



SOCIETY OF
ACTUARIES

INTERNATIONAL
SECTION

ISSUE 72 • SEPTEMBER 2017

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Issue Number 72 • September 2017

Published by the International Section
Council of the Society of Actuaries.

This newsletter is free to section
members. Current issues are available
on the SOA website (www.soa.org).

To join the section, SOA mem-
bers and non-members can
locate a membership form on the
International Section webpage at
<http://www.soa.org/International/>

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Publication Schedule

Publication Month: January 2018
Articles Due: Sept. 26, 2017

Editor's Note

By Arpita Das

September marks the end of summer and the beginning of fall. As the leaves change color, I am excited to bring to you this issue of *International News*, chronicling change in the actuarial profession across the world.

In many countries, the actuarial profession is only beginning to take hold. In this issue we feature a range of articles on budding actuarial societies in different countries, including a fascinating piece by the only qualified actuary in Paraguay as well as pieces on Mongolia, Panama and Sri Lanka. Actuarial organizations, including the International Association of Actuaries (IAA) and the International Association of Consulting Actuaries (IACA), are also expanding their presence in Africa and Asia, a practice that is outlined in three articles. We hope to continue covering these significant developments in upcoming issues. If you would like to become involved as a mentor to support actuaries in these regions, I encourage you to apply at the *Actuaries Without Borders* section listed on the IAA website.

In other countries where the actuarial profession has been well established for years, we feature new angles on existing markets and issues. Low interest rates have been on many of our minds over the last few years, and in this issue, we present a unique story on the topic that begins in the United Kingdom and ends with a global enterprise. In North America, life insurance is often thought of as a stable, saturated market. Here we present a different take through a piece on innovation in the Canadian life insurance market. Continuing our journey through North America, Mexico—a country with a long history of actuarial science—recently elected a new president of the National College of Actuaries. I am pleased to publish an interview he gave with our own Carlos Arocha, a long-standing editorial board member and friend of the council.

Changes have also taken place closer to home, here at the International Section. I congratulate Vincent Xuan, our newly elected section chairperson for 2017–2018 term. Vincent has had years



of experience with the section, as vice-chair and as the former chief editor of this newsletter. It has been a pleasure working with Vincent on both the council and the editorial board, and I wish him continued success. This also marks the end of term for our current chairperson, Graydon Bennett. I would like to thank Graydon for his leadership and invaluable contributions made over the last year.

By the time you receive this newsletter, we will also have a new slate of International Section council members with terms beginning in October. Talent on the council is renewed every year, and I warmly welcome our new members. We are always on the lookout for new ideas and encourage our readers to volunteer with the section. If you are interested in joining the editorial board, please contact any of the members listed on the front page. The International Section is also sponsoring several events at the upcoming *2017 SOA Annual Meeting & Exhibit* in Boston. This will provide an excellent opportunity to meet other members and become involved.

Finally, I am pleased to announce the 2017 Country Feature Article Call for papers. Details should be available in your inbox and on the section website by the time you receive this newsletter. We look forward to receiving your submissions! ■



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Chairperson's Corner

By Graydon Bennett

Tempus fugit! I'll let you in on a little secret: clichés sound less clichéd in Latin. I can hardly believe that this is the last time I will write a “Chairperson's Corner” for you to skim briefly before flicking to the next page.

By the time you read this, SOA elections for 2017 will be over—or nearly. The International Section was fortunate to have seven candidates for the International Section Council, and I encourage all section members to exercise their right to vote, both in this election and in the presidential and board elections.

If you missed the deadline to submit your name for the ballot, if you made it to ballot but were unsuccessful in your candidacy or if you want to get involved with the International Section but don't know how, then look no further than the SOA's *Volunteer Opportunities page* on SOA Engage. There are many ways to contribute to your section and to the SOA as a whole: writing newsletter articles, organizing webinars and seminars, mentoring a new actuary or getting involved in a research project. Professional volunteering gives you a platform to work with brilliant and engaged actuaries around the world whom you might not meet otherwise. I have personally found time spent volunteering to be time well spent.

The SOA Annual Meeting & Exhibit is just around the corner and takes place October 15–18. I hope to meet many of you in Boston, a truly international city. The International Section, under the direction of Wendy Kwan and Quintin Li, has

organized a number of sessions from around the world, some of which are co-sponsored with other SOA sections:

- Life Reinsurance in Bermuda
- How Retirement Works Around the World
- Accident & Health Insurance Around the World
- Latin American Update: Insurance & Pension Regulatory Topics
- China Social Health Insurance Programs at 2030
- IAIS Global Insurance Capital Standards Update

We have also organized a jointly sponsored evening networking event with the Investment and the Joint Risk Management sections. Lastly, we will be hosting a hot breakfast where we will be treated to insights from representatives of the China Insurance Regulatory Commission. Don't miss it!

I would be remiss if I did not seize this opportunity to thank publically those actuaries and SOA staff who have made the past year an absolute delight. In particular, my officers have been invaluable in assisting me and the council with leading the section this year: Vincent Xuan (vice-chair), Milanthe Sarukkali (secretary) and Heather Ingram (treasurer). My thanks as well to the rest of the council, friends of the council, ambassadors, and our newsletter team.

I would also like to recognize the tireless “behind-the-scenes” work of SOA staff. Jane Lesch has been a tremendous section specialist, and I have been fortunate to work with Ben Marshall (staff partner) and Ann Henstrand (international director) as well. It has been a wonderful three years on the council.

See you in Boston! ■



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The First South Asian Actuarial Conference: A Resounding Success

By Milanthe Sarukkali

The Actuarial Association of Sri Lanka (AASL) hosted the first South Asian Actuarial Conference in Colombo, Sri Lanka, with the theme “Creating Value for Business: Risk, Innovation, Regulation, Education.” It was held on July 12–13, 2017 and was the first such event to focus on South Asia. More than 200 participants, speakers and guests—ranging from actuaries, accountants and insurance professionals to CEOs and business leaders—attended the conference, which the AASL hopes will become a biennial event.

President of the International Actuarial Association (IAA), Tom Terry, graced the event as the chief guest. Emphasizing the theme of the conference, Terry’s address stressed the importance of innovation and actuaries becoming competent in new practice areas such as data science. He further expressed his hope that the South Asian Actuarial Conference will continue

in years to come. “This is an amazing turnout,” he stated. “It is not because of the organizers alone, but the attendees as well. It shows your commitment to the profession. You are not here just to listen to the speakers but to actively participate. Getting to know more professionals from different sectors is an important takeaway from this kind of a forum.”

The chairperson of the Insurance Board of Sri Lanka (IBSL), Indrani Sugathadasa, was a guest of honor. She encouraged the AASL to focus on professional development in Sri Lanka to address the region’s demand for actuarial skills. She also noted that IBSL is ready to facilitate such initiatives.

The keynote speech was delivered by the assistant governor of the Central Bank of Sri Lanka, C. J. P. Siriwardena. He stated that risk governance, effective regulation and innovation will create value for businesses, adding that this is essential for maintaining public confidence, building respect for the profession and improving actuaries’ reputation and credibility. He noted that South Asian countries continue to lead the world in all types of growth despite recovery from global financial crises remaining elusive: “Our region is home to 25 percent of the global population, with more than \$3 trillion of annual production adding to the global GDP. South Asia is now on the rise economically, socially, politically and technologically.”

A wide variety of presentations were delivered, ranging from cutting-edge technologies that included machine learning and artificial intelligence to new global developments such as International Financial Reporting Standard (IFRS) 17. Product



Organizing committee of the 1st South Asian Actuarial Conference with chief guest, Tom Terry, President of the IAA.



Tom Terry addresses attendees at the conference.

development incorporating the new risk-based capital requirements prevalent in Sri Lanka and the impending changes in financial reporting standards were also the focus of several presentations. In addition to technical sessions, there was a panel discussion on the impact of the changing regulatory landscape on the insurance business. The panelists included Tom Terry representing IAA and Jules Gribbles representing the International Association of Insurance Supervisors (IAIS), in addition to representatives from the local insurance industry and AASL.

AASL also organized a session on actuarial education and the credentialing process of the Institute and Faculty of Actuaries (IFoA) and the Society of Actuaries (SOA) for local university students. The session was conducted by Thanuja Krishnaratna, an associate member of IFoA, and Pushpika Seneviratna, an associate member of SOA. This session was well attended and

helped to raise the attendees' awareness of and interest in the profession.

The South Asian Actuarial Conference was followed by the Asia Subcommittee meeting of IAA. The main focus of this meeting was the relationship between insurance regulators and the actuarial profession. The program included a session introducing the IAA Standards of Actuarial Practice and a professionalism session conducted by Jules Gribbles of IAIS and Milanthi Sarukkali of AASL. ■



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The Nascent Actuarial Community of Sri Lanka

By Milanthe Sarukkali

Sri Lanka is an island nation in South Asia, well known for its world-class tea, pristine beaches and elephants. However, rarely do we hear about the emerging insurance industry or the budding actuarial community of this nation. Here are a few highlights of recent developments within the actuarial community in Sri Lanka and its future plans.

ACTUARIAL ASSOCIATION OF SRI LANKA

The Actuarial Association of Sri Lanka (AASL) is the only registered professional organization for actuaries in the country. It was formed in 2008 and had 14 fellow members, 23 associate members and 64 ordinary members at the end of 2016. Most fellows and associates do not practice in Sri Lanka, as they are often consultants attached to foreign firms working with local companies.

AASL does not have a credentialing procedure of its own but requires all its members to have at least a student membership with one of the following actuarial organizations:

- Institute & Faculty of Actuaries (IFoA, UK)
- Society of Actuaries (SOA, USA)
- Institute of Actuaries of India (IAI)
- Institute of Actuaries of Australia (IAA)
- Het Actuarieel Genootschap (Netherlands)

Most current members are attached to IFoA, and a significant student community follows both IFoA and SOA exams. Most members practice in the life insurance sector with very few employed in the general insurance (P&C) sector.

Currently AASL is an associate member of the International Actuarial Association (IAA) and applied for full membership in the IAA in 2017.

The need for actuarial resources has increased tremendously over the last few years due to changing regulations, especially with the implementation of risk-based capital (RBC) requirements by the Insurance Board of Sri Lanka, and more challenging market conditions. The demand for actuarial resources will continue to increase with the adoption of IFRS 17 and the evolution of other regulations.

Sri Lanka facts

Land area: 25,330 sq miles

Population: 21 million

GDP per capita: \$3,835

Insurance market:

- 2016 premium:
 - Life – \$369 million
 - P&C – \$475 million
- Penetration: 1.1% of GDP



Aerial view of Colombo, Sri Lanka, coastal promenade area.

The actuarial profession in Sri Lanka has also grown rapidly over the last few years. We now see much more interest from university graduates and even high school students in pursuing careers in actuarial science. Access to information has been key in generating interest in the field and developing the image of the actuary within the local market.

CHALLENGES

Lack of awareness about the profession among the general public makes it difficult to attract top talent with the educational background and skills necessary to pursue an actuarial career. This situation has improved significantly over the last few years thanks to AASL activities and more opportunities that are on par with international standards becoming available to local talent.

Support provided by employers in pursuing actuarial credentials vary widely in the industry, which has slowed down the progress through actuarial exams. The financial and time commitment required to obtain an actuarial designation prevents many talented students from pursuing an actuarial career. Some employers have developed student programs in line with global standards, while others provide barely any support at all.

Currently only the insurance industry in Sri Lanka recruits actuaries, and the involvement of actuaries in other industries such as banks and the government sector is limited. Local actuaries will look to expand their skill sets and add value to other industries in the future.

Emigration is also a concern, as credentialed actuaries leave the country to work in more developed markets. This has improved slightly over the last few years, with several students returning to work in Sri Lanka after completing their undergraduate and graduate studies and gaining some experience overseas. Providing exposure to non-traditional areas of practice will be key to retaining top talent in the country.

FUTURE OF THE PROFESSION

With a strong insurance and financial services sector, the Sri Lankan market will need the services of a large number of actuaries. To meet this demand, AASL has launched several initiatives to develop more home-grown talent.

In general, Sri Lanka has a large talent pool with the necessary background in mathematics, statistics and finance to attract to

the profession. Local university graduates have the technical prerequisites for taking actuarial exams. However, adequate support from employers to complete exams and receive guidance and mentoring from senior actuaries will be required to support new actuaries' development.

AASL has applied for full membership in the IAA and is hoping to be accepted as a full member in January 2018. In preparation for full membership, AASL has adopted a code of conduct and also established a disciplinary process, both of which are in line with the professional codes and disciplinary procedures of the SOA and IFoA. Becoming a full member of the IAA is expected to provide numerous opportunities for Sri Lankan actuaries to expand their careers.

Here are some of the initiatives AASL has launched to support the student community and growth of the profession in general:

- Examination preparation support through tutorial sessions for at least one exam in a sitting, usually with help from Actuaries Without Borders (AWB®)
- Regular knowledge-sharing sessions on relevant topics
- Facilitation of members' participation in the global mentorship program launched by AWB®
- Sponsorship of a student member to attend the Asian Actuarial Conference each year
- A discount program for study materials from Actex Publishers made available to members
- A library providing study and other educational material that is currently being established (AASL is considering different avenues for financing this initiative.)
- Role of hosting international events such as the South Asian Actuarial Conference that will expose AASL members to new developments and international practices
- Social events to promote networking

AASL is confident that these measures will result in expanding the actuarial profession within the country as well as ensure that its members are globally recognized. ■



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The Development of the Actuarial Profession in Mongolia

By Gantulga Donorov, Oyun Batkhuyag and Batbayar Baasankhuu

The Mongolian insurance market is fairly young and still developing. The first insurance activities began in 1934 when the Government Danger Protection Authority was established to cover fire and flood risks to people's property. The initial products with set tariffs were developed by the Russian state insurance company.

The rebirth of the insurance market started in the late 1990s, when the first insurance law was adopted, making the first step toward preparing the environment for further development of a commercial insurance market. At this stage, eight new insurance companies were established, and this number had grown to 17 by the end of 2016: 15 general insurance companies, one life insurance company and one reinsurance company.

The period from the late 1990s to the late 2000s was dedicated to the development of the commercial insurance market. This included additional insurance regulatory bodies and regulations, training from abroad, introduction of various products and definitions of roles and responsibilities for insurance professionals, including the actuarial profession.

Due to the absence of actuaries in Mongolia, insurance companies initially hired mathematicians or statisticians to fill actuarial positions. Retaining traditional practices, insurance companies used predefined tariffs, which were the same for all companies, and reserves were calculated by predefined rules set by the regulator. Initially, extremely low loss ratios (roughly 20–30 percent) attracted more insurance companies to enter the market. With this expansion, development and increased competition, the need to develop the actuarial profession became increasingly evident.

In 2008, the Society of Actuaries of Mongolia was established through the initiative of Donorov Gantulga, a mathematician who had just completed his actuarial education in the United Kingdom, and Dr. Ravsal Rinchinbazar, a professor from the National University of Mongolia. This was a big step forward in



ORSA training Held by FRC, July 2016.

the development of Mongolia's actuarial community, providing a way of bringing bright minds to the profession and raising awareness about the profession among insurance executives and the general public. As there previously were no actuaries, the society's board consisted of representatives from the regulator (the Financial Regulatory Commission, or FRC), the Social Insurance Office, university professors and insurance company CEOs. The idea behind bringing these people together to form the board was to involve them in the initiative of developing the profession and to encourage them to make their respective contributions. The society's main activities were directed toward attracting actuarial candidates, organizing professional training and advising the FRC on the requirements for actuaries of insurance companies, since the regulator is the authority that grants actuarial licenses according to Mongolia's insurance law.

For instance, through the society's cooperation with the FRC in 2009, the regulator amended the insurance reserves procedure to include and specify the role of actuaries for insurance companies. This was a further impetus for growth in the actuarial profession and for mathematicians to train to become actuaries.

Following this, the society organized a campaign to help all the mathematicians who worked for insurance companies to become members of the Institute and Faculty of Actuaries (IFoA). They were admitted as students to start their journey to become internationally qualified actuaries.

In 2010, the society became an associate member of the International Actuarial Association (IAA). Joining this larger family of actuaries allowed the society to invite famous actuaries to speak at events and to hold international-level seminars and training sessions, which were and still are the essential part of the society's activities. As there were still no actuarial university programs and academics, local actuaries-to-be were in great



Meeting with representatives of Social Insurance project of Jaica, Dec. 2016.



Actuarial Intensive training taught by Michael Sze, June 2016.

need of other opportunities for professional training. To address this, the society decided to recognize actuarial professional examinations conducted by the IFoA as the local equivalent of professional exams and obtained the authority to conduct the exams in Mongolia.

Sitting for internationally recognized actuarial professional examinations in Ulaanbaatar was another big opportunity for local students to start their careers. The difficulty of the examinations and the fact that they are in English present a double challenge for these students, requiring increased preparation by the students and further training support provided by the Society through local professors and visiting actuaries from the United Kingdom.

Currently, the members of the society have passed the first few exams and aim to become associates in the near future. Also, four students are participating in the Asian Actuarial Scholarship Program that is administered in South Korea and includes preliminary examinations and VEE courses. Further growth is expected in this program.

Recently, the society board has officially recognized the Certified Actuarial Analyst (CAA) qualification. Actuarial students will now need to pass all CAA exams and an additional exam on professionalism and legal environment to qualify as a fellow.

The society aims to become a full member of the IAA in near future.

Disclaimer: The views expressed in this article are those of the authors and do not reflect the views of their respective employers. ■



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IACA Strengthens and Unifies the African Actuarial Practice

By Kudzai Chigiji

I have a particular interest in the role of actuaries in African development and in new industries. Being a committee member of the International Association of Consulting Actuaries (IACA) has provided me with a powerful platform to manifest this interest into influence across Africa. I'll take you on a brief journey of how I became involved with the International Association of Actuaries (IAA) and what I have been up to within IACA in the past year.

My first contact with IACA was at the 2014 International Congress of Actuaries (ICA) in Washington, D.C., when the association offered me a bursary for my participation in the event. I went on to win a Best Paper Prize for a research paper on the role of actuaries in social security in Africa. I responded to IACA's call for volunteers and immediately got involved in its publications team by writing articles for the quarterly newsletter. At the time, I was also the secretary of the Actuarial Society of South Africa (ASSA) Social Security Member Forum.

Following my participation with IACA publications over a two-year period and subsequently qualifying as a fellow, I was pleasantly surprised to be nominated as a committee member. I was elected to the committee at the 2016 Colloquium in St. John's Newfoundland where I also took the opportunity to present research I had been conducting with a former colleague. Since then, I have been focused on raising the profile of IACA among my African colleagues and encouraging closer collaborations among consulting actuaries and other professionals. Additionally, I have had the opportunity to assist my IACA colleagues in developing the consulting track for the 2018 ICA, which has provided me with even more insight into the organizational mechanisms that keep this large organization running. More recently, I have also been involved with the ASSA and IAA banking committees as I work within a large banking institution. I have taken this opportunity to actively leverage off the two different areas by learning from and improving the initiatives across both practice areas.

The moral of the story: One of the easiest and cost-effective ways to learn and influence what you are interested in is to volunteer. It often looks like you are working for "free," but the value you derive from volunteering (if you do so diligently and in an area of strong interest to you) far exceeds the resources you spend. When you are young and don't have a lengthy track record of achievement within the profession, or you don't have many opportunities to display your skills in your "day job," you can make use of volunteering opportunities to learn and develop faster than your peers. Additionally, volunteering can open your eyes to new opportunities, perspectives, people and places to which you would otherwise never have access to.

Given the fact that IACA serves the interests of consulting actuaries within a diverse range of practice areas, it has also exposed me to the different issues that are of interest for actuaries in areas outside of my specialties. It has been eye-opening to see the direct link between instrumental matters discussed within IACA and practice in corporate and consulting settings. Additionally, as the profession ventures into wider fields, such as banking, climate change and the fast-moving consumer goods (FMCG) industries, the role of consulting actuaries to act as pioneers and identify how actuaries can best add new value to these industries is critical to the development and advancement of the profession.

Over the past year, IACA activities have focused on raising the profile of the section across the globe. My focus to date has been the South African Development Community (SADC) region, starting with South Africa, Kenya and Zimbabwe. Good progress has been made in these countries. I have reached out to the actuaries and senior actuarial students in these countries by inviting them to join and participate in the Africa Sub-Committee of IACA, as well as asking for their contact and professional details. Although the responses have not been resounding, several members from the different countries have expressed their interest in both joining and taking an active role in IACA. A few members have extended invitations to meet with others from across the region in the near future and to share knowledge on working in different parts of the region. This is a testament to the fact that wherever you look, there are always willing helping hands. Oftentimes, people just need to know that opportunities are available.

Our aim is to build a network of consulting actuaries within the region who can assist one another on the various initiatives taking place in these countries, from peer reviews, government work that requires teams from several firms and learning about one another's landscapes. The latter may be instrumental in creating further opportunities and expanding the role of actuaries to add value to several industries.

Speaking at various forums (the conferences, IAA meetings and webinars) has opened doors for me to foster relationships with other actuaries (and a few other professions such as lawyers, bankers and physicians) across the region. It has also allowed me to link up individuals who can assist one another.

The key next steps will be to formalize the IACA database on which we have been working and make it accessible to registered members. The countries that I will be approaching next are Malawi, Botswana, Zambia and Namibia. More events will bring together consulting actuaries in the region. IACA and the Actuarial Society of Zambia (ASZ) have committed to hosting an increased number of webinars in the near future. This will give actuaries working in the region a more regular forum to discuss issues that are relevant to their day-to-day work as well as ideas for how best to advance actuarial involvement in these jurisdictions. In instances that involve an established practice area, we will be collaborating with actuaries in that specialty to get key technical insights, in addition to the consulting angle.

My involvement with IACA has provided me with informal leadership training and taught me how to better manage projects, take stronger accountability, develop my confidence, work in diverse teams, understand how the profession is run at a global

level and contribute to its future development. The individuals I have met and with whom I have fostered relationships have motivated me to carefully consider and strategize my contribution, not just to the profession, but also to the development of young people. I am always impressed by the caliber of the newly qualified actuaries and young actuarial students I meet across the globe. Again, all some people need is an opportunity and a nudge to draw out their full potential. It is an incredible opportunity to meet fellow professionals from across the globe (and travel the world while doing so!). It is an honor to be part of the IAA and be able to contribute to the future of the actuarial profession.

If you are interested in knowing more about IACA and would like to get involved in one of our subcommittees, please contact me at kudzai.chigiji@africansthinking.com. ■



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Human Longevity Around The World

During the sixth [Living to 100 Symposium](#), leaders from around the world shared ideas and knowledge on aging, rising survival rates and implications caused by increases in aging populations. The monograph will continue the conversations on living longer, its impact on social support systems and the practical needs of advanced-age populations. [Discover featured sessions and material from the Living to 100 Symposium.](#)

livingto100.soa.org

LIVING to 100

SOCIETY OF ACTUARIES
INTERNATIONAL SYMPOSIUM



An ERM Initiative in Nigeria by Actuaries Without Borders

By Queenie Chow

Editor's Note: This article previously appeared in January Actuaries Without Borders section communication. It has been lightly edited and is included here with permission.

In September 2016, in collaboration with the College of Insurance and Financial Management (CIFM), Actuaries Without Borders (AWB®) volunteer Shruti Shah delivered a two-day workshop providing extensive training on enterprise risk management (ERM) in Lagos, Nigeria. This jointly organized AWB® workshop focused on helping companies build a successful risk management culture using effective methods and techniques.

The National Insurance Commission (NAICOM) has recently introduced risk-based regulations, which borrow heavily from ERM, into the Nigerian market. This prompted the head of CIFM, Rector Yeside Oyetayo, to request an AWB® workshop to address the need for effective ERM policies for Nigerian insurance and reinsurance companies.

More than 15 professionals—ranging from risk managers to CEOs and COOs in the Nigerian insurance industry—took part in the ERM workshop. The workshop not only provided participants with the key concepts of ERM and an understanding of the importance of a risk management culture and corporate governance, but more importantly, it presented real-life case studies in which risk management went wrong. Attendees were encouraged to come up with their own risk appetite and key risk indicators that could be applied in their practical work environments under NAICOM guidelines.

The workshop received excellent feedback from participants and worked to deepen the industry's knowledge about ERM in Nigeria while encouraging a community of learning among risk management professionals in Africa as a whole.

Shruti Shah, the AWB® teaching volunteer, started her career in the United Kingdom and worked at Alexander Forbes Financial Services in Kenya as the resident actuary and head of research and development. Her work experience included teaching insurance companies in East Africa about ERM and working with them to develop risk dashboards. Shruti is a Fellow of the Institute and Faculty of Actuaries and a Chartered Enterprise Risk Actuary with more than 10 years' experience. ■



Queenie Chow, AIAA, is a fellow with the ILO Impact Insurance Facility, hosted by MicroEnsure Holding Limited based in Nairobi, Kenya. She can be reached at queeniechow0320@hotmail.com.

ON THE RESEARCH FRONT



The Future of Retirement in China: Report 6

In this final installment of the series, the SOA and the LIMRA Secure Retirement Institute provided the results of research on the current state and future opportunity of the retirement market in China. Authored by Lauren Finnie, this final report; History, Systems and Review, summarizes the evolution of the China retirement system and where it stands today.

<https://www.soa.org/research-reports/2016/2016-future-retirement-china/>

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From UK Mutual Life Insurer to Global Investment Company: Standard Life's Transformation

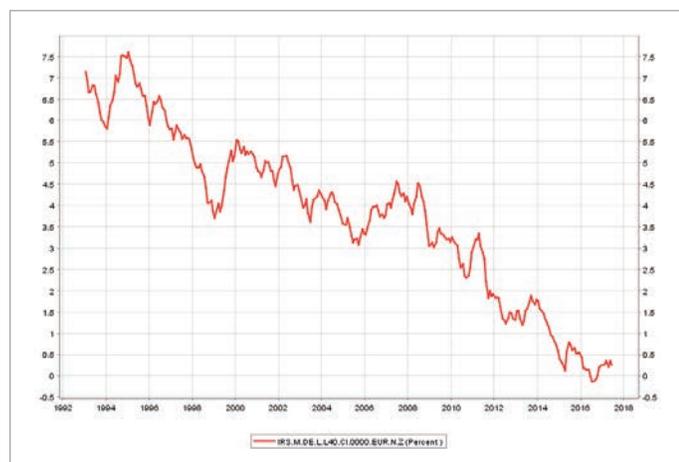
By Bruce T. Porteous

GLOBAL DRIVERS OF INSURANCE INDUSTRY CHANGE

There is a growing awareness among many insurers around the world that traditional insurance business models may need to change to become sustainable over the longer term as a number of factors converge to drive industry change:

- The past 30 years have been characterized by a secular fall in interest rates, which have now reached record low levels. Figure 1 uses historic 10-year German government bond yields to illustrate this phenomenon.
- The advent of modern risk-sensitive solvency regimes in conjunction with market-based asset and liability valuations

Figure 1
German 10-year government bond yields



have crystallized the costs of the risks and long-term guarantees, including asset risks accumulated on insurers' balance sheets. This has encouraged insurers to place greater focus on product design, investment strategy and solvency capital requirements.

- Rapidly accelerating growth in conduct regulation, designed to protect customers from unfair treatment, high commissions and opaque charging structures, presents additional requirements for insurers.

Standard Life Investments' European Insurance Survey affirmed and validated these drivers of fundamental change in the European insurance industry. For example, it found that 43 percent of European insurers were unable to price new guaranteed investment products at competitive rates. Similarly, 73 percent felt that Solvency II was restricting the design of their investment portfolios. The survey can be found at https://www.standardlifeinvestments.com/INS_EU_Survey.pdf.

The cumulative effect of these pressures and constraints has led insurers to consider new business models, often characterized by the following features:

- In capital-light, investment-linked savings propositions, customers take on more investment risk, supported by innovations such as risk-based fund ranges.
- The investment solution is increasingly a key differentiator, and specialist investment management skills are often needed to ensure an appropriate outcome is achieved for customers.
- With transparent charging structures, the customer is fully aware of the costs of the proposition and any advice received.

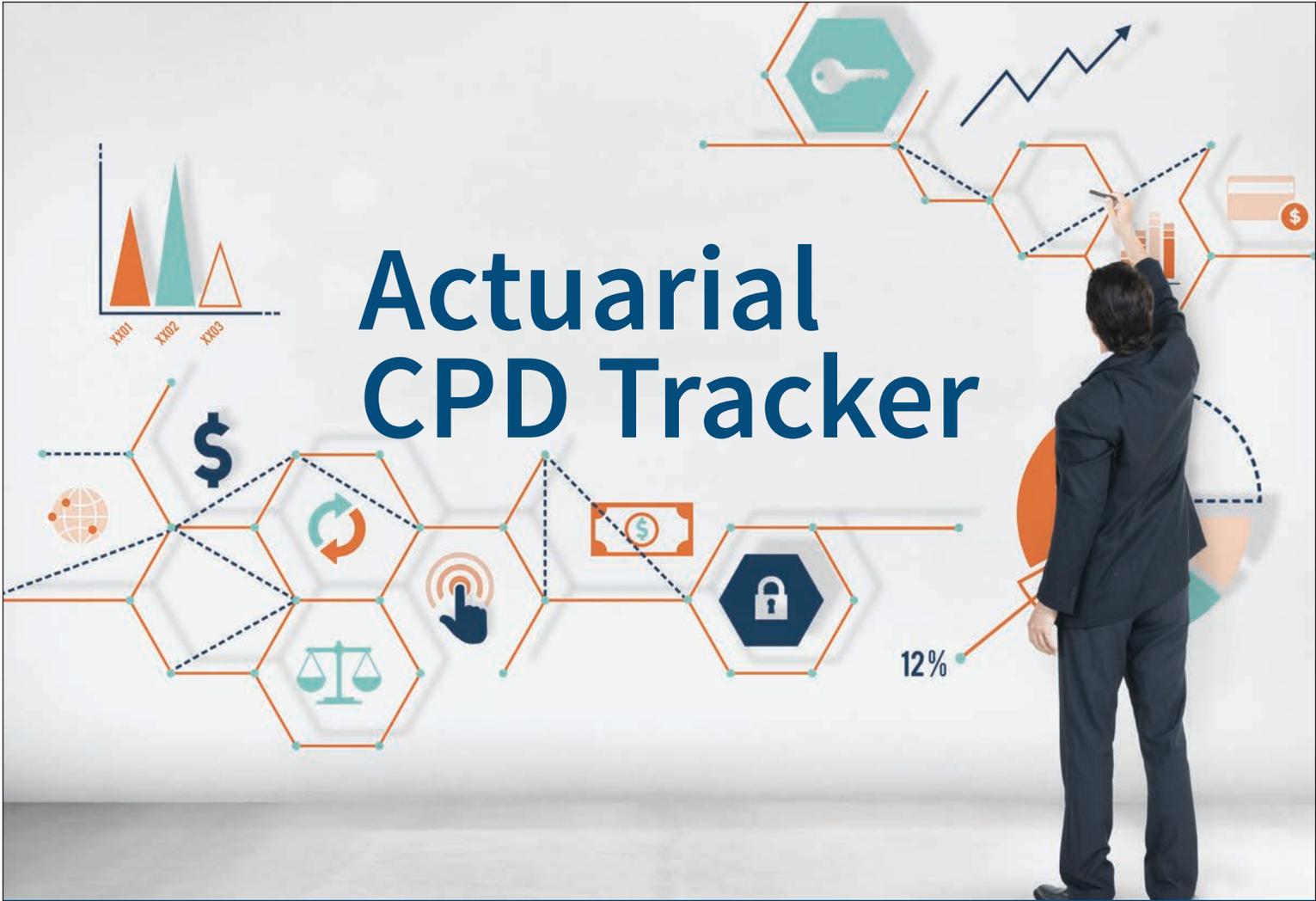
STANDARD LIFE'S TRANSFORMATION

Over the past 20 years or so, in response to the global drivers of change already discussed, Standard Life has transformed itself from a traditional, UK-focused, mutual life insurer, owned by its members, to a publicly listed global investment company.

The interest of many insurers worldwide in Standard Life's business model transformation story has been piqued, especially as they consider their own futures. The story is told in full in our recent white paper: https://www.standardlifeinvestments.com/WP_UK_Mutual_Life_Insurer_to_Global_Investment_Manager.pdf. ■



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Innovation in the Canadian Life Insurance Industry

By Melissa Carruthers

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EVOLVING LIFE INSURANCE INDUSTRY

The Canadian life insurance industry is seeing a wave of innovation across multiple fronts. Evolving customer expectations, shifts in distribution, emerging technologies, big data and the threat of non-traditional entrants have insurers looking to drastically change the way they do business.

In response to these evolving industry dynamics, Canadian life insurers are increasing their level of innovation in order to achieve a competitive advantage, with particular success in the following four areas:

1. Underwriting innovation. The life insurance industry as a whole has seen a focus on accelerated-underwriting efforts to better meet the needs of consumers and advisers. The traditional 30-day invasive and manual underwriting process is just one more reason for the millennial generation to defer purchasing life insurance. Several Canadian insurers have seen progress over recent years in accelerated underwriting for the young and healthy, successfully underwriting applicants in real time without the need for blood tests or paramedical exams. New technology and processes and the increased availability of data have insurers investing in the data and analytics capabilities required to further expand their real-time underwriting capabilities. While still limited by approved third-party data sources compared to our U.S. counterparts (i.e., credit ratings, electronic health records, etc.), several Canadian insurers have seen tremendous progress over the last two years.

In the fall of 2016 Humania Assurance launched HuGO, what they quoted to be the most advanced underwriting platform available in Canada at the time, offering up to \$1 million of term insurance at a competitive price in just 15 minutes. HuGO was the first to introduce personal underwriting through the use of

predictive analytics, providing real-time underwriting decisions at the point of sale on approximately 65 percent of applications.

Earlier this year Manulife announced that it had eliminated the need for all nicotine, blood and urine testing for policies up to \$1 million on all individual life insurance products with the use of its predictive analytics program, a significant achievement toward simplifying the purchasing process and a first in Canada.

Although consumers would likely agree there is room for improvement, we can only expect further advances in underwriting as the availability of data and investments in emerging technologies continue to increase.

External partnerships are at the forefront of senior executives' minds as they look to become more innovation-focused.

2. Innovative products for the new consumer. With evolving consumer expectations, demand is increasing for a seamless, customized and self-serve experience. To become more customer-centric, insurers are partnering with non-traditional start-ups as a means to offer new products and services tailored to consumers that encourage ongoing engagement like never before.

Last fall, with the launch of Vitality, Manulife was the first to offer a life insurance product that awards customers for living a healthy lifestyle (e.g., exercising, getting a flu shot) with "vitality points" that can be used to lower their life insurance premiums. Manulife Vitality customers receive a free wearable device to track their progress, are provided with personalized health goals and can easily share their health data to receive vitality points. By partnering with Vitality, Manulife has managed to not only incentivize policyholders to live a healthier life but also encourage ongoing engagement unlike any other life insurance product to date.

As mobile interactions become continuously less expensive, there is likely to be an increase in life insurance product offerings built on behavioral analytics applications in the wellness space.

3. Re-engineered distribution and service offerings using digital technologies. The customer experience is changing dramatically in other industries, and customers are coming to expect the same service options as part of their life insurance experience. To



meet these evolving expectations, several insurers are looking to enhance their digital service offerings, allowing for quicker and more accessible distribution with personalized advice (e.g., live chat, needs analysis tools and mobile technologies).

One insurer making significant progress in this space is Sun Life, which has focused its efforts to develop an industry-leading new business digital platform. Sun Life's "discovery stage," where it has designed a digital experience for helping clients navigate complex insurance information to identify their needs and make an informed decision, was recognized in the 2016 Canadian Life Insurance Digital Sales Functionality Benchmark Report from Forrester for achieving the highest score of Canadian life insurers who are using digital touch points.

As customers seek greater autonomy in decision making, insurers must deploy infrastructure that supports digital technologies, simplifies the purchasing process and provides personalized advice.

4. External partnerships. The Canadian insurance industry faces rising competition with the entrance of global players, InsurTechs and non-traditional start-ups. Forward-looking life insurers are seeking to learn from the new business models and technology platforms that these new players have developed to interact with the insurance ecosystem through the use of external partnerships and/or investments in accelerators or

incubators. Accelerators and incubators can be thought of as communities that provide start-ups with the resources, mentorship and investor connections to further develop their idea in exchange for equity.

Among several external partnerships aimed at increasing its digital service offering, Sun Life partnered with Plug and Play Tech Center, a technology accelerator that helps to connect start-ups with investors. As part of the partnership, Plug and Play organized a 12-week insurance-specific program in which Sun Life and other organizations support start-ups with industry expertise and mentorship while they develop an idea to pitch to investors at the end of the program. Strategic investments like this provide insurers with an opportunity to be at the forefront of innovative technologies in their industry.

Given their global perspective, Canadian reinsurers are among those most open to embracing an innovative culture. Munich Re Canada recently announced that it had a permanent workspace at Cookhouse Lab, a lab that provides a creative atmosphere for insurers, reinsurers and financial services professionals to collaborate and take an iterative approach to idea generation.

A recent industry survey that was conducted this year at Deloitte indicated 50 percent of Canadian life insurers have already engaged in external partnerships as a means to increase their degree of innovation, with 76 percent planning to engage in external partnerships over the next one to three years. These responses provide a clear indicator that external partnerships are at the forefront of senior executives' minds as they look to become more innovation-focused.

LOOKING FORWARD

Today's consumer expects customization, transparency and efficiency, all uncharacteristic traits of the traditional life insurance business model. For an industry encumbered by complex products, legacy systems, channel conflict and a risk-averse culture, our progress in innovation is slow but promising. There may be some serious work ahead, but I for one am excited to be a part of the transformation journey on which our industry is about to embark, with particular interest in the innovations that will lead the way. ■



Melissa Carruthers, FSA, FCIA, is a manager at Deloitte Canada in its Actuarial, Rewards and Analytics consulting practice, based in Toronto, Ontario. She can be reached at mecarruthers@deloitte.ca.

The Mexican College of Actuaries Elects Luciano Devars as President

By Carlos Arocha

Actuarial education in Mexico follows a university-based approach, much like most countries in continental Europe. The actuarial tradition dates back to 1946, when an undergraduate program was established at the Mexican National Autonomous University¹ (UNAM). At present, 24 universities in Mexico offer undergraduate and graduate programs in actuarial science, and the number of undergraduate actuarial students is the largest in Latin America. There are three professional actuarial associations in Mexico: the Mexican Association of Actuaries² (AMA), the Mexican Association of Consulting Actuaries³ (AMAC) and the (Mexican) National College of Actuaries⁴ (CONAC). While the AMA is an associate member of the International Actuarial Association (IAA), the CONAC is a full member and an official professional body recognized by the Ministry of Education⁵ (SEP).

The core element of actuarial education is a university degree, which is awarded after students complete a four-year university program and fulfill other educational requirements. The usual path after the degree is to obtain a professional certificate⁶ from the Ministry of Education and apply for membership at the CONAC. However, this last step is voluntary. In fact, more than 14,000 actuaries have earned an actuarial degree, and 10,500 have the Ministry of Education certificate, but fewer than 500 are members of the CONAC.

The newly elected president of the CONAC, Luciano Devars, agreed to be interviewed for the SOA's *International News*. Devars spent the first 10 years of his career at Grupo Asesores, an insurance broker. He then worked as an actuarial technician for Seguros Monterrey Aetna and helped with the formation of a special unit for its banking business. In 1986, this unit was divested into Seguros Bancomer, a bancassurance leader in Mexico, that later merged with BBVA, a Spanish global banking group. At BBVA, Devars was named global chief actuary, with responsibility for various Latin American and European markets, as well as the BBVA reinsurer subsidiary in Ireland. Overall, Devars has more than 36 years' experience in life and property and casualty insurance.



Luciano Devars, president of the CONAC

The CONAC's strategic plan for 2017–2019 includes the following points:

- Increase the services provided to CONAC members;
- Strengthen CONAC management;
- Strengthen the CONAC's financial position;
- Strengthen ties with universities and students;
- Integrate actuaries and their families with the CONAC; and
- Establish governance processes to execute these strategies.

The interview with Devars is presented below. Please note that this transcript has been edited slightly for clarity.

Carlos Arocha: What are the areas of employment for actuaries in Mexico?

Luciano Devars: Actuaries in Mexico are employed by insurance companies, banks, consulting firms, market research companies, government agencies and so on.

CA: What are the incentives for membership at the CONAC?

LD: The CONAC helps actuaries network and identify employment opportunities, it fosters professional development and the exchange of ideas, and it provides a platform to keep actuaries abreast of current developments that impact the practice of the actuarial profession.

CA: What is the “certified actuary” designation?

LD: To issue statements of actuarial opinion regarding adequacy of insurance reserves, technical memoranda,

solvency capital requirements and the filing of insurance policies, actuaries must be certified by the CONAC and comply with a rigorous continuing education program. This requirement is included in Mexican insurance law and regulation, and it applies to the pricing, reserving and auditing of the five lines of insurance: (1) life, (2) accident and health, (3) property and casualty, (4) pension and annuities and (5) credit and surety. The certification is really a recognition, but since it was called “certification” in legal documents right from the beginning, it is common to refer to the CONAC-recognized actuaries as “professional-quality certified actuaries.”

CA: Mexico has implemented a risk-based regulatory solvency paradigm that is much like the European Solvency II Directive. What are the professional opportunities for actuaries?

LD: Actuaries have a lot of professional opportunities, both as employees of insurance companies and as consultants. The new solvency requirements are complex and require the participation of actuaries. Their role is fundamental in the operation of the 100+ insurance and reinsurance companies in Mexico.

CA: Are all university programs in Mexico compliant with the core educational curriculum of the CONAC?

LD: The CONAC is the main actuarial organization that represents the actuarial profession before governmental agencies, as well as domestic and international trade and professional associations. The CONAC is a full member of the International Actuarial Association. In this sense, if an actuary has earned a degree from an institution whose syllabus complies with the IAA educational standards, the actuary is eligible for CONAC membership. If this is not the case, the CONAC prescribes a procedure to determine additional educational requisites that must be met. At present, not all universities belong to the first category.

CA: Do actuaries have any incentive to write SOA examinations?

LD: In some universities, writing preliminary SOA examinations is a way to fulfill some of the requirements to obtain an undergraduate degree. So it is not uncommon to find a relatively large number of students writing exams P, FM, MLC and MFE. After that, the interest in writing exams wanes rapidly. Employers do not pay for study materials, do not offer paid leave to prepare for the exams and do not increase salaries when an exam is passed. So given the cost-benefit relationship, it makes little sense to write SOA exams if the actuary is planning to practice in Mexico. If, on the other

hand, the actuary is looking for a position abroad, he or she may be encouraged to continue writing SOA exams.

CA: Your strategic plan for 2017–2019 includes the integration of actuaries and their families with the CONAC. Could you elaborate on this point?

LD: Professional vocation involves passion, much the same as settling down and growing a family. We see dedication to work and family (or personal life) as the main ingredients to a balanced life. The CONAC will be organizing cultural excursions with actuaries and their families to rediscover the fantastic tourist places that Mexico offers. Likewise, other activities like going to the theater and cinema and dominoes tournaments will be organized in the spirit of networking.

CA: Do you have any message for actuarial students in Mexico?

LD: Actuarial studies are rigorous, and people connect them with a love of mathematics and the analytical traits. But on top of liking math, it is necessary to develop an inquisitive mind and to be intellectually curious. Reading about history, politics and social issues, as well as having a flair for writing, help actuaries become better communicators and prepare them for leadership. Interpersonal skills are very important, often more so than mastering mathematical formulae. Employers seek staff who can do a job well, done at once, and with commitment.

CA: On behalf of the International Section of the Society of Actuaries, I would like to thank you and congratulate you on winning the election. All the best! ■



Carlos Arocha, FSA, serves with the Leadership and Development Section Council and is managing director of Arocha & Associates, an actuarial consulting firm based in Zurich, Switzerland. He can be reached at ca@arochaandassociates.ch.

ENDNOTES

- 1 In Spanish, *Universidad Nacional Autónoma de México*. All acronyms related to Mexico are kept in their original Spanish form.
- 2 In Spanish, *Asociación Mexicana de Actuarios*.
- 3 In Spanish, *Asociación Mexicana de Actuarios Consultores*.
- 4 In Spanish, *Colegio Nacional de Actuarios*.
- 5 In Spanish, *Secretaría de Educación Pública*.
- 6 This certificate is called *cédula profesional*, a government document that attests that an individual has fulfilled the requirements to earn an undergraduate degree at a university whose studies are recognized by the Ministry of Education. Interestingly, the certificate has a patent scope.

The Actuarial Association of Panama

By Carlos Arocha & Concepción (Cuqui) Moreno

A country abundant in tropical plants and animals and most commonly associated with one of the world's most famous canals, Panama has been recognized since 2010 by the World Economic Forums' Global Competitive Index as the second most competitive economy in Latin America. Although revenue from canal tolls still represents a significant portion of the country's GDP, the development of commerce, financial services and tourism has contributed to robust economic growth over the past few years.

In actuarial matters, there has been significant progress over the past few years, especially in 2014 when the Actuarial Association

of Panama (AAP) was formally established as a nonprofit organization under Panamanian law. But the group called the *Asociación* had its genesis much earlier.

In 2002, Luis Martínez, a Panamanian actuary, presented a paper at the International Actuarial Association Congress held in Cancun, Mexico. Martínez was motivated by peers to form a local association and seek recognition from the International Actuarial Association (IAA). A major challenge to be faced was that there was no formal actuarial program in Panama.¹ Students interested in actuarial science—if they knew what it was—went to the United States, Mexico and Europe to get their actuarial education. Orlando Sánchez, a renowned Panamanian actuary, attended the inaugural actuarial science bachelor's program at Mexico's National University² (UNAM). Like Sánchez, many other actuarial graduates returned to Panama, and Martínez invited some of them to establish the *Asociación*. Twelve years later, the AAP was finally formalized.

Panama's insurance industry has enjoyed sustainable growth over the past few years. Today, the country has a direct premium volume of \$1.4 billion³ (with about 75 percent in non-life insurance premiums). The nominal growth rate has been consistently higher than the region's average. The steady growth of the



Panama City, Panama

insurance sector and the modernization of solvency regimes in other Latin American countries now require further development of the actuarial profession. To respond to the challenge, the AAP has launched a large-scale project to grow its membership.

Panama's insurance industry has enjoyed sustainable growth over the past few years. Today, the country has a direct premium volume of \$1.4 billion.

In summary, the AAP exists to encourage the development of the actuarial profession in Panama and to keep pace with global changes through continuing education to foment the technical competencies to be a credible and well-respected profession. Its main objectives are as follows:

- To encourage cooperation among the actuarial science professionals in Panama
- To promote the highest standards in the actuarial profession through continuing education
- To develop education standards
- To be proactive in the profession locally and internationally
- To participate in developing professional standards of practice that encourage and guarantee the quality and integrity of the actuary's work
- To maintain and promote its Code of Conduct and Code of Ethics among its members

A critical ingredient of the project is actuarial education. In May 2017, the AAP organized a workshop on Solvency II, covering the quantitative aspects of the "standard formula" of the European

Directive. All 22 AAP members attended a one-day course that was taught by coauthor Arocha, and the workshop provided a few R scripts⁴ to pique the attendees' interest on actuarial applications and insights. At the time of this writing, more workshops and seminars are being planned, given the positive feedback received.

What is in store for Panamanian actuaries in the years to come? With unprecedented global change in the age of qualitative turbulence, the AAP is reinforcing the role of the actuary to tackle present and future challenges.

The AAP hopes to make new international friends! ■



Carlos Arocha, FSA, serves with the Leadership & Development Section Council and is managing director of Arocha & Associates, an actuarial consulting firm based in Zurich, Switzerland. He can be reached at ca@arochaandassociates.ch.



Concepción Moreno is actuarial director of ASSA Insurance Company, based in Panama City, Panama. She can be reached at cmoreno@assanet.com.

ENDNOTES

- 1 A few years ago, the University of Panama established a master's degree program in actuarial science, but it was then discontinued. There have been attempts (unsuccessful so far) to reestablish the program.
- 2 In Spanish, *Universidad Nacional Autónoma de México*. All acronyms related to Mexico are kept in their original Spanish form.
- 3 Swiss Re, Sigma 03/2016: *World Insurance in 2015: Steady Growth amid Regional Disparities*, March 2016.
- 4 R is an open-source programming platform.



Caribbean Actuarial Association 27th Annual Conference

#BreakingTheMold

November 29th - December 1st 2017, Atlantis, Bahamas

The CAA's Annual Conference brings together leading actuaries and other professionals in the financial services industry. The agenda features regional and international specialists in the fields of pensions, life and health insurance, investment, and property and casualty insurance.

Last year's conference covered a wide range of subject matters, including the hot topics of climate change and big data, by speakers from as far away as Australia.

This year's conference will provide a blend of actuarial and related financial topics which would be of interest to actuaries and non-actuaries alike. On Wednesday November 29, the SOA will host an Associateship Professionalism Course (APC) and there will be a 4-hour professionalism session focused on Business Ethics.

CAA conferences are also known for its memorable social events which are not to be missed. This time, there will be both on- and off-island evening events.

The Bahamas consists of 700 islands located between Florida's south east coast and the Caribbean Sea and is like no other place on earth.

Atlantis, Paradise Island features the world's largest open-air marine habitat; Aquaventure, a 141-acre waterscape, including the iconic Mayan Temple's Leap of Faith slide; 11 incredible pools; four miles of magnificent beaches; a Tom Weiskopf-designed 18-hole, oceanfront golf course; and the Atlantis Casino.

Additional information will be posted to our website and our Facebook page.

Come join us at the CAA's 2017 Conference at the Atlantis

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A Short History of Pensions in Paraguay

By Victor Molinas

To understand the pension system in Paraguay, we must first walk through its initial steps.

In 1909, the first pension scheme was established; it was designed to provide for the retirement and pension requirements of civil service staff, the military and the police force. Over the years, this scheme became La Caja Fiscal (the Government-run Pension Fund), and it is now managed as a unit of the Finance Ministry (Ministerio de Hacienda).

During this time, other pension schemes focusing on particular collectives were established: Instituto de Previsión Social, or IPS (private sector workers), in 1943; Caja Bancaria (banking employees) in 1951; Caja Administración Nacional de Electricidad (the state-run power company) in 1968; Caja Municipal (Asunción municipality staff) in 1978 and Caja Parlamentaria (members of Congress) in 1978. Today, IPS is the country's largest and most important scheme because it is the only one that also provides health care, but it covers only about 17 percent of the workforce. This low rate of coverage is due to a widespread informal economy, among other reasons.

All these “public schemes” share some primary characteristics: they target salaried workers and servants, they were established by specific laws and their statutes are established in these laws. All of them are mandatory for a specific collective and have a defined benefit (DB) system.

In light of the absence of coverage for independent workers, professionals and entrepreneurs, private sector initiatives were also developed. This initiative came in the form of nonprofit organizations set up under the principles of solidarity and mutual aid in which some people voluntarily organize themselves and set up these entities to gain access to services based on trust and reciprocity. They are known as *mutuales* (a different concept from the Anglo mutual fund) and are run by a specific law designed to manage them.

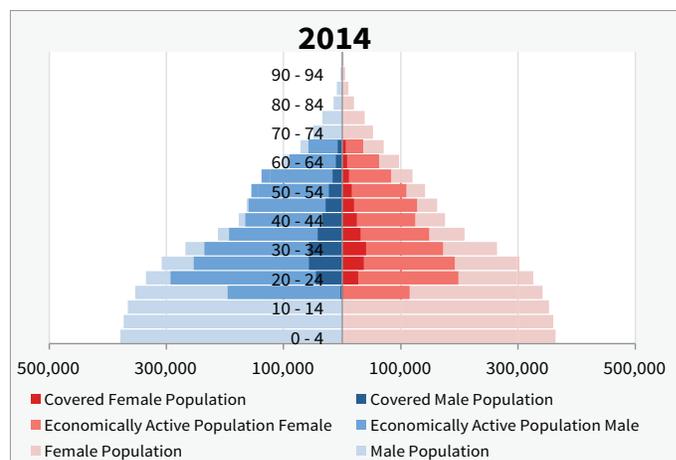
La Caja Médica (Physicians' Fund, set up in 1981) and La Caja Mutual de Cooperativistas del Paraguay (Cooperatives

Associates' Mutual Fund, set up in 1985) focused at first on restricted collectives and had a DB system. This private sector initiative was prompted by the lack of coverage from public schemes and the urgency to have associates at least partially covered. In the 1990s, when the first actuarial deficits started to emerge and with a new school of thought in the region (Latin America Southern Cone countries in particular), the mutuals shifted from DB to DC (defined contribution) schemes, emulating the individual accounts from the Chilean Pension System. Actuarial liability became a concern and started to be addressed. The mutuals grew in affiliates and assets, but they did not achieve high coverage for independent workers/professionals and entrepreneurs.

Also in the 1990s, discussions arose among policymakers about a structural reform of the pension system and the possibility of shifting the public schemes from DB to DC systems. But this idea went no further than a draft.

The public in Paraguay strongly believes that public schemes with DB systems are the most appropriate, although new actuarial deficits are starting to emerge for different reasons: higher life expectancy at retirement age, lower contribution density, high substitution rates and lower interest rates on financial investments. Public opinion also holds that because of the pyramidal structure of the population—a very large young population, resulting in a healthy population bonus at least for the short and medium term—as shown in Figure 1, there won't be problems in the near future. That might hold true for the country's largest scheme (IPS), but the public schemes are starting to show actuarial deficits at different speeds, some at very high ones.

Figure 1
Paraguay's Pyramidal Population Structure

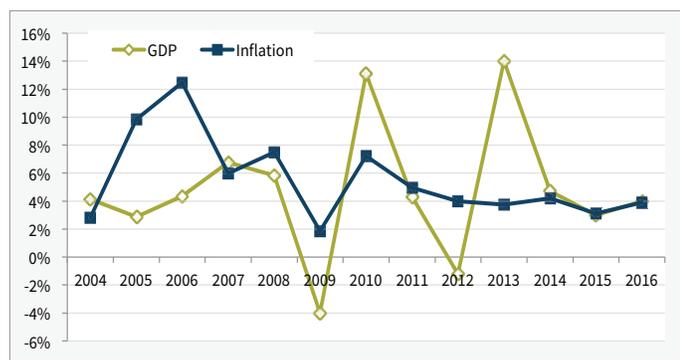


Source: www.ips.gov.py

In 1997, La Caja Bancaria already had a cash flow problem, primarily due to a financial system crisis that directly affected its revenue sources as well as its increased liabilities due to a substantial growth in retirees. Its law was amended in such a way that contribution rates by active members and employers increased, and retirees had to start contributing too. Furthermore, retirement benefits were cut up to 50 percent, creating not only serious economic problems for retirees but also social problems. Since 2016, retirees have again collected full pensions; however, the contribution rates by active members and employers have remained at the new level. Despite this troublesome period and its negative impact, there was no proposal for a structural change in the scheme.

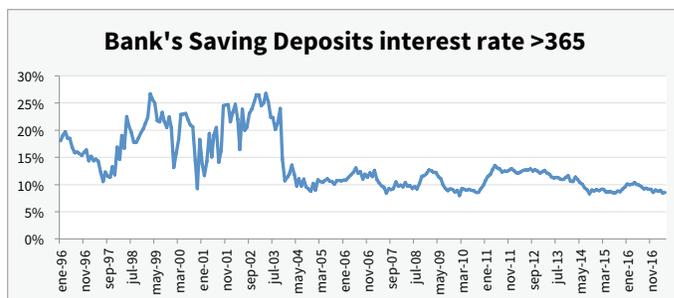
Paraguay has shown strong macroeconomic metrics for a few years: low inflation (3–5 percent per annum—as shown in Figure 2), a low fiscal deficit (1.5 percent of GDP), and a solid GDP growth (4 percent average—as shown in Figure 2) coupled with a substantial decrease in interest rates on banking liability papers (from 12–15 percent to 8–10 percent per annum). Considering that contribution rates were established several years ago based on a different economic scenario, the decrease in interest rates has become an issue as earnings derived from financial investments (as shown in Figure 3) are a crucial element in the health of the funds.

Figure 2
Paraguay’s GDP and Inflation evolution



Source: www.bcp.gov.py

Figure 3
Paraguay’s Banks Interest Rate for Deposits > 1.5 years term in local currency



Source: www.bcp.gov.py

Asset managers are not yet used to the new economic scenario, nor are they prepared to take higher risks to reach the profitability target on their financial investments. And with new benchmarks (lower interest rates), the actuarial deficits are growing.

The good news is that policymakers are now aware of this problem, and steps are being taken. The first of these was to submit a bill to Congress to create a superintendency of pension funds/mutuals. This structure should serve, provided it is passed by Congress and made into law by the executive branch, to supervise pension funds. The project and its key objectives have generally been welcomed by most sectors affected as it addresses a crucial need for both the long and the short term. However, as currently outlined, it is somewhat controversial in certain aspects and faces opposition from some sectors (particularly from workers’ unions). Therefore, it appears that the bill will face lengthy and difficult negotiations before it is finally passed into law. Its approval should bring order, discipline, better overall administration and better protection for all interested parties. ■



Victor Molinas, economist and actuary, is chief actuary of the IPS (Instituto de Previsión Social), a governmental organization overseeing social security and health care based in Asunción, Paraguay. He can be reached at victor.molinas@mgc.com.py.



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