission includes assistance with the development and sound management of social security, enterprise risk management, pensions, insurance, investments, health care, and other areas where actuarial services can be of use. Its volunteers also provide education and training.

EDUCATION AND TRAINING

Mr. Carey describes a January 2017 project in Armenia² where AWB helped to train and instruct people sitting the Society of Actuaries (SOA) exams. “We attracted good instructors,” he adds. “The students were very motivated.”

Other recent AWB projects include workshops in Sri Lanka, Nigeria, Bosnia-Herzegovina, Columbia, and Kenya. The group’s current and future projects involve a global mentorship program,³ a two-day introduction to ERM workshop in Bulgaria, and a two-day workshop introduction to ICPs, Solvency II and the four (4) internal control functions in Macedonia.⁴

GLOBAL MENTORSHIP PROGRAM PARTNERS WITH AIO

The **African Insurance Organisation**⁵ (AIO), a non-governmental association established in 1972 with members of the insurance industry, regulatory/supervisory authority, insurance training centers and national and regional associations



(such as FANAF⁶), mainly from Africa, is partnering with AWB to provide a global mentorship programme for actuarial professionals in Africa. In May 2017, the AIO General Assembly in Kampala approved AWB’s Global Mentorship Programme (distance assistance) and AWB’s on-site tutorials for professional exams to develop actuarial capacity in Africa. This initiative will aim to increase the number of qualified actuaries across the African region, and, contribute to a sound sustainable insurance business delivering products meeting the policyholder’s reasonable expectations. The program counts already more than 50 mentees from all over Africa.

WHY SHOULD YOU GET INVOLVED WITH AWB

Volunteering is very useful to the people and countries receiving assistance, but also to the volunteers themselves. AWB provides an opportunity to work much more broadly than just in a professional environment; to develop connections completely outside one’s sphere. It’s personally rewarding to see people succeed, to make a difference in these people’s lives and their professional development.

HOW IT WORKS

AWB has a pool of volunteers, and a committee (comparable to a board) of 14 members, 12 of whom are elected (two are delegates appointed by the IAA Council) and one is recruited as executive director (ED), supervising and monitoring the AWB requests/projects. An actuarial association submits a request online, followed by a personal support by the ED who, after duly analyzing the request, submits it with a proposal for a project manager for approval to the AWB Committee. The AWB itself has only a small amount of funding; local sponsors usually fund the project, while the AWB, through the AWB director of funding, looks continuously for other financial sponsors as

needed. For example, the Asian Development Bank helped with funding for a project in Kazakhstan. The AWB puts out a call for volunteers and helps with logistics. Volunteers receive reimbursement for their expenses.

INTERESTED IN VOLUNTEERING?

The AWB is always looking for new volunteers, from a variety of practice areas. The only requirement for volunteering is being a member of the AWB section,⁷ which costs C\$50 per year. People who are intent on teaching, mentoring and tutoring young actuarial professionals in actuarial developing countries are particularly welcome.

“Obviously we want active AWB members,” says Ms. Renata De Leers, ED. “We have monthly committee calls. We ask the committee (board) members, elected by the AWB section, to commit to the calls as they have a responsibility to the AWB Section and

the existing and future AWB clients. This is so rewarding for volunteers,” she adds.

For more information about Actuaries without Borders®, visit their website.⁸ ■

ENDNOTES

- 1 http://www.actuaries.org/AWB/Documents/AWB_Rules.pdf
- 2 http://www.actuaries.org/AWB/Projects/2016/Armenia_Report.pdf
- 3 http://www.actuaries.org/index.cfm?lang=EN&DSP=AWB&ACT=GLOBAL_MENTORSHIP
- 4 See article on page 29 of this issue.
- 5 <http://www.african-insurance.org>
- 6 www.fanaf.org
- 7 <https://www.actuaries.org/merchandise/section/>
- 8 <http://www.actuaries.org/index.cfm?LANG=EN&DSP=AWB&ACT=ABOUT>

SOCIETY OF ACTUARIES

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The SOA's new podcast series explores thought-provoking, forward-thinking topics across the spectrum of risk and actuarial practice. Listen as host Andy Ferris, FSA, FCA, MAAA, leads his guests through lively discussions on the latest actuarial trends and challenges.

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SOCIETY OF ACTUARIES

Lifetime Annuity Income is the Key to Life

By Ronald Klein

Editor's Note: We are pleased to feature this article which won second place for the International Section 2017 Country Feature Call for Papers.

THE UK FREEDOM AND CHOICE IN PENSION ACT

People are living longer than ever; fertility rates are at a record low and projected to drop even further; interest rates are at historic lows. So, what does the U.K. government do in response? It reverses a mandatory annuitization of Pillar II employer-sponsored defined contribution pensions with the Taxation of Pensions Act, widely known as the Freedom and Choice in Pensions Act of 2014. But, more about this shortly.

WHEN FUNDS RUN LOW

My grandmother died at 102 years old. She lived a good life and was relatively healthy. While this could be a model for an argument that people are living longer, it is not. It is also not an argument that my family has good genes. More concerning to me than how long my grandmother lived is her cause of death. The medical records probably show that she died of heart failure, or maybe respiratory failure. Some may say that she simply died of old age. I, however, know the truth. My grandmother died because she ran out of money.

About nine months before her death, her son (my uncle) moved her to a nursing home after 101 happy years in her own home. Only in the last five years did my grandmother require at-home aides and only during her final two years in her home did she require 24-hour care. This is quite expensive and even with support from the grandchildren, USD 8,000 per month is a large bill to pay. Therefore, my uncle moved her to a nursing home and she died.

When my grandfather died 25 years earlier, he left my grandmother a nice sum of money to live on, but he could not have imagined that she would continue to live for another 25 years. Had my uncle consulted the only actuary in the family, he (I) would have suggested a lifetime, payout annuity. While my grandmother would not have been able to live the same style of life that she had grown accustomed to while my grandfather was alive, she would be secure with the knowledge that she would

have a steady income for life, and she would probably still be alive today (at age 109).

PROBLEMS WITH THE U.K. PENSION SYSTEM

Lifetime income is important for everyone, but most important during times of low interest rates. The U.K. had a fantastic system in place—automatic enrollment into an employer-sponsored defined contribution plan (called Pillar II in most of the world except for the U.S., with Pillar I being social benefits and Pillar III being personal savings) and mandatory annuitization in most cases at retirement. But there were some problems with this system.

First, most people used the annuitization option inside of their pension plan. Retirees had the option to annuitize with any company and could easily shop rates, but like the rest of us, people are lazy and just chose the annuity inside the plan. Annuity providers fought to have their products inside these pension plans. However, once inside, companies knew that most people would annuitize to their product and offered less than attractive rates inside of plans thus distressing the U.K. Government.

Second, interest rates were (and still are) so low that longevity assumptions become too transparent. When interest rates assumed in annuities are about 5 percent, it is difficult for the average person to determine what longevity assumptions are utilized. With the effects of longevity and compound interest at work, a 65-year old person would calculate that he or she would only have to live to age 80 or 85, for example, and determine that an annuity was a good choice.

However, with rates hovering around 1 percent, it becomes a simple exercise for the average person to calculate that for GBP 100,000, a monthly annuity of GBP 350 beginning at age 65 means that the person has to live to age 90 to recoup his or her “investment.” Although people are living longer, the average person may struggle with an investment option that has benefits only if he or she lives to age 90 or beyond.

This is one of my personal pet peeves with the way annuities are sold. In the U.K., annuities are sold by advisors or banks and both seem to sell them as investments. We do the same in the U.S.—selling annuities as investments. Look at the product called Variable Annuities. Such a small percentage of policyholders annuitize that it is a wonder why this product name continues to exist. Annuities are insurance against the policyholder living too long and this is how annuities should be sold!

Third, Pillar II annuity payments are taxed similarly to how they are taxed in the U.S. Since the pensions are funded with pre-tax monies, they are fully taxed on withdrawal. Her Majesty's Revenue and Customs (HMRC) would much prefer lump

sum withdrawals of Pillar II funds so it can collect more in tax revenues. HMRC sees all of the money in these pension funds and drools. (In all fairness, HMRC was actually against the Freedom and Choice in Pensions Act. It was the government that was drooling). While not yet proven, it seems logical that too much money withdrawn early would cause elderly poverty levels to rise in the future. Could it be that politicians are not too concerned about delaying this issue to the future at a time when they may not be in office any longer? I know, I am a skeptic.

This is a quote from the then Chancellor of the Exchequer, George Osborne, about why the Freedom and Choice in Pensions Act was enacted:

“This government believes in the principle of freedom. Individuals who have worked hard and saved responsibly throughout their adult life should be trusted to make their own decisions with their pension savings, and the reforms I announced at Budget will deliver just that.”

Should the average person be trusted to make a financial decision that includes investment and longevity assumptions? Are these people even given the correct tools in schools or at work to fully understand the issue? Actuaries, who study for years and take continuing education courses on these topics, still argue over assumptions and discount rates. Maybe Mr. Osborne should have put in place a Financial Literacy Act prior to the Freedom and Choice in Pensions Act to make sure that people learned about annuities and had the proper tools to make the right decisions.

In addition, the government allowed people to save these monies on a tax-deferred basis. The entire reason for allowing this is so that people would use the money for retirement and not be dependent on the state. Taking the entire pension savings and purchasing a boat hardly achieves this goal.

In trading email messages with Steve Webb, the Minister for Pensions, during the time that the Freedom and Choice in Pensions Act (the Act) was discussed and passed, I learned some very interesting facts. According to Mr. Webb, the current government wanted to shed the “nanny state” label. It felt that the perception amongst the U.K. population was that government thinks it knows best.

Interest rates were a key factor in the decision. With rates tumbling, the private annuity market was seen as in trouble. And, with retirees not shopping for the best rates, the government felt that retirees were being taken advantage of. It is interesting that the government wanted to lose the “nanny state” characterization but it suddenly knew what was best for people with respect to annuitization.

Only time will tell if the U.K. made the correct choice, and it may be a long time. While withdrawal rates increased greatly since the passage of the Act, there is no indication yet that these withdrawals will cause harm to the government. It may be that old-age poverty levels will actually decrease in the short term, but increase in the long term. This is because with higher levels of lump sum withdrawals, retirees will be spending money in early years meant for use much later into retirement. The U.K. government may have passed on a gift to future generations that will be difficult to compensate for. With lower fertility rates, subsidizing the elderly who deplete savings and become dependent upon the state, will be spread amongst an ever-decreasing number of workers.

A POSSIBLE SOLUTION

With interest rates currently so low, it is not really prudent to purchase a lifetime annuity with the entire Pillar II savings account as was done previously. However, “drawing down” the monthly benefit that would have been paid if interest rates were higher is not the answer either. Retirement money will simply run out too quickly. What could be done is a simple ladder approach. Take a certain percentage of the money, say 10–20 percent, and purchase lifetime income. The same could be done in each of the next number of years so there is an average of current interest rates.

By laddering your annuities one can assure himself or herself that an annuity wasn’t purchased at the worst possible time. It would give at least some comfort to retirees and, at the same time, lock in much needed lifetime income. While people may have to take a small stepdown in standard of living at the time of retirement, people can rest assured that this somewhat lesser lifestyle will continue forever.

Had my uncle thought to contact me when making his poor financial decisions for his mother, my grandmother might still be alive today—reading the same books as me, telling me about her world travels and giving me invaluable family information not available anywhere else. She was also an inspiration for my four children. I miss my grandmother and hope that an entire generation of Brits do not fall to the same fate because of the Freedom and Choice of Pensions Act.

Disclaimer: The views expressed in this article are those of the author and are not necessarily those of the Society of Actuaries or the International Section. ■



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Africa: A New Dispensation with New Opportunities for Problem Solvers

By Kudzai Chigiji

A NEW DISPENSATION

If you haven't noticed, Africa is going through some interesting changes. We are experiencing significant shifts in the political paradigm that has ruled for the bulk of our lives. It has been decades since we saw such shifts. And we are excited about the prospects.

In the past year, we have witnessed unprecedented resignations by national leaders, peaceful coups, increased active citizenship and a wave of elections across 21 countries, occurring at all levels of government. Our eyes are wide open as we consider the possibilities of this new era. The past few months have been an adventure, not so much because of the marching, coups (including the coups that are not coups), the resignation speeches or the late night cabinet reshuffles—but more so because of the many doors that have opened for us to define, build and discover an Africa we were not always sure we would witness in our lifetime.

The morning of Nov. 22, 2017, the phones in Zimbabwe were abuzz. The world wanted to know: "Are you open for business?" Moreover, the new dispensation in South Africa has given many global investors hope for the entire region. To say the least, this is an interesting, unparalleled time for the region.

A LAND OF NEW OPPORTUNITIES

I have long since touted the mantra: "Africa is the land of opportunity. The fields do not get any greener than this."

It is fascinating to see how the role of the actuary in Africa is often vastly different from what we witness in more developed financial markets. Ultimately, an actuary is a problem solver. As much as we respect professional titles what will matter ultimately is what you can fix. In Africa, the nature of the problem can change on a weekly or daily basis. We have many of them and almost everyone is keen to receive and implement good

ideas. Thus, if you are an actuary and you like solving problems, Africa is an incredible place to live and work, with unlimited opportunities.

The "brain drain" that developing and emerging countries have experienced for centuries has not left Africa unscathed. But I am an optimistic realist. So I decided that I would stay in Africa and work here. Why? I don't have to go looking for adventure if I just go to work every day. Adventures will find me if I am true to the actuary and business person in me. We are definitely open for business and our doors are always open for fellow problem-solvers with the continent's best interests at heart.

... if you are an actuary and you like solving problems, Africa is an incredible place to live and work, with unlimited opportunities.

Two of the key challenges that have been referred to in the past have been "political risk" and "lack of political will." There are many others, as in any market, but their impact on breeding fear within investors and discouraging innovation have been a significant hindrance to achieving progress. Hopefully, this will not be a problem much longer and Africa will continue to present unique opportunities to problem solving actuaries.

GETTING DOWN TO BUSINESS

In Africa, the most successful actuaries become business people. A business person is first and foremost a problem-solver. He or she has to be meeting a tangible need if the business is to grow and be sustainable. Insurance is a business. Healthcare is a business. Pensions is a business. Banking is a business . . . and so is mining, agriculture, energy, education, textiles. When problems are staring you in the face on a daily basis, actuaries are challenged to go beyond their professional title and specialty. They take charge and do their best to fix the issue at hand.

A lot of building and re-building needs to be done in the next few years if we, as actuaries, are going to capitalise on this new-found hope. The job cannot be left to politicians and NGOs alone. It also cannot be completely outsourced to supranational organizations with donor-funding. This is mostly a job for those of us on the ground.

To survive and to be seen to be worth more than our subscription fees, we have had to sharpen our business acumen and apply the



actuarial tool-box in as many problems as are possible. I've taken my actuarial tool-box into a wide range of situations during my career. It has served me well in traditional areas but it has served me perhaps even better in less traditional areas. Whether it is developing strategies to expand tertiary institutions across the continent; or building agricultural models for subsistence farming areas; or making healthcare supply chains more efficient, my actuarial education never fails me. The rigour, discipline, critical thinking and the keen desire to crack hard problems is a gift. And for that, I will always be grateful to the profession.

FUTURE OF THE ACTUARIAL PROFESSION IN AFRICA

More than 70 percent of the Sub-Saharan African population is under the age of 30.¹

Yes, 70 percent. This poses both challenges and opportunities, but the young energy embodied in the continent can be harnessed for growth and development. As actuaries in other parts of the world consider what to do with ageing populations, we are searching for how to best utilize the untapped resource that is the youth. Even as much as pensions and long-term health care are typical actuarial problems, so is a very young population.

It is no secret that we have an abundance of natural resources—land, minerals, oil, and gas. You name it, we probably have it. Between the very young human capital and the natural resources, there is no shortage of opportunities for those who are economically empowered.

Given the size of the opportunities, it is no longer good enough to simply adopt solutions from abroad, as has often been done historically. We are living in a time where we can finally imagine the Africa that we want and get onto the business of creating it. We can redefine what wealth looks like and create products that meet the needs of Africans. We can develop policies that speak to the needs of ordinary citizens. We can build organisations that we can call our own that have our best interests at heart. It will be challenging work—but after all, as actuaries, are we not well used to challenging works?

As the profession takes a more defined role in public policy and protecting the interests of the public good, it is worth zooming in on one of the most historically exploited continents as it is on the verge of its rebirth. Even as there are shifts in the political regimes, there must be shifts in (or complete rewrites of) the policies that have slowed progress for so long. We have already started seeing them come up for public comment and discussion in parliaments. This is an opportunity for actuaries working in Africa to evaluate the impact of proposed regulation and legislation; and to have a voice in shaping the future of the world's youngest population.

It is not good enough to simply have a great vision for the future and the values to ensure execution. As we build, we need to do so with virtue. We need to move past being efficient number-crunchers to architects of an Africa that benefits the general public and drives sustainable development.

Our hope as Africans is that this is the beginning of a story we can be proud of. We are not naïve to believe that everything will change overnight. We know there is a lot of work to be done. In Shona, there is a statement that goes “Iwe, neni, tine basa.” The direct English translation is that “You and I have work to do.” If nothing else, I appeal to my fellow problem-solvers to join me as we create and build the Africa that we imagine for ourselves.

Disclaimer: The views expressed in this article are those of the author and are not necessarily those of the Society of Actuaries or the International Section. ■



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ENDNOTE

1 The World's Youngest Population, Euromonitor International 2012

Launch of ActuET in Tunisia

By Mohamed Habib Chebchoub and Renata De Leers

Editor's Note: This article originally appeared on the World Bank's Collaboration for Development Forum. It is lightly edited for clarity and reprinted here with permission.

November 17, 2017 marked the launch of the Tunisian Association for Actuarial Students (ActuET). The launch took place at the Université Paris-Dauphine | Tunis, gathering several major players in the actuarial profession. The ceremony began with a welcome speech by the president of ActuET, Mr. Mohamed Habib Chebchoub and the executive director of Université Paris-Dauphine | Tunis, Mrs. Amina Bouzguenda Zeghal. This was followed by a presentation given by the general secretary of the Tunisian Actuarial Association (ATA), Racem Ktata, under the theme “The Actuarial Profession in Tunisia: Issues and Challenges.”

ActuET is a student association which aims to promote the actuarial profession in Tunisia and help actuarial students develop their knowledge alongside their technical and soft skills. To reach its goals, ActuET intends to organize conferences

and training sessions. Moreover, ActuET intends to publish a magazine written in three languages, primarily by students that features Actuarial Science issues in Tunisia and worldwide.

The conference was followed by a debate uniting students and professionals to discuss the major topics of the actuarial profession in Tunisia and in the world.

Mrs. Jouda Khemiri from the Tunisian regulator, the comité général des assurances and Mrs. Claudine Dhuin, officer in charge of relations between the Université Paris Dauphine and its Tunisian partner university, participated and supported the new association. Among the guests present was the executive director of Actuaries Without Borders (AWB®), Renata De Leers, who explained the different paths that actuarial students can take after graduation and presented the membership procedure to become a member of the International Actuarial Association (IAA) to be followed by ATA. ■



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Renata De Leers is expert sénior régulation et contrôle at Autorité de Régulation et de Contrôle des Assurances. She is based in Kinshasa, Democratic Republic of the Congo and can be reached at rdeleers@arca.cd.



From right to left: Zeineb Ezzedine (at the podium), member of the executive board of ActuET, Mohamed Habib Chebchoub, president of ActuET, and Amina Bouzguenda Zeghal, executive director of University Paris Dauphine | Tunis



From left to right: Zeineb Ezzedine, member of the Executive Board of ActuET; Aymen Turki, treasurer of ActuET.



Rassem Ktat, general secretary of the ATA.



From left to right: Sami Fridhi, member of ActuET; Yassine Hamdi, member of AtuET; Hamza Namouchi, member of ActuET; Zeineb Ezzedine, member of the executive board of AtuET; Farah Ezzedine, member of ActuET.



From left to right: Hichem Rammeh, head of Actuarial sciences departement at university of Paris Dauphine Tunis; Claudine Dhuin, coordinator, Paris Tunis; Jouda Khemiri, Tunisian regulator; Renata De Leers.



Hichem Rammeh head of the actuarial sciences departement at University of Paris Dauphine Tunis and a number of students.

aYo Ghana and Innovations in Microinsurance

By Francis Gota

The concept of insurance is nothing short of sheer brilliance and has made significant impacts in our world and changed lives. In Ghana, the microinsurance and insurance scene as a whole is steadily progressing, but at a slow pace with a less than 1.5 percent insurance penetration rate. Most Ghanaians struggle with the notion of protecting themselves against a loss that is uncertain. This, and other reasons such as costly premiums and cumbersome policies are major contributing factors for the low overall penetration rate.

In light of these factors, the collaboration between Mobile Network Operations (MNO) and Insurance Companies has been crucial to expanding the patronage of insurance among the masses. The ubiquitous usage of mobile/cellular phones with a penetration rate of about 128 percent, offers insurers wider outreach, increased coverage, and facilitation of easy payment of premiums and claims, hence making access to insurance easier and convenient. Also, from an actuarial perspective the challenge with microinsurance is relatively small premium coupled with high expenses. Mobile applications and a paper-free set up help address this issue by facilitating scaling of these products, lower administrative expenses, making the product viable.

aYo Intermediaries Ghana Limited, a subsidiary of aYo Holdings, a joint venture between MMI Holdings and MTN Group, in partnership with MTN Ghana and MetLife Ghana, offers relevant, accessible, and easy-to-use insurance solutions to MTN subscribers and also aims at providing a future where everyone uses insurance.

With the current upsurge of mobile money business in the country, aYo Ghana is the first to have introduced a microinsurance innovation: Send with Care. This enables subscribers of MTN to send money to loved ones on the mobile money platform with an added insurance cover. In addition, aYo is making preparations to introduce its second insurance offering dubbed Recharge with Care, which enables subscribers of the network to buy life and hospitalisation insurance anytime they



The two pictures depict aYo agents engaging customers at the informal sector. This is mainly market women, artisans, lorry station attendants, etc.

recharge their airtime and the premium is deducted from their airtime. With about 17.6 million MTN voice subscribers (NCA July 2017 report), offering insurance to the subscriber base is significant in addressing the insurance deficit especially in the less privileged communities. The penetration rate is expected to increase with a range of ingenious products yet to hit the market.

Adding aYo Send with Care to MTN Mobile money transfers to your family members ensure that you get 3x the amount you send as life insurance cover for yourself and the recipient (family member), and up to 3x as hospitalisation cover for yourself.

Enrollment and claim filling are **Unstructured Supplementary Service Data (USSD)**-based, with limited human intervention and simple terms and conditions, consequently no proposal form is required. This automated process helps lower administrative expense which is crucial to having a sustainable microinsurance product.

Although we are at the very infantile stage, the excitement with which subscribers have welcomed the concept of easy access to insurance in this nearly complete self-served process has been phenomenal. Riding the wave of the generally positive feedback, the team remains resolute in revolutionizing the mobile insurance market in Ghana and meeting the insurance needs of Ghanaians. ■



Francis Gota is an associate member of the Actuarial Society of Ghana and country head for aYo Intermediaries Ghana Ltd. He is based in Accra, Ghana and can be reached at fgota@icloud.com.



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Life Insurance Development in Vietnam

By Albert Li

Editor's Note: We are pleased to feature this article which was submitted as a part of the International Section 2017 Country Feature Call for Papers.

I spent the past three years working in Vietnam as the appointed actuary for a major life insurance company. During this time, I witnessed a lot of changes in the industry on regulation, distribution models and product development. In this article, I will briefly discuss the current life insurance development with a focus on the latest regulation change from an actuarial perspective and its possible impact to the industry.

LIFE INSURANCE IN VIETNAM

Vietnam has a population of over 93 million and the life insurance penetration rate is low at around 1.2 percent. There are currently 18 life insurers in Vietnam, with 17 of them foreign insurers and only one predominately local life insurer. The top five life insurers accounted for over 78 percent of sales in 2017. The CAGR for the last five years on annualized first year premium has been 29 percent with USD 760 million in 2016 (F/X rate is assumed at USD 1 = VND 0.000044). The preliminary 2017 annualized first year premium is recorded at over USD 980 million, sustaining a YOY 29 percent growth rate trend.

The Ministry of Finance (MOF) is responsible for supervising the insurance market in Vietnam. The MOF has the power to grant and withdraw licenses and has authority to issue legal documents (circulars/decisions) that provide guidelines for the operation and other activities of insurers, reinsurers, insurance agents and insurance brokers. The Insurance Supervisory Authority (ISA), which is part of the MOF, assists the MOF in supervising the insurance business and market in Vietnam.

All restrictions on the ability of foreign insurers to establish 100 percent foreign owned subsidiaries were removed on Jan. 1,

2008 according to Vietnam's WTO commitments. In 2016, we saw Aviva Vietnam become a 100 percent subsidiary by acquiring the balance of the shares from the joint venture of Vietin-Aviva. Sun Life Vietnam also acquired the balance of the shares of PVI-SunLife. A new entrant is MB Ageas Life, with share interests of: 61 percent with the Military Bank, 29 percent with Ageas and 10 percent with Muang Thai Life.

DISTRIBUTION AND PRODUCT OFFERING IN VIETNAM

Agencies represent the major distribution channel accounting for 85 percent of industry sales, while bancassurance represents close to 13 percent in 2017. A small percentage is distributed through alternative methods. The product offering continues to focus on universal life and endowment plans, which carry significant guaranteed interest rates. Riders have become popular, mostly importing product ideas such as accidental death and dismemberment, total and permanent disability, hospital income and critical illness from other countries or reinsurers. Term life and credit life represent a small part of life insurance sales.

RECENT REGULATORY CHANGE

The insurance regulation in Vietnam has been evolving, with significant changes introduced during 2016 and 2017. The last update in 2017 was the Circular (Cir) 50/2017 which was issued during the last week of May 2017. One change was to revise the maximum valuation interest rate formula partly in response to the single index to the 10-year bond auction rate and the movement of the interest rates. Figure 1 shows the movement of the primary auction rates of government bonds. Please note, certain months did not have an auction and this chart will show the same rate as the previous month.

Figure 1
Vietnam Recent Government Bond
Primary Auction Rates

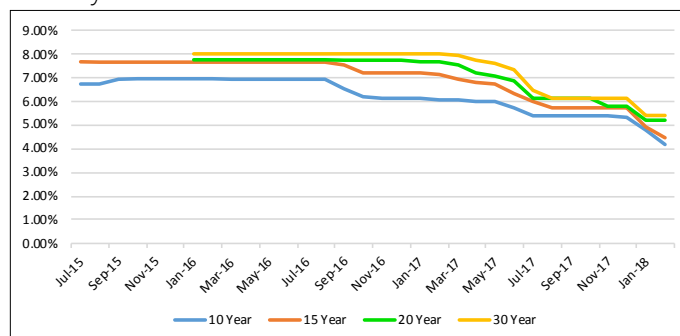


Table 1
Impact of Reserve Regulation on Methodologies and Assumptions

Reserve Regulations	Before	After
Primary regulatory documents	Dec 46/2007, Cir 125/2012 & Dec 96/2007	Dec 73/2016, Cir 52/2016, and Cir 50/2017
Reserve Methodology and Basis	Not permitted to change in the same fiscal year. Written approval from MOF is needed to change the method and basis for the following fiscal year.	Valuation interest rate can change (reduction only) within the fiscal year without notifying MOF but cannot be higher than the maximum valuation interest rate
Maximum Valuation Interest Rate (VIR)	80 percent of the 6-month average of 10-year government bond primary auction winning rates	70 percent of the 6-month average of 10-year and higher government bond primary auction winning rates. VIR cannot be higher than the average investment rates for the past four quarters. VIR cannot be higher than the pricing interest rate for each product.
Valuation mortality	80CSO	80CSO Other tables can be used but cannot be lower than the rates submitted for MOF product approval.
Minimum Valuation Methodology (contract term over 1 year)	Contract term > 1 year Zillmer with 3 percent expense allowance. Other methods are acceptable but cannot have lower reserves than the above prescribed methodology.	Contract term > 5 years Term products: 1 year FPT Others: Zillmer with 3 percent expense allowance Coverage term >1 year and =< 5 years Net Premium Valuation Other methods are acceptable but cannot have lower reserves than the above prescribed methodologies.
Unearned Cost of Insurance (COI) reserve	Not mentioned	100 percent of COI collected
Reserve for universal life	Surrender Value	Account value or surrender value
Reserve for minimum guaranteed interest rate	No detail	Equal to difference of investment result from insurance premium and guaranteed interest rate

Table 1 summarizes the impact of the most recent regulations on the reserve methodologies and assumptions. These regulations also resulted in a number of other changes but these are not discussed.

POTENTIAL IMPACT

The original idea of the changes in the VIR formula was to allow for a better representation of assets backing the liabilities and to reduce the sensitivity of a VIR reduction based on one tenor only. In this case, the MOF expands the VIR formula from a six month average of 10-year government rates to a six month average of government bond rates with tenor 10 years or higher. However, the MOF also increased the haircut factor from 20 percent to 30 percent as the interest rate was high at that point

and thus the ISA was not comfortable with the significant jump of the VIR that would arise on 2017 data ending June, if the same haircut factor had been applied.

As illustrated below, the simple average yields were average of all winning auction rates for government bond rates 10-year or higher over the past six months. As an illustration, if over the past six months, there were three successful 10-year bond auctions with 6 percent each, one successful 20-year bond auction with 7 percent and one successful 30-year bond auction with 8 percent, then the VIR is $70\% \times (3 \times 6\% + 7\% + 8\%) / 5 = 4.62\%$. The VIR as of August 2017 was 11 basis points higher than would be determined using the replaced regulation.

Table 2
Valuation Interest Rates (VIR)

VIR	80% of Average 10-year yield*	70% Simple Average yields*
Jan-17	4.99%	5.26%
Feb-17	4.96%	5.22%
Mar-17	4.89%	5.20%
Apr-17	4.83%	5.15%
May-17	4.80%	5.05%
Jun-17	4.75%	4.97%
Jul-17	4.70%	4.83%
Aug-17	4.62%	4.73%
:	:	:
Dec-17	4.32%	4.01%

* The VIR calculation is based on Vietnam government bond winning auction rates.

Although the new regulation appears to support a higher VIR result, there are expectations of further declines in yield, driven by:

1. Moody’s and Fitch upgrade on Vietnam’s outlook from stable to positive,
2. Vietnam government targets and maintain inflation rate at around 5 percent,
3. Excess liquidity from financial companies such as banks and insurance companies.

In fact, the 10-year bond rates decreased around 67 bps YTD ending August while the 15, 20 and 30-year bond rates decreased around 145 bps, 188 bps and 188 bps respectively.

For example, suppose that the bond auction winning rates repeating the August rates only happen once a month between September and December for all four tenors on 10, 15, 20 and 30-year bonds, then

Table 3
VIR Scenario

VIR	80% of Average 10-year yield	70% Simple Average yields
Sep Projected	4.30%	4.09%
Dec-17		

In 2016, the maximum VIR wasn’t known until the last week of December and then reduced to 4.99 percent from 2015’s level

of 5.10 percent. Most companies were able to absorb that last minute change due to the small difference. However, 2017 was a challenging year as the haircut factor was increased to 30 percent while rates continued to decrease. Applying the reduction of the maximum VIR from 4.99 percent to the 4.01 percent in Table 3 to the entire inforce block could mean an increase in the traditional reserve of around 10 percent. This increase in reserve coupled with the book value accounting of assets would also present a higher reduction in solvency margin. Based on a submission letter from the Vietnam Actuarial Work Group (comprising appointed actuaries within Vietnam) to the ISA dated Aug. 24, the total reserves for the whole industry would increase by VND 10,000 billion or USD 440 million at year end should the VIR drop to the 4 percent level, and it did.

CONCLUSION

The Aug. 24, 2017 submission letter to the ISA proposed a few solutions.

Short-term solution: Set the VIR to the higher of Cir 50 or 4.83 percent (VIR as of July 2017). This solution will expire either when a medium-term solution is agreed or by the end of 2018, whichever is sooner. Obviously, ISA didn’t accept this proposal.

Long-term solution: IFRS 17 is mentioned but most companies may not have the proper capability for it as currently the valuation is simple and it is based on a net premium valuation with 3 percent Zillmer adjustment and 80CSO.

With the volatile interest rate environment and the continual evolution of regulation, it is very important for companies to understand the movement of interest rates and the impact to the financial statement by performing stress tests and/or stochastic test and make it a part of the appointed actuary report. Although most companies coped with the last minute change in the VIR in December 2016, this was not the case for 2017.

Disclaimer: The views expressed in this article are those of the author and are not necessarily those of Willis Towers Watson, the Society of Actuaries or the International Section. The content of this article is for general interest. No action should be taken on the basis of this article without seeking specific advice. ■



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A Journey of Creating a Formal Actuarial Society for Vietnam

By Phan Ngoc Hung

It has long been a desire of practicing actuaries in Vietnam to establish an actuarial society, which would encourage the development of the profession, by promoting research, and by setting qualification and professionalism standards for actuaries working in the industry. Furthermore, it would foster collaboration with the worldwide actuarial community, as well as local related industries, regulatory bodies and the public. An actuarial society hence creates a point of contact between the local and international actuarial communities. Due to many complexities and sensitivities in the local industry, such a society does not exist.

The Vietnam Actuarial Community was founded in 2016 by a group of Viet actuaries in the financial industry when the profession was less widely known. It aims to promote the actuarial profession in Vietnam and lead to the establishment of a recognized Vietnam Actuarial Society.

We have learned from all previous efforts and our approach is now based on both “outside-in” and “inside-out” perspectives.

From an “inside-out” perspective, we talked with many people in the Ministry of Finance (MOF) and the Insurance Association of Vietnam to understand their views and seek support. We also created some effective communication channels through the website *vietactuary.com*, our Facebook page *facebook.com/Vietnam-Actuarial-Community-1493782650735889/* and other social media messenger applications, through which we are maintaining regular communication and improving the sense of belonging to the local community. We are also actively arranging



Appointed actuaries of several insurers in Vietnam.

many regular casual in-person meet-ups (lunch, coffee chat) to facilitate interaction and knowledge sharing.

We spoke and raised awareness at various national universities to promote the profession and gain support, and many have expressed their interest to cooperate with the Vietnam Actuarial Society (VAS) once it's formed. We are also supporting local national universities to develop courses that will help advance the profession and bring global recognition to our members.

From an “outside-in” perspective, we spoke to and gained support from the most key international actuarial societies including the International Actuarial Association (IAA), Society of Actuaries (SOA), Institute and Faculty of Actuaries (IFoA), Institute of Actuaries of France (IA France), Institute of Actuaries of Australia (IAAust), Singapore Actuarial Society (SAS), and Actuarial Institute of Chinese Taipei (AICT). In addition, we worked on many other initiatives such as organizing a Risk-Based Capital seminar in collaboration with the MOF in October 2016, with the participation of the SOA, SAS, and AICT to promote the cooperation with the international actuarial community. The upcoming issuance of a quarterly actuarial newsletter is part of our master plan to drive things forward. We are also working closely with other Vietnamese actuarial communities based in other parts of the world such as Diffusion Internationale de l'Actuariat Francophone—International Diffusion of French Actuarial Science (DIAF)¹ to foster knowledge, relationships, and join forces to build up a strong Vietnamese actuarial network worldwide which will ultimately be helpful for the effective operation of the forthcoming Vietnam Actuarial Society. We are also strengthening the link with foreign actuaries who are, or have been, working in the local market to gain more support.

From a legal perspective, we have identified the relevant legal framework monitoring the establishment of professional associations in Vietnam, and a legal professional who has experience in this space.

Conceived as a holistic approach, and while there are still some uncertainties on the outcome and timeline, we believe we are building up foundations for the society in learning from previous experiences. ■



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ENDNOTE

1 <http://assodiaf.org/en/>

Australian Retirement Incomes: What's Next?

By David McNeice

Editor's Note: We are pleased to feature this article which was submitted as a part of the International Section 2017 Country Feature Call for Papers.

Is the Australian retirement income system “all tip and no berg?” Does it have substance or only an appearance? Thirty years after the introduction of the first variant of compulsory private occupational superannuation, twenty-five years after the widening of the compulsion to all employees, and fifteen years after the contribution rate reached 9 percent of earnings, it is a reasonable time to ask the question: is it working? Is it doing what it was meant to? If not, why not and what can be done to make it work better? What next?

BACKGROUND

It is worth recapping the current state of the Australian retirement incomes system and how we came to be here. Australia has had a means-tested old age pension funded from general tax revenue on a pay-as-you-go basis since 1909. The level of pension is not overly generous, being set by government target to be approximately 25 percent of average ordinary time earnings. Currently, the maximum amount payable is approximately AU\$35,000 per year to a couple living in their own home. Given the cost of living, that amount alone will not be sufficient for most retirees' needs and expectations. Nor should it be, of course. It is there as a safety net, to protect the poor, the aged and the infirm from destitution. While the pension amount is not large, it is worthwhile noting that to buy an annuity of that amount on the open market today at age 65 would cost a couple approximately AU\$800,000, and more with inflation adjustment options and other favorable policy conditions.

The age pension is subject to a means test, both on assets and income. Most retirees will be eligible to receive part age pension rather than full age pension. Even so, the age pension and other welfare payments are the federal government's single largest expenditure item. For the 2017–18 year, 35 percent of federal government expenditure will go to social security and welfare payments. Income support for seniors is the single largest program in the social security and welfare category.¹



By the late 1980s, the first form of compulsory occupational superannuation was implemented followed by the economy wide compulsory Superannuation Guarantee (SG) system. The SG started at 4 percent of earnings and gradually increased. It is currently 9.5 percent of earnings.² Employers must pay (at least) 9.5 percent of earnings for each employee (with some limited exceptions) to an approved superannuation fund. The money must be preserved until retirement. There are no conditions on how the money is received in retirement.

IS THE SG WORKING?

The SG system was introduced without any specified purpose. There was no objective established by the relevant government as to what the SG was for. In recent years, various attempts to define its purpose have been made, but as yet with no general acceptance. Therefore, it is difficult to assess how well it is doing. Broadly, it could be said that the aim of the SG is to supplement the retirement savings of Australians. But that is not specific—even \$1 extra in retirement savings is a supplement. That objective says nothing about how much to supplement the savings, and nothing about the efficiency of the method in terms of minimizing opportunity costs.

Two structural points are worth highlighting. Firstly, the SG contribution is predominantly deferred wages. Other than those on the legal minimum wage (in many cases people are on the minimum wage during a transitional phase), the compulsory contribution is “paid for” by the employee in reduced wages, not as an extra amount on top of wages paid by the employer. Is it better for an employee to be forced into that position by law or to let that person make his or her own value judgments about the use of their money? Secondly, the age pension is means-tested. For every extra private dollar of savings, the age pension is reduced, and eventually phases out completely.

The data available on the size of savings that are being accumulated for retirement incomes are not particularly encouraging. According to the 12th annual HILDA³ Survey, the median superannuation balance at retirement of men that retired in the four years prior to 2015 was approximately AU\$325,000. For women, the figure was AU\$110,000. The CSIRO Risklab Australia group published its analysis of Household Assets Among Australian Age Pensioners in June 2017.⁴ It found that just over 50 percent of households were entering retirement with assets (excluding the family home) of less than AU\$350,000. 85 percent of households enter retirement with assets less than AU\$800,000.

The bulk of Australians are entering retirement with assets insufficient to generate a retirement income payable for life at the rate of the age pension.

The bulk of Australians are entering retirement with assets insufficient to generate a retirement income payable for life at the rate of the age pension. It is true that the SG system is still maturing. It will take another 25 years before an Australian entering retirement will have had SG contributions at the level of at least 9 percent of earnings for their full working life. At this stage of the SG program, there must be some doubt about whether the Australian system is as good as some like to claim it is.

It remains common to hear some industry participants lobbying the government to increase the minimum rate of SG contribution to reduce the risk of inadequate retirement savings. While that is theoretically one way of improving retirement incomes, it is highly questionable on the grounds of efficiency. Not everyone will live longer than average—it is not necessary to assume a long retirement for all people. The higher rate of saving across all people during their working lives will result in more leakage of savings out of the retirement draw down phase from those that die after shorter periods of retirement. Those leaked savings could have been put to better use. The problem lies with our lump-sum delivery mechanism.

A significant clue to the effectiveness, or perhaps lack of effectiveness, of the Australian retirement income system unfolds

annually. Virtually every year since 1983, the rules and policy settings for superannuation have changed. Some of the changes have been massively structural, some less so, but change after change is implemented by the government. If the system were working, then changes would be less frequent. The scale of the changes suggests the system is not working. Layer over layer of regulations have been added. Some layers created outcomes that had to be corrected by other layers of regulation. The regulatory burden on superannuation funds is enormous. Still the regulator is not happy. The Australian Prudential Regulation Authority (APRA), charged with the responsibility of prudential supervision of financial institutions in Australia, has announced that it intends to force funds that do not meet the interests of members, as judged by APRA, to wind up and transfer their obligations to another fund. Exactly what standards APRA will use to judge which funds it should terminate is not clear.

THE MISSING INCOME

The main topic of the current day is how to put the “income” into retirement income policy. The amount of retirement savings taken in the form of an income that has some form of protection against longevity or market risk is relatively small. Mostly, the retirement savings are accumulated in lump sum form, used in many cases to pay off debt or fund a holiday and then drawn down at whatever rate the retiree chooses. The retirees retain the market risk, the inflation risk and the longevity risk (along with operational risk of the institution entrusted to manage their investment). If they live too long, they rely on the pension. If they die early, they can pass on their residual assets to their estate.

With interest rates at current levels and with the prospect of increasing longevity, financing a retirement income of any meaningful amount on an individual basis without any component of mutuality, becomes ternary: a retiree will live too long, beyond what they were able to save for; or, they will die early and didn't need to save very much at all; or, they will get it right by dying approximately on time. The chances of getting it about right are less than the combined chances of getting it wrong. All the education and nudging and compulsion in the world to save more will not change the ternary nature of the problem.

The best outcome is to have people save what they need to fund retirement, no more and no less. The concept of mutuality allows this solution. Older style products with mutuality built in have fallen out of favor. Now the search is on for a modern day mutual product that will appeal to the retirees.



To get the income into retirement, there are two solutions currently available on the market. The first requires a financial promise underwritten by an institution. An annuity is one example. It requires capital to meet the financial promise and comply with regulatory capital adequacy requirements. Capital is not free and pricing a product to pay for the capital generally makes the product less attractive to consumers, where those consumers place too little value on certainty. The second requires voluntary pooling of risks with benefits limited to the existing remaining pool of assets. A longevity risk pool is an example. Pooling products exist, but the take up rate has been low.

The federal government released a consultation paper in December 2016 on the topic of comprehensive income products for retirement, or CIPRs. An earlier inquiry into the financial system had recommended development in this area. The government will now be considering stakeholder feedback. We are yet to know how government thinking will develop on the topic but there is potential for encouragement, or requirement, of the use of retirement income streams delivered by way of a product, in place of the long established practice of lump sums. It is too early to tell exactly what form such products could take.

WHAT NEXT?

What happens next for the retirement incomes of Australia depends on politics. If the federal government continues in the same vein as it has over the last 30 years, then not much will change in the way of effectiveness. Compulsion and restriction will continue to inhibit innovation. At best, we may see marginal improvements in efficiency driven mainly by technological advancements. However, the age pension will continue to be the dominant expense of the government's budget, policy makers

will exhibit frustration that ordinary people are not saving more and may react with further layers of regulation. Some kind of pooled risk product may become compulsory for retirees to use. The community will remain uninterested in superannuation. Those firms that provide the intermediate services such as investment management, administration, insurance, consulting, and advisory will continue to take their cut and be criticized for doing so. Whole careers of people will come and go as discussion continues through future years as to what the real purpose of the SG is. Someone will ask the question in 2040 as to whether the Australian retirement income system is all tip and no berg.

Alternatively, the politics could change. Economic stagnation results in frustration among the people and in such times, genuine change in governments can emerge. It has happened before and could happen again that a reforming government could gain power and strip away various layers of regulation and compulsion. If that occurred, there would be greater incentive for innovation in financial product design. There is growing evidence that the SG system in Australia has not had as much effect on the cost of the age pension as might have been expected 25 years ago. Our system requires the deferment of wages into savings that then reduce the taxpayer-funded age pension. Is it not reasonable for many people to then minimize such savings, or spend those savings on other items so as to maximize the pension? Is our system inherently self-defeating? Compulsion is not a substitute for good policy.

Disclaimer: The views expressed in this article are those of the author and are not necessarily those of Willis Towers Watson, the Society of Actuaries or the International Section. ■



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ENDNOTES

- 1 see Budget Paper: http://www.budget.gov.au/2017-18/content/bp1/download/bp1_bs6.pdf.
- 2 Earnings are capped for this purpose. Currently SG contributions are not required for earnings in excess of AU\$206,000/ann.
- 3 Household Income and Labour Dynamics in Australia Survey. (https://melbourneinstitute.unimelb.edu.au/_data/assets/pdf_file/0010/2437426/HILDA-SR-med-res.pdf)
- 4 <https://publications.csiro.au/rpr/download?pid=csiro:EP174179&dsid=DS1>

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Professionalism in Actuarial Practice: Part 2

Including a Case Study with an International Perspective

By Jules Gribble and Milanthe Sarukkali

Professionalism is an important aspect of any actuary's career and we suggest it is an important aspect of what sets actuaries apart. Actuarial associations support professionalism through their codes of conduct, and it is important for their members to understand and apply those codes in their business practices.

This is the second in a series of articles that discuss professionalism issues through hypothetical case studies. The issues we raise have an international perspective. In each article, we start by discussing some important aspects of professionalism, then discuss feedback on the prior case study, and then introduce a new case study for readers to consider.

These articles are based on a presentation made by the authors at the International Actuarial Association (IAA) Asia Subcommittee Regional Seminar held in Colombo, Sri Lanka on July 14, 2017. Some of the points to consider following the case study reflect audience feedback received.

The first article was published in the January 2018 issue of *International News*. In that article, we discussed professionalism and its focus. We made the key point that professionalism focuses on the "how" of the conduct of actuarial activities, not the technical "what" of the outcomes. In this article, we extend and build on this.

PROFESSIONAL ADVICE

"Professional advice" is, naturally, talked about a great deal. However, it is not often clarified what this phrase means and it can be used differently by different people or in varying circumstances. We suggest the following definition help clarify and set expectations: *Professional advice is the provision of an unbiased opinion by a person whose training and experience should ensure that the advice is in accordance with the current state of knowledge.* This is quite general but fully applicable to actuaries.



We make two key observations about this definition. First, it is not a guarantee. Its purpose is to improve the probability of good or correct decisions. This highlights the importance of effective communication by actuaries to the decisions makers. Second the key role that professional judgement plays. In future looking risk-based analyses it is not possible to provide certainty of outcomes. This needs to be clearly understood and reflected in communications. In particular, this suggests that the communication of the variability and drivers of future outcomes is critical in supporting improved decision making. Appropriate processes for and documentation of the base for professional judgements are also vital to support accountability and future review.

The word "advice" is a key word. We emphasize the need for actuaries to do sound technical work to support, justify and document their recommendations. The word clearly indicates that the advice given is received by another party. This emphasizes the importance of clear communications. Very often it is the recipient of the advice who is the decision maker. While this may sound like a simple and obvious statement, it has some profound implications.

Firstly, the advice provided needs to be in terms and language the recipients of the advice understand. That means actuaries should try to put themselves in the position of the recipients of their advice when they develop their reports and advice. They need to recognize that although these recipients are likely to be clever and experienced, with many skills, they are most likely not actuaries. This may mean that jargon and concepts that actuaries are familiar and comfortable with may be inappropriate or need clear explanation to allow implications to be effectively communicated.

Actuaries are familiar with the reality that future projections are uncertain, however others are not so familiar with this and the extent of uncertainty therefore needs to be constructively communicated. Scenarios can be useful in this context. It should also be said that while there is a clear responsibility on actuaries to communicate their finding clearly, there is also an equal obligation of the recipients of those findings to engage so their reception is improved. This can also be challenging for both parties, yet it is a critical component of effective application of actuarial advice.

Secondly, a key implication of the word advice is that it implies the actuary provide the advice is not the decision maker. To emphasize the point, it is the recipient of the advice who is typically the decision maker. It can therefore be a mistake (and unprofessional) for an actuary to presume that their advice must be followed.

Perhaps obviously, it is advice and not an instruction. Also, and importantly, there may be other issues that impact the decisions that are not included or reflected in the advice provided. This may not be a criticism of the advice, but a recognition that there may be other, perhaps critical, issues that impact decisions but are not actuarial in nature. For example, there may be external constraints of requirements an insurer is obliged and needs to address and then the role of actuarial advice may be more to mitigate and understand risk then to provide a “good actuarial” proposal for a technical actuarial perspective. So, in some cases, it may be that the actuarial advice is (appropriately) not followed. It is always important that decision processes are well constructed and documented. Depending on the circumstances, the actuary may or may not be a key part of that process. As the actuary’s involvement in the decision process declines, the importance of clear communication of actuarial recommendations and implication rises.

A perspective on the effectiveness and value actuaries provide to their clients is that of a “use test” of how influential their advice is to their decision makers.

CASE STUDY 1: ANOTHER COMPUTER GLITCH!

The case study presented in the first article published in January described a situation where a company’s reputation was at risk due to a technical issue with the system that generates unit-pricing for unit-linked products. This is the third time this has occurred within the last six months. The issue has been rectified, but the chief financial officer and actuary, Mike, has been asked to keep this situation away from media. However, the media has contacted Mike and asked for comments, and Mike’s relationship with his manager is strained as a result. Several questions were suggested for consideration when the case study was presented.

The following discussion reflects feedback we received from the audience when the case study was presented at the IAA seminar.

- “Hushing it up” seems inappropriate, even though it is common practice in the market that Mike now practices in. This highlights the challenges actuaries may face, both professionally and personally, when local or corporate business practices and cultures are inconsistent with their experience and professional obligations.
- As an actuary, Mike is expected to act honestly, with integrity, and meet his obligations under the Code of Conduct of the actuarial association(s) he is a member of. The matter at hand is something that affects (at least some) policyholders and may be seen to be of public interest.
- Does the company have processes, experience or contingency plans in place to draw on to minimize potential reputational damage and give their policyholders and the wider public confidence the issue is being appropriately addressed? This includes what lesson were learned and actions taken due to the prior issues.

Actuaries are familiar with the reality that future projections are uncertain, however others are not so familiar with this and the extent of uncertainty therefore needs to be constructively communicated.

It needs to be acknowledged that Mike is now in a very difficult position, both professionally and personally. Not only does he need to deal with the immediate situation, but he also needs to deal with the consequences of his actions, which may be significant.

It is also clear that prevention is much better than cure as by the time situations have arisen, the scope for actions may have become limited. This emphasizes the need for individual awareness at all times, ongoing education and awareness, and the benefits of having support processes in place for when they are needed.

These support processes should include your actuarial association(s). Your membership should provide both benefits to you as a member of a well-regarded professional and the association

should also provide its members with support. This support should be both educational, before issues arise, and tangible when issues do arise.

CASE STUDY 2: CREDIBLE EXPERIENCE

A second case study along with a few points to consider when evaluating the actuary's position are presented below. We encourage readers to reach out to us with their views on how this situation can be managed without compromising the actuary's professional obligations.

Mary is the chief actuary at Good Life Insurance Company in Asia, which has been in operation for five years. She is responsible for experience studies and annual assumption setting for pricing and valuation.

A thorough analysis of actual claims data, showed that their mortality experience was close to 70 percent of the standard industry mortality table. However, Mary feels that this is not credible due to the company being in early years of operations.

Mary suggested blending company experience with an industry-wide mortality study on similar products weighted for credibility. She finally recommended using 80 percent of the standard mortality table as the assumption used in pricing.

Mary presented results of the experience study and her recommendation at the next meeting of the assumptions governance committee, which included senior management of the company. At this meeting, senior management of the company expressed views that the mortality assumption should be around 70 percent of the standard mortality table, based on their experience having worked for decades in this insurance market. They indicated that setting the mortality at 70 percent of the standard mortality table would help in re-pricing a product that is very price sensitive in the current marketplace.

She has been under pressure from senior management, and even the board of directors for the last few months to price this more competitively. She has adjusted several pricing parameters within reasonable limits to make pricing somewhat competitive. Mary realizes that setting a lower mortality assumption would indeed enable them to price this product to be very competitive in the market. This would enable the company to gain considerable market share.

What should Mary do? Should she set the assumption to enable the company to price the product more

competitively? How can she justify her decision to management?

Some points to consider include:

- Assumptions often reflect professional actuarial judgements and so will contain a component of subjectivity (there is no single "right" outcome with all other outcomes being "wrong").
- Are there any technical concerns around the methodology used?
- How can Mary defend her recommendation? Further, how can Mary better communicate her recommendation and the impact of changes?
- How can Mary handle the implications on product pricing? This may depend to a considerable extent on the structure of the product and the scope there is to change parameters in the future in the light of experience.
- What is Mary's professional role in the meeting?
- Is there additional information that is required to be able to make informed comment on this case study? If so, what information and why is it required?

We look forward to hearing your suggestions on how Mary can handle this situation. We also welcome further comment on Mike's dilemma. Please reach out to us at the email addresses we've provided.

Disclaimer: The views expressed in this article are those of the authors and are not necessarily those of their employers, the Society of Actuaries or the International Section. The content of this article is for general interest. No consideration of specific or personal circumstances has been made or implied. No action should be taken on the basis of this article without seeking specific advice. ■



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Actuaries Without Borders in Macedonia

By Vladimir Bubalov

Republic of Macedonia is one of the republics that emerged as an independent country after the dissolution of the Yugoslav federation in 1991. The actuarial profession was almost non-existent in the country until 2004, when 10 actuarial students successfully completed an actuarial education program organized by the Ministry of Finance in cooperation with the International Association of Actuaries (IAA) and USAID/Financial Services Volunteer Corps (FSVC), and founded the Macedonian Actuarial Association (MAA). MAA has been a full member association of the IAA since May 28, 2016. Today it has 30 fully qualified actuaries who work at 16 insurance companies, one state pension fund, and two private pension funds. In order to assist its members in their continuing professional development (CPD), MAA is organizing seminars and workshops, the latest one being with Actuaries Without Borders® (AWB), a section of the IAA.

AWB SEMINAR FOR MAA

On December 27–28, 2017, in collaboration with the MAA, and sponsored by three Macedonian insurers, a workshop was successfully delivered by Mr. Idriss Amrani, an AWB volunteer, in Skopje, Republic of Macedonia. The president of the Council of Experts from the Insurance Supervision Agency, Mr. Klime Poposki, gave the keynote address, providing ample information on the market and the expected changes.

Over 50 participants attended the workshop including risk managers, CEOs, COOs, in-house actuaries from the Macedonian insurance industry and from the Macedonian Insurance Supervision Agency and actuaries from the Agency for Supervision of Fully Funded Pension Insurance.

The purpose was to create awareness of the foundations of a risk based regulatory framework which will be introduced shortly in the Republic of Macedonia and to demonstrate that the actuarial association is a stakeholder in this process.

Mr. Amrani gave extensive information on Insurance Core Principles (ICP) 7 (corporate governance), 8 (risk management and



internal controls), and 16 (ERM for solvency purposes). He paid special attention to the various roles of the actuarial profession within this new framework. He gave an in-depth explanation of the differences between the actuarial function, appointed actuary and the operational actuary. He also pointed out that the actuarial professional is playing a key role in ERM function. Some case studies on business risk assessment were presented in addition to the theoretical presentations and were much appreciated.

Reporting under ICP and Solvency II and embracing the ICPs, were presented as topics. For this purpose, the guidance note for life insurers financial condition report prepared by the Actuarial Society in Ghana for the Ghanaian insurance market was presented. It is an example of the importance of the association setting standards for the market in partnership with the regulator.

This jointly organized workshop received four-star feedback from participants and hopefully inspires the MAA to take up their role as stakeholder in the process of introducing, implementing and monitoring the new regulatory framework to guarantee the financial sustainability of the industry, to protect the consumer, and to provide valuable products to the consumer.

In addition to his presentation, Mr. Amrani shared his professional experience. He has worked for six years at the ACPR (French insurance regulator), is involved in issues related to Solvency II such as evaluation of business models and the effectiveness of corporate governance ensuring fair treatment of policyholders. ■



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Actuaries Around the World: Hungary

By Stephen Camilli

Editor's Note: This interview originally appeared on the ACTEX Learning blog <https://blog.actexamdriver.com/2018/02/07/actuaries-around-the-world-hungry/>. It has been lightly edited for clarity and is reprinted here with permission.

Our next edition of “Actuaries Around the World” takes us to Hungary. Gábor Borza is an actuarial consultant working with Tools4F and is a board member of the Hungarian Actuarial Society, which he chaired from 2013 until 2017.

Borza spent the first 22 years of his professional career at ING / Nationale-Nederlandem, a retail financial provider. His expertise lies in life insurance and pensions and he teaches pension insurance to post-graduate actuaries. Borza is a member of the Pension Committee of the Actuarial Association of Europe. Prior to this, he was active in various industry associations and committees in Hungary and at the European level. Most notably, he was a member of the working group for the European Insurance and Occupational Pensions Authority (EIOPA) Occupational Pensions Stakeholder Group (OPSG).

Stephen Camilli (SC): How many practicing actuaries do you have?

Gábor Borza (GB): We have 217 members of our association. Some of them work outside the strictly actuarial profession, in risk management, finance or banking. There are also practicing actuaries who are not association members.

SC: What is the word for actuary in your local language?

GB: Aktuárius

SC: When was actuarial science first introduced?

GB: Over 100 years ago. The first Hungarian actuary published articles and participated in international events before World War I.



Gábor Borza

SC: What is your favorite part about being an actuary?

GB: Most actuaries have a similar sense of humor.

SC: Can you share an interesting anecdote or two from your career?

GB: When the company I worked for in the mid '90s developed a dread disease product (with an acceleration benefit), one of the actuaries created a “commercial slogan” (based on the calculation formulas): *You are still alive, but we consider you already dead.* This was hung on the wall during the whole process and they tried to explain to visitors that this would be a real slogan.

SC: Do you have any advice for young people in your country interested in pursuing this career?

GB: This career offers great opportunities—you can either develop yourself as a high value specialist or later on, you can move into management.

SC: What are some of the highlights of the history of the actuarial profession in your country?

GB: 1991: Founding of the Hungarian Actuarial Society
1995: Beginning of university actuarial education
1996: Hungary joined the International Actuarial Association
2004: Joined the Actuarial Association of Europe as a full member

SC: What are some of the main challenges and projects for your association over the next 5–10 years?

GB: Implementation of the International Standards of Actuarial Practice (IASPs) and European Standards of Actuarial Practice (ESAPs) into the everyday life of actuaries.

SC: What developments on the horizon could affect future opportunities in your country?

GB: Changes in life annuities that are hardly sold or bought on the market. In addition, the implementation of the pan-European personal pension product (PEPP) and in general true pension products. PEPP is a new initiative of the European Commission to promote individual pension savings by setting requirements for a special pension product allowing savers/investors to use the same long-term product while moving from one EU member state to another without losing the tax benefits.

SC: Who are the main employers of actuaries?

GB: Insurance companies, auditors, consulting companies, regulators, pension funds, and government (in order of significance).

SC: What qualifications do you find most important for upcoming actuaries?

GB: Technical skills combined with communication abilities and openness to new developments, such as big data.

SC: Do schools in your country have actuarial majors, minors, concentrations or do students study on their own or overseas?

GB: We have one university program, a joint program of two major universities (Corvinus and ELTE), providing actuarial master's degree courses in Insurance and Financial Mathematics and Actuarial Specialization.

SC: What is the credentialing procedure like for an actuary in your country?

GB: One can apply for membership based on one's professional work, support by two members and a presentation. Qualifying

PEPP is a new initiative of the European Commission to promote individual pension savings by setting requirements for a special pension product allowing savers/investors to use the same long-term product while moving from one EU member state to another without losing the tax benefits.

membership can also be obtained by university education and can be maintained by collecting CPD points.

SC: Are there any noteworthy non-traditional actuarial positions?

GB: Internal auditor, IT, CEO

SC: What is your favorite Excel function and why?

GB: Personally, SUMPRODUCT and matrix multiplication

SC: Do you have any non-actuarial hobbies?

GB: Travelling (but I guess this is rather actuarial as the actuarial conferences are all over the world and actuaries love travelling).

SC: What could people from outside of your country do to help the profession grow?

GB: Share experiences of similar-sized actuarial organizations with no paid staff and no office.

SC: Thank you Gábor Borza! ■



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Latin American Insurance Regulatory Update

By Carlos Arocha

Gross written insurance premium in Latin America is about \$150 billion,¹ about a tenth of the corresponding annual insurance production in the United States and Canada taken together. Notwithstanding, premiums in the region have been growing steadily over the past few years, as the local economies develop and modernization in industry, technology and societal changes spur the growth of the insurance sector.

Penetration is relatively low: at 3.2 percent of GDP, the sub-continent lies well behind the emerging Asian markets, let alone other more developed insurance markets. The same is true for the premium density metric, or the amount of premium dollars per person. Latin Americans spent less than \$260 per year in insurance, compared to about \$2,300 spent in the United States.²

Latin America is a group of 20 countries³ with a combined population of 640 million, two major languages, and an area of more than 7.4 million square miles. A direct flight from Mexico City to Buenos Aires takes about 10 hours.

Two large commercial trade blocs are in place: *Mercosur*, grouping Argentina, Brazil, Paraguay, Uruguay, and Venezuela (although admittedly, the bloc's economic engine is fueled by Argentina and Brazil only), and *Alianza del Pacífico*, that includes Colombia, Chile, Mexico, and Peru.

Whilst Brazil's budget balance is close to -7 percent of GDP,⁴ policymakers in Mexico, Chile, and Colombia implemented monetary and fiscal policies that have improved the state of their economies. But the renegotiation of the North American Free Trade Agreement (NAFTA) looms large over the Mexican economy.

DRIVERS OF INSURANCE GROWTH

Barring Venezuela and Cuba, Latin America is becoming more politically stable as democracy is taking a hold. The growth of the regional insurance industry is driven by the following:

1. More awareness and knowledge about natural disasters—the renewed interest in issuing catastrophic bonds (a form

of insurance-linked securities) by the World Bank and the governments of Mexico, Peru, Colombia, Chile and Argentina, illustrates the use of international finance and global reinsurance markets to model natural catastrophes. In turn, specialists from a few countries have developed expert systems to measure risk.

2. A growing middle class—there is more demand for savings products, particularly, to finance children's education.
3. Compulsory insurance—in many countries, automobile third-party liability, workers' compensation and other forms of liability insurance are compulsory.
4. Bancassurance—the use of the banking infrastructure to reach the unattended population, has motivated the establishment of micro insurers. Anyone who has visited El Alto, in the outskirts of La Paz, Bolivia, can attest that micro finance has helped millions of small, family-owned businesses.
5. Mass marketing—thanks to new distribution channels, insurance companies are reaching new market segments and new generations, including the techniques of InsurTech. Technology is probably one of the most important drivers of insurance growth in the region.
6. Growth of commercial insurance—as economies flourish, small and medium companies are being established. These companies have appetite for credit insurance, commercial property damage, third-party liability, and other forms of insurance.

INSURANCE PROTECTION GAP

Notwithstanding the fact that insurance is developing rapidly in Latin America, there is a huge protection gap. It is difficult to produce a meaningful measure of how much markets could grow, but if the insurance density and penetration of the more advanced markets is taken as a proxy, one can probably reach the conclusion that the industry is less than one-third developed. Stated differently, if the current premium production is about \$150 billion, the market would have potential today, to be worth some \$450 billion at constant prices, maybe more.

GROWTH POTENTIAL

Latin America has one of the lowest insurance penetrations in the world. But its 640 million people, the fact that Spanish is the dominant language (as is Portuguese for the 209 million Brazilians), and a relatively homogeneous culture, makes it somehow easy to devise regional marketing strategies and expand into new products and services.

The economic and political stability invites foreign investors to the region. Mexico, one of the region's top economic engines,

has witnessed a 15-year period of macroeconomic stability previously unseen. The evolution towards global regulatory and financial systems and the alternative distribution channels being explored, add to the list of arguments behind the region's growing potential.

ASSAL and IAIS

Both the Latin American Association of Insurance Supervisors (ASSAL) and the International Association of Insurance Supervisors (IAIS) have made a host of commitments to modernize insurance regulation, ranging from developing a balance sheet approach to solvency, to the establishment of disclosure and transparency measures that are more aligned with international standards, such as the European Union's Solvency II Directive. ASSAL works through committees for education, microinsurance, solvency, and information exchange.

The IAIS has proposed a revision of its Insurance Core Principle No. 1, to suggest that primary insurance legislation must define its objectives: the protection of policyholders, the maintenance of a fair, safe and stable insurance market; and the contribution to financial stability. These measures have been enthusiastically adopted (or at least seriously considered) by most Latin American insurance regulators.

STAGE OF DEVELOPMENT OF RISK-BASED REGULATION

Solvency II, the Swiss Solvency Test, and other regulatory solvency capital directives, have been catalysts for risk-based solvency regulation throughout the world. For many years, solvency capital was calculated as a function of premiums or claims for general insurance, or of reserves and nets amount at risk for life insurance.

These methodologies were practical but did not address the inherent risk characteristics of insurance portfolios, nor credit, market, and operational risks. The European paradigms meant an overhaul of regulatory capital rules, and regulators in most countries in Latin America have initiated projects to shift to a risk-based capital regime. Countries can be classified in groups:



We now turn to the stage of solvency modernization in selected Latin American countries and the insurance supervisory agency in charge of solvency modernization projects.

Brazil

SUPERINTENDENCIA DE SEGUROS PRIVADOS (SUSEP)

- New regime has been gradually introduced
- The insurance risk module is factor-based
- There is a capital requirement to mitigate credit and operational risk
- Market risk requirements have been gradually introduced
- Supervision activities have been strengthened, and aimed to be consistent with the Solvency II Directive
- SUSEP may be understaffed

Chile

SUPERINTENDENCIA DE SEGUROS Y VALORES (SVS)

- Solvency modernization project launched in 2004
- Approach analogous to Solvency II
- Mandatory quantitative Impact Study No. 5 issued in May 2017
- Quantitative requirements have been approved by congress, but qualitative and supervisory requirements require no approval
- A 6th Quantitative Impact Study is being planned in 2018
- It is foreseen that insurers will have to appoint a chief risk officer

Solvency II and the Swiss Solvency Test have been catalysts for a risk-based solvency regulation throughout the world.

Mexico

COMISIÓN NACIONAL DE SEGUROS Y FIANZAS (CNSF)

- Solvency modernization project launched in 2014
- A mix between Solvency II, Switzerland’s Swiss Solvency Test, NAIC methodologies, and organic development
- Qualitative requirements in place as of April 2015, including solvency and financial condition reports and quantitative requirements in place as of January 2016
- Compulsory dynamic solvency requirement and stress tests
- Shift to an economic balance sheet for compliance reporting, which together with the new solvency requirements, has increased financial statements volatility, particularly for life insurers

Colombia

SUPERINTENDENCIA FINANCIERA DE COLOMBIA (SFC)

- Gradually shifting from a factor-based model to a risk-based model
- Underwriting risk is measured by a Solvency I-type formula (i.e., a factor-based model)
- Credit and market risk capital charges already in place
- Companies may use an internal model upon approval by the SFC
- Circular 045 requires an independent appointed actuary to validate and certify reserves on a monthly basis

Peru

SUPERINTENDENCIA DE BANCA, SEGUROS Y AFP (SBS)

- Solvency modernization project launched in 2008
- Solvency is factor-based with additional capital charges for credit, market and operational risk
- In 2014, the SBS implemented a capital charge for asset concentration risk

- Debt for insurance companies cannot exceed the total solvency capital
- The actuarial function (mimicking the Solvency II Directive) has been prescribed
- Reserving guidelines have been revised
- There is a pathway to establish quantitative impact studies

HOW TO MODERNIZE SOLVENCY CAPITAL REQUIREMENTS

Through international cooperation, the Insurance Core Principles of the International Association of Insurance Supervisors have set the tone for industry regulation in much of Latin America. There is, however, an enormous gulf between highly developed economies and emerging markets, that is being addressed by regulators, industry leaders, and other stakeholders.

Insurance regulators face substantial challenges, and there is probably no one-size-fits-all solution to the problem of requiring companies to determine an appropriate solvency capital requirement. Many jurisdictions worldwide have attempted established simple rules and methodologies that represent a fair solution for the industry, and avoid unintended consequences, such as business mix changes to optimize regulatory capital utilization.

Latin America may be relatively homogenous, but each market is different—each market should engage in modernization projects at their own pace. A full-blown risk-based solvency regime may not be the answer to solvency modernization—viable alternatives such as simplified factor models, scenario models, and stress tests warrant consideration. ■



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ENDNOTES

- 1 Sigma 3/2017, Swiss Re Institute
- 2 Ibid.
- 3 Not counting the Anglophone, Francophone, and Dutch-speaking countries such as Belize, Guyana, Surinam, and Jamaica.
- 4 The World in 2018: The Economist Intelligence Unit

The Future of Canadian Group Benefits

By Melissa Carruthers

In recent years the life and health insurance industry has felt the ripple effect of emerging technologies and the shift in customer expectations driven by other sectors. While albeit lagging behind in their response, insurers globally are now on the cusp of transformation. In Canada, insurers, third-party administrators, advisors, and consulting firms are particularly concerned with what the future has in store for their group benefits business, which combined made up approximately 39 percent of Canada's 2016 total life and health insurance premiums.

While individual lines and group retirement continue to be markets ripe for disruption, the high-touch, high-volume nature

associated with that of group benefits results in a number of significant customer (both plan sponsor and member) friction points, thereby accelerating it on the list of executive's priorities.

This creates a strategic imperative to explore how group benefits may evolve in Canada as a result of several key drivers, and the implications across product development, pricing and underwriting as carriers look to gain a competitive advantage in the future of group benefits.

Amongst several forces driving change in the insurance industry, there are five primary factors in and outside of group benefits that are encouraging incumbents to rethink their traditional business models and product offerings:

1. **Rapid shifts in customer expectations**—Driven by experiences offered by other sectors, today's consumers are demanding an improved customer experience from discovery through to claims. They are looking for increased transparency, improved digital capabilities and a more personalized experience from their group benefits provider.
2. **Emerging technologies and increased availability of data**—Group benefits providers are looking to capitalize on the integration of third-party data with traditional datasets



and emerging technologies to achieve operational efficiencies and data-driven insights for more actionable business decisions.

3. **Increasing competition**—There is an increasing number of new startups and insurtechs presenting both an opportunity and a threat as they look to target pain points unaddressed by traditional incumbents through technology-led solutions. In addition, several specialty health care providers are emerging as competitors as there is an increasing overlap with the non-traditional benefit services offered by carriers and that of specialty health care providers.
4. **Increasing plan costs**—The sharp increase in specialty drug costs and the rising incidence of mental illness have driven plan costs up significantly in recent years. Sponsors and carriers are actively looking for opportunities to proactively manage plan costs and decrease the frequency and severity of disability claims.
5. **Evolving workforce demographics**—Across Canada there is an increasing number of contract workers, solopreneurs, microbusinesses and millennials entering the workforce with new and vastly varying benefit demands not currently being met by traditional benefit plans.

Insurers must not just react but prepare for the future or risk being left behind.

While several carriers across the country have started to respond to these evolving market dynamics, there remains to be a clear leader in this space. However, given the rapid pace of change upon us there is now a widespread understanding that one must not just react but also sense the direction the market will take and prepare for the future or risk being left behind.

On the brighter side, with uncertainty comes opportunity. The path forward is an exciting one with leaders in the space looking to future proof their business by renewing their strategic focus, developing a new differentiated value proposition, refreshing their product suite and redesigning their traditional business models.

Despite the uncertainty of the future, there are foundational capabilities, existing friction points and evolving customer demands across the value chain that will need to be addressed if a carrier wishes to achieve a competitive advantage in the future of group benefits.

1. **Balancing sponsor cost with member value:** While managing plan cost is front and center in the minds of sponsors, they consider their benefits offering to be a critical part of their talent strategy. However, due to the commoditization of group health and dental plans, these have become table stakes with nontraditional benefits in the form of “work perks” becoming an important tool for attracting and retaining talent. Members expect to have some level of health and dental coverage included in their benefits but tend to place the most value on benefits they first and foremost understand and those in which they can realize the benefit of in the short term (i.e., health care spending accounts) versus those they do not plan—ideally—to use (i.e., life insurance). Benefit providers will not only need to take a proactive approach to cost management for plan sponsors and actively seek new ways to reduce costs through plan design and improved claims experience, but they will need the ability to develop creative solutions that balance traditional offerings with those members perceive true value in if they want to gain sponsor buy-in.
2. **Redefining your customer:** Historically the plan sponsor has been the primary customer in the eyes of advisors and carriers. Evolving customer expectations and the increased frequency in which carriers interact with members directly are forcing the need for carriers to become more member centric. While the sponsor may dictate the suite of benefits that the member has access to, the experience provided at the member level across onboarding, servicing and claims can strongly influence who the sponsor selects as their benefits provider. The products and services as well as the communication and distribution channels offered by an insurance carrier must cater to both the sponsor and the member. Developing a deeper understanding of member needs and how those vary by segment (e.g., group size, industry, demographic etc.) in order to customize solutions and provide an improved experience that better meets the unique needs of the underlying members must be at the center of how insurers operate and distribute in the future.
3. **Integrated market exchange:** The reduction in plan coverage and the increase in the number of contract workers without access to benefits has increased the demand for individual and top-up coverage. To date carriers have remained fairly unsuccessful in their attempt to cross-sell for numerous reasons such as approval from the plan sponsor or the lack of data availability and integration across business lines. However, driven by experiences in other sectors members are increasingly open to more personalized marketing, particularly if it means a more convenient purchasing process.

Should members have an increased propensity to purchase all of their insurance needs (i.e., health, wealth and lifestyle products) from one convenient platform, sponsors may be more likely to grant providers direct access to members. Competing in the future will mean providing members with a one-stop shop for all of their needs, which given the desire for more “work perk” oriented products may not be limited to that of just standard benefit or insurance products. To provide a direct-to-member service offering will require the seamless integration amongst various internal business lines, data and operations. Ensuring you are equipped with the digital platforms and supporting data and analytics capabilities required to distribute members a wide range of products will be foundational to achieving a competitive advantage in the group benefits market and ultimately across all lines of business.

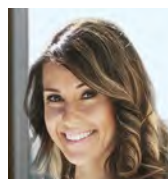
4. **Advisor of the future:** Distribution has seen the greatest amount of disruption as new entrants and now incumbents look to address unmet needs in the market. Small groups (roughly <50) are increasingly being targeted through low-cost digital distribution channels enabled by simplified, pre-packaged solutions and digital advice. Similarly, the shift towards a member centric offering looks to connect direct-to-member. However, with increased flexibility and benefit choice comes an increased demand for product transparency, awareness and personalized advice. The ability to successfully target small groups and members directly via digital channels will be heavily dependent on not only your digital capabilities but a carrier’s ability to develop simplified products that support digital distribution and personalized advice largely enabled by advanced analytics and emerging technologies such as artificial intelligence.

Mid to large groups (100+ lives) continue to place a heavy reliance on their relationship with the advisor and value face-to-face advice. As advisors are expected to remain a critical role in the future of group benefits—albeit with new expectations—identifying the advisor segments most critical to the future growth of your group benefits business

and equipping them with the tools and training required to enhance the sales experience will be increasingly important as carriers look to secure a strong sales force and maintain their market presence.

5. **Engaging in nontraditional partnerships:** The ability to transform into a leader in the group benefits space will require several new capabilities, skillsets and product offerings not traditionally core to insurance operations. Particularly technology and digital capabilities with significant upfront investment and resources will be difficult to build at the pace required to win in the market. Curating a “partner ecosystem” will be key to both managing fixed costs and creating differentiation, hence engaging with non-traditional partners such as startups, insurtechs or health care specialists with technology-enabled solutions are expected to become common business models of the future. In this new market, carriers may be required to make new choices around where they will play across the value chain. They will need to identify what capabilities they believe to be core to their operations and how they can augment those through the increased use of external partnerships.

The ability to design and distribute your products and services in a way that adheres to the unique needs of the member while balancing plan cost and value for plan sponsors will be key to winning in the future of Canadian group benefits but may require a review of your current strategy, value proposition, capabilities and business models. It will no doubt be an exciting yet long transformational journey but the outlook for group benefits in Canada looks promising as carriers begin to capitalize on the opportunities presented and future proof their business for these changing market dynamics. ■



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2018 Bermuda International Life & Annuity Conference

By Scott Selkirk and Wenda Roberts

On Thursday, Sept. 27, 2018, actuaries and other insurance professionals from all over the world will come to Bermuda for the fifth annual Bermuda International Life and Annuity Conference, hosted by the industry’s association of companies known as the Bermuda International Long Term Insurers and Reinsurers (BILTIR). With nearly 300 registered attendees expected, the event will be held at The Fairmont Southampton, and begins with a welcome reception on Wednesday evening.

Bermuda has seen substantial growth of its long-term insurance sector in recent years, which now includes over 140 commercial reinsurance companies according to the Bermuda Monetary Authority’s latest annual report. These reinsurers cover liabilities such as life, annuity, disability, and long-term care for clients who are based worldwide.

The conference is an important event that has sought to highlight Bermuda’s enhanced capital and solvency framework, and showcase some of the innovative risk solutions that have spurred the growing interest in the longterm insurance sector on the island. Bermuda is recognized by the NAIC as a Qualified Jurisdiction under the NAIC’s Credit for Reinsurance Model Law, and in 2016, Bermuda became the second non-EU jurisdiction (Switzerland being the first) to be recognized by the European Parliament as fully equivalent under Solvency II.

In 2017, the conference had over 260 registered attendees and past speakers have included Nassim Nicholas Taleb, author of the bestselling book *The Black Swan*, and well-known longevity expert, Professor S. Jay Olshansky. For more information about the 2018 conference, visit the events section of the BILTIR website, www.biltir.bm. ■



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Keynote address delivered by Nassim Taleb.

Nassim Taleb discusses the concept of “Anti-Fragility.”



Insure-Tech panel discussion.



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