


# International News

ISSUE 56 JUNE 2012

- 
- 2 **Editor's Note**  
By Carl Hansen
  - 3 **Chairperson's Corner**  
By Genghui Wu
  - 5 **The New SOA International  
Committee**  
By Alan Cooke
  - 8 **A Note on the Actuarial Profession  
in Switzerland**  
By Carlos Arocha
  - 10 **21st Annual Caribbean Actuarial  
Association (CAA) Conference:  
"Tailoring Actuarial Practice to  
Caribbean Reality"**  
By Monique McBean
  - 14 **Ambassador's Corner**
  - 18 **International Experience Study  
Update**  
By William R. Horbatt
  - 20 **Chinese Dragon vs. Indian Tiger:  
Developments in variable annuities**  
By Sharon Huang

# International News

ISSUE 56 JUNE 2012

Published by the International Section Council of the Society of Actuaries

## 2012 SECTION LEADERSHIP

Genghui Wu, Chairperson  
Ben Marshall, Vice Chairperson  
Michael Witt, Secretary  
Douglas Carey, Treasurer  
Michael Lockerman, Council Member  
Sunil Sen, Council Member  
Theodoros Iaponas, Council Member  
Alycia Slyck, Council Member  
Lina Xu, Council Member

## Newsletter Editor

Carl Hansen  
e: [chansen@bwcigroup.com](mailto:chansen@bwcigroup.com)

## Assistant Newsletter Editors

Doug Carey  
e: [doucarey@deloitte.com](mailto:doucarey@deloitte.com)

Alan Cooke  
e: [vancooke@telus.net](mailto:vancooke@telus.net)

Jill Hoffman  
e: [jhoffman@munichre.com](mailto:jhoffman@munichre.com)

## SOA Staff

Kathryn Baker, Staff Editor e: <a href="mailto:kbaker@soa.org">kbaker@soa.org</a>	Jill Leprich, Section Specialist e: <a href="mailto:jleprich@soa.org">jleprich@soa.org</a>
---	--

Martha Sikaras, Staff Partner e: <a href="mailto:msikaras@soa.org">msikaras@soa.org</a>	Julissa Sweeney Graphic Designer e: <a href="mailto:jsweeney@soa.org">jsweeney@soa.org</a>
---	--

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

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

This publication is provided for informational and educational purposes only. The Society of Actuaries makes no endorsement, representation or guarantee with regard to any content, and disclaims any liability in connection with the use or misuse of any information provided herein. This publication should not be construed as professional or financial advice. Statements of fact and opinions expressed herein are those of the individual authors and are not necessarily those of the Society of Actuaries.

© 2012 Society of Actuaries. All rights reserved.

## Editor's Note

By Carl Hansen

In addition to our usual feature articles and updates from various parts of the world, this issue of *International News* includes an article on page 5 on the SOA's new International Committee. The work of this group should be of interest to most or all of the International Section membership. I encourage all section members and other readers to help shape the future of the SOA with respect to its international activities at this important developmental stage. Here are a few ideas for becoming more involved without leaving your desk:

- Volunteer to help with initiatives of the new International Committee or of the International Section. If you have some spare time for professional activities in addition to your normal work, you can contact the chairs directly, or email Martha Sikaras ([msikaras@soa.org](mailto:msikaras@soa.org)) or Jill Leprich ([jleprich@soa.org](mailto:jleprich@soa.org)) at the SOA.
- Consider standing as a candidate for the International Section Council if you are able to commit three years to a professional activity. Current or former members of the Section Council can answer questions on duties and time commitment.
- If you are currently working outside the United States and Canada, volunteer to serve as a country ambassador for the SOA, or help your existing ambassador with local activities. [See page 15 for a full list of the current ambassadors]
- Volunteer for the editorial staff of *International News*. We can always use help to come up with ideas for articles and authors, and to chase people to meet our editorial deadlines. You can contact any of the editorial staff for more information.
- Write an article for *International News*. We are always looking for interesting and informative content for the newsletter. If your timing is right, you may be able to enter your article in the annual Country Feature Article Competition for an opportunity to win cash prizes.

The actuarial profession is becoming much more international, both in terms of membership of organizations and specific issues for each practice area. Actuaries that can draw on experience living and working in more than one country can provide valuable perspective to help shape the future. □



Carl Hansen, FSA, FCA, MAAA, is international director at BWC Group in Guernsey in the Channel Islands. He can be reached at [chansen@bwcigroup.com](mailto:chansen@bwcigroup.com).



Genghui Wu, FSA, CFA, MAAA, FRM, is senior investment vice president at Prudential Financial, in Newark, N.J. He can be reached at [Genghui.Wu@Prudential.com](mailto:Genghui.Wu@Prudential.com).

## Chairperson's Corner

By Genghui Wu

Dear International Section Members,

As I mentioned in my note to members from the last newsletter, the council has already started to implement strategies in an effort to facilitate some of the objectives we laid out for 2012. As such, I feel it is appropriate to update the readers on some of the recent and upcoming activities of the council as we continue to find ways to serve our members and other interested parties who are either working overseas or have a strong international interest.

### MAKE YOUR MOVE – BECOME AN INTERNATIONAL SECTION LEADER

The 2012 election of new section council members is approaching. Now is your opportunity to move from section member to a section leadership position. Each year, one-third of the International Section Council is replaced with new volunteers—people like you—who plan and execute the activities of the International Section in line with its mission. Council members typically serve three-year terms. Read about the roles and responsibilities<sup>1</sup> or contact a current member of the International Section council for more information. If you are interested in becoming a candidate for election, please fill out the Expression of Interest Form.<sup>2</sup>

### SOA INTERNATIONAL SECTION MEMBERSHIP SURVEY

Member satisfaction is a primary goal of the International Section. The council rolled out the membership survey in March. I appreciate those of you who participate in such a critical event; we will make certain that we address your needs and aspirations.

### SOA INTERNATIONAL SECTION VOLUNTEER OPPORTUNITY

The International Section Council seeks volunteers for a working group to take the lead in section member communication and related international initiatives. This group will work with the council and SOA staff to enhance the section communication tools with our members and will be involved in other SOA activities sponsored by the International Section. Volunteers will commit to three-to-

four calls per year, participate in discussion of hot topics, and benefit from participating in well organized section international activities. Please contact Jill Leprich at [jleprich@soa.org](mailto:jleprich@soa.org), if interested.

### COUNTRY FEATURE ARTICLE COMPETITION

The International Section Council (ISC) is pleased to announce we are running our Country Feature Article Competition again this year. Here is a chance for you to win a cash prize of U.S.\$1,000 for first place, or U.S.\$500 for second place. The Country Feature Article Competition has enabled our council to gather informative and interesting articles related to the development of the actuarial profession, market trends, consumer behaviors, social values, and culture from across the globe. I encourage you to participate in this competition. The details can be found in the link below: <http://www.soa.org/professional-interests/international/intl-country-feature-article.aspx>

### SOA INTERNATIONAL EXPERIENCE STUDY – EMBEDDED VALUE FINANCIAL ASSUMPTIONS

In the February 2012 issue of *Product Matters!*, an article titled “SOA International Experience Study – Embedded Value Financial Assumptions” was printed. The International Section is quite pleased to be an ongoing supporter of the international experience study work.

### SECTION COUNCIL MEMBERSHIP COMMUNICATION

We want to examine ways to more effectively communicate through multiple channels and advanced tools. The council is drafting a membership survey to make sure we hear and understand your needs. We have also updated our section website based on members' feedback. The changes will provide a fresh new look and a better organized search engine to fulfill your needs. With these changes, we explicitly state our section mission, have added stories from actuaries abroad, provide a central location for finding your dream jobs, and much more. Please visit us at: <http://www.soa.org/professional-interests/international/intl-detail.aspx>.

CONTINUED ON PAGE 4

Chairperson's Corner | from Page 3

#### MEMBERSHIP VALUE SUPPORT

The section approved financial support to the Thailand ambassador for a local actuarial event, and continued our sponsorship to the Pacific Rim Actuarial Club. The SOA Ambassadors continue to play an important outreach role and we are still looking for members willing to act as ambassadors for a number of countries.

As these activities illustrate, the leadership of the International Section is continually striving to meet the needs of its very diverse constituency. Please feel free to contact me or any of the other section council members if you have ideas to make your membership in the International Section more valuable. □

#### END NOTES

<sup>1</sup> <http://www.soa.org/professional-interests/professional-interests/prof-council-roles-and-responsibilities.aspx>

<sup>2</sup> <http://www.soa.org/professional-interests/section-expression-form.aspx>

## What do you do when you're out of the office?

- **Collect** rare artifacts?
- **Play** an instrument, or
- Win ballroom dancing **competitions**?
- **Create** artwork?

*The Actuary* has introduced a new column called, "Out of the Office." It is a place where you can showcase your talents, your community involvement, or extracurricular activities you participate in just for the sheer fun of it.

**So, what are you waiting for?** Send us a short paragraph providing some basic details about your out-of-the-office experiences, along with your contact information, and we'll be in touch. Visit <http://www.soa.org/pub-out-of-office>.



**We look forward to hearing from you!**



Alan Cooke is a retired actuary living in Vancouver Canada. He was a member of the task force that reviewed the SOA's international membership strategy and is also a member of the new International Committee. He may be reached at [vancooke@telus.net](mailto:vancooke@telus.net).

## The New SOA International Committee

By Alan Cooke

In prior issues of *International News*, we have reported on the progress of the task force that has been reviewing the Society of Actuaries' international membership strategy. The work of this task force ended in October 2011 with the submission of their final report and recommendations to the Society of Actuaries Board of Directors.

One of the key task force recommendations approved by the Board of Directors was the creation of an International Committee that would be "responsible for establishing and maintaining cross-functional international policy oversight and direction for activities of the Society of Actuaries outside the USA and Canada." It should be noted that this new entity is in addition to your International Section which continues in its present format.

The International Committee acts as an advisory body with the following responsibilities:

1. Oversight of implementation of the SOA's international strategy; monitoring of the results of the SOA's international activities and identifying new areas of potential activities or services to be offered to the SOA's international constituencies.
2. Serving as an information clearinghouse for international activities, and events involving the SOA and the SOA's relationship with these activities and events.
3. Maintaining knowledge of and providing recommendations on the SOA's resource commitments to international activities.
4. Overseeing the SOA's relationship with the International Actuarial Association (IAA) and with other international bodies

including actuarial societies, other national or supranational organizations with a focus outside the United States and Canada and appropriate governmental authorities. Facilitating connections between the IAA subject matter committees and the relevant SOA sections.

6. Overseeing the establishment and maintenance of SOA relationships on international matters as they relate to activities and positions of other U.S. or Canada-based actuarial organizations.
7. Facilitating the promotion of international content and themes within each section.
8. Oversight of the international implications of issues addressed by a variety of other committees within the SOA.
9. Serving as a resource on international issues for the Board of Directors and its committees, the Leadership Team, the Issues Advisory Council and its strategic teams, operational committees, task forces, and working groups of the SOA, and staff.

As you can see from the preceding list, the International Committee's responsibilities cover all areas of the SOA's international activities. This new committee had its first organizational meeting on January 16, 2012 under the leadership of Darryl Wagner. Key discussion items at that inaugural meeting included:

- Approaches to better engage with the sections on matters pertinent to in-

CONTINUED ON PAGE 6

The New SOA International Committee | from Page 5

international work; this would include liaising with the volunteer Section Value Team

- Updates on the SOA's current international activities, both from the section as well as other projects and initiatives
- Approaches to better engage with supranational organizations such as the World Bank

- Formulate a more comprehensive communication plan including increased engagement with our country Ambassadors

As you can see, there will be much for the committee to consider in its first year. Over the course of this year, we will keep you apprised of its work including opportunities for volunteer involvement. □

## 2012 Joint Colloquium of the ASTIN, AFIR/ERM and IAALS Sections



A joint colloquium of three sections of the International Actuarial Association will take place from October 1–4, 2012 in Mexico City. On the Colloquium dates, the Asociación Mexicana de Actuarios, A.C. (Mexican Association of Actuaries) will celebrate its 50th anniversary and the 30th for the Asociación Mexicana de Actuarios Consultores (Mexican Association of Consulting Actuaries). In addition, we will commemorate ten years of having hosted the International Congress of Actuaries in Cancun.

The theme of the Colloquium is **Beyond Boundaries**. The program will include plenary sessions with formal addresses by invited keynote speakers, topical presentations by subject-matter experts, and parallel sessions at which submitted papers will be presented. The program will feature sessions in the areas of General Insurance and Property & Casualty, Financial Risks and ERM, and Life Insurance. We are pleased to announce that Michel Liès (Chairman of Swiss Re); Bradley M. Smith (President of the Society of Actuaries and Chairman of Milliman); Paul Embrechts (Professor of the Department of Mathematics, ETH Zurich); and Patricia Guinn (Managing Director Risk & Financial Services, Towers Watson) have accepted to deliver keynote addresses.

The program and online registration will be available through the Colloquium website at: [www.actuaries.org/Mexico2012](http://www.actuaries.org/Mexico2012).

We will be honored to have you in Mexico City during the celebration of these ASTIN, AFIR/ERM and IAALS Colloquia this coming October 2012.



## 2012 Caribbean Actuarial Conference in The Bahamas

Attend the CAA 2012 conference in Nassau, Bahamas and be a part of the dialogue on actuarial issues facing the Caribbean region and the world!

The 22nd annual Caribbean Actuarial Association conference will be held at the Sheraton Nassau Beach Resort in The Bahamas from November 15 to 16, 2012. It will be held in conjunction with the IAA's Fall Meetings.

On November 14 the Institute & Faculty of Actuaries will conduct a **Professionals Skills Course**. This seminar will provide up to 6½ hours professionalism CPD credits for qualified actuaries and students and offers a highly recommended update on professionalism issues.

Conference and course details will be available soon at [www.caa.com.bb](http://www.caa.com.bb).

Imagine a world where you can't tell where dreams begin and reality ends. These are The Islands Of The Bahamas and they're like no other place on Earth.

There are 700 Islands of The Bahamas starting just 50 miles off the coast of Florida. They boast the clearest water on the planet — you can see your toes as easily as you can the world's third largest barrier reef.

We invite you to explore our islands. One step and you'll realize the beauty of each island extends far beyond our extraordinary natural wonders. It's the smiles on the faces of the Bahamian people, the unique sounds of our rich culture, the warm hospitality of our heritage and our colorful history.

***Come experience an actuarial conference like no other  
..... in a place like no other !***



Carlos Arocha, FSA, MAAA, is president of Arocha & Associates GmbH and the SOA ambassador for Switzerland. He can be reached at [carlos@carlos-arocha.ch](mailto:carlos@carlos-arocha.ch).

## A Note on the Actuarial Profession in Switzerland

By Carlos Arocha

Swiss actuaries form a clearly defined profession. In 1905 the Swiss Association of Insurance Mathematicians<sup>1</sup> was founded. In 1995 it was renamed the Swiss Association of Actuaries (SAA). Well before the association's original foundation date, early scientists like Basel-born Leonhard Euler<sup>2</sup>, or the several members of the Bernoulli family<sup>3</sup> (who also lived in Basel), contributed in a meaningful way to the Swiss mathematical tradition. Today, Basel is closely associated with its tennis legend Roger Federer, or in banking circles, with the Basel Accords—which incidentally might have triggered the development of economic capital concepts in insurance, enterprise risk management, and ultimately the overhaul of solvency standards in Europe.

The Swiss actuarial education is a mixture of university-based courses, practical work experience and a final examination offered by the Swiss Association of Actuaries.

In the 1990s the Insurance Legislation Treaty between the European Union and Switzerland paved the way to the deregulation of the Swiss insurance market and the introduction of risk-based solvency regulation. The appointment of an actuary by insurance companies was discussed and the SAA decided to introduce a membership category of Qualified Actuary, based on the core syllabus of International Actuarial Association (IAA) and the *Groupe Consultatif* (GC), an association that brings together the actuarial societies in the European Union. With the establishment of the Swiss Solvency Test, the risk-based capital standard for insurance companies, the onus of adherence to principles was passed on to Senior Manage-

ment, and not to the Appointed Actuary, but the professional distinction between the Qualified Actuary and the Member of SAA had already been made.

The Qualified Actuary<sup>4</sup> is then a “full member” in the sense of both the IAA<sup>5</sup> and the GC. Such individuals will normally hold a degree in mathematics or actuarial science in a university where the syllabus has been agreed to by the SAA. To date, five universities have been approved: Basel, Berne, Lausanne, Zurich, and the Swiss Federal Institute of Technology Zurich.

Besides a university degree in mathematics or actuarial science, candidates must prove at least three years of work experience (usually at the actuarial department of an insurance or reinsurance company), and must pass a final examination on both a selected actuarial topic, and the SAA's Code of Conduct.

Most actuaries in Switzerland are affiliated with the insurance, reinsurance, and consulting industries, with a relatively high concentration working in the major Zurich area. As of this writing there are about 1,100 members of the SAA, of which some 600 hold the Qualified Actuary credential. The Society of Actuaries' headcount in Switzerland is 70, of which 32 individuals are FSAs. These numbers are seemingly high in a country with a total population of 7.7m.

As the insurance and consulting industries continue to evolve and new challenges in regulation, economic capital, and insurance financial reporting are to be faced—coupled with the emergence of developments in enterprise risk



management, extreme value theory, and quantitative finance—the actuarial profession in Switzerland is well positioned to forge ahead. □

#### END NOTES

<sup>1</sup> Or in German, *Vereinigung Schweizerischer Versicherungsmathematiker (VSVM)*

<sup>2</sup> Leonhard Euler (1707 – 1783) was a pioneering Swiss mathematician and physicist, who made important discoveries in fields as diverse as infinitesimal calculus and graph theory. He also introduced much of the modern mathematical terminology and notation, particularly for mathematical analysis, such as the notion of a mathematical function.

<sup>3</sup> For example, Jacob Bernoulli, one of the most prominent mathematicians in the family, who discovered the constant  $e$  by studying a question about compound interest which requires to find the value of the expression:

$$e = \lim_{n \rightarrow \infty} \left( 1 + \frac{1}{n} \right)^n$$

<sup>4</sup> Actuary SAA, or in German, *Aktuar SAV, Aktuar der Schweizerischen Aktuarvereinigung*

<sup>5</sup> Fully Qualified Actuary, or FQA in the International Actuarial Association's parlance.



Monique McBean, ASA, is an associate actuary at Guardian Life Limited in Kingston, Jamaica. She can be reached at [monique.mcbean@ghl.com.jm](mailto:monique.mcbean@ghl.com.jm).

## 21st Annual Caribbean Actuarial Association (CAA) Conference: "Tailoring Actuarial Practice to Caribbean Reality"

by Monique McBean

With almost 200 registered participants for this year's conference, some coming from as far as the United Kingdom and Australia, the CAA invaded the Hyatt Regency in Port-of-Spain, Trinidad over the course of December 1-2, 2011. The usual impressive line-up of delegates from the actuarial profession, regulatory bodies, and business experts shared with eager audiences their insight into the issues relevant to the Caribbean region and the considerations to be taken into account when adapting benchmark principles to the Caribbean. Most noticeable was the increase in the number of regulators who registered. Indeed, the regulators are now coming to us!

As the programmes were handed out, it was apparent the planning committee has maintained the high quality of speakers and the breadth of topics covered. This staging saw sessions on pensions, life and general insurance, risk management, investments, strategy, reinsurance, regulatory reform, governance and professionalism.

This excerpt from the president's opening remarks expertly summed up the CAA's goals for the 2011 conference:

*"The focus of this year's conference will be to highlight the increasingly important role of actuaries as thought leaders and decision makers in addressing pertinent matters affecting the region. Given the recent sovereign debt crises in Europe and the instability that characterises the global financial markets, it is critical that as actuaries, we continuously assess and monitor the implications of these*

*developments on the financial viability of the Caribbean region. The actuarial profession will be increasingly important in establishing and implementing sound regulatory and risk management practices that will reduce the vulnerability of the region to adverse financial and economic shocks."*

The 2011 conference officially began on December 1 with keynote speaker and Inspector of Financial Institutions at the Central Bank of Trinidad and Tobago, Carl Hiralal's speech on regulatory regime. Presentations to follow included "Competitive strategy for financial services firms in the Caribbean" and "Product Strategy, Product Development and Pricing in a Competitive Environment," led by senior executives of the region's most influential banks and insurance companies. These were complemented by topics such as "Capital Management and Achieving ROI's in the Caribbean Insurance," "Practical issues for General Insurance reserving in the Caribbean" and "Reinsurance Governance – Is Your Board of Directors Aware?"

We were treated to "Another Game Show," an entertaining exercise on analyzing different investment strategies within the confines of capital and risk exposures.

Pensions sessions addressed "Provisions of the 2011 Barbados Pensions Act and EC Pension Reform," "Longevity Risk for Pension Schemes – Measurement, Management and Mitigation" as well as lessons to be learnt from issues facing pension plans in Europe—"Caribbean Pension Practitioners – Take Note."

Presentations on “IFRS Insurance Contracts – The State of Play” and “Updates to IAS19 – Implications for actuaries, auditors and companies” tackled regulatory reform while “Lessons from the CL Financial Failure” opened up discussion on governance, risk management and the roles of the different players in the financial services industry.

The importance of professionalism was emphasized in this year’s conference with not only two presentations but also two courses. The 2011 conference saw the now customary course on professionalism; this year’s course, “Professionalism in Practice” was co-sponsored by the CAA and the Society of Actuaries (SOA). In addition, the SOA’s Associateship Professionalism Course, a requirement for becoming an associate with that body was offered in the Caribbean. Many thanks to the CAA and the SOA for making this happen. Sessions at the conference continue to be eligible for CPD credits from the Institute of Actuaries (IOA), the SOA and the CAA which has now implemented a CPD requirement for its members.

#### CAA DEVELOPMENTS

The CAA has been working on sharing our expertise and increasing our visibility so that the general public is aware of the contribution we can make. We would like to share with you a few of 2011’s highlights where we were involved in:

- Commenting on various public matters, including Jamaica’s Public Sector Pension Reform (the report is available on our website) and the Jamaica Debt Exchange



Speaker Sylvain Goulet



Delegates during the professionalism course for credentialed actuaries

CONTINUED ON PAGE 14

21<sup>st</sup> Annual CAA ... | from Page 11

(JDX), which some have pointed to as a model for Greece's debt crisis.

- Through the Trinidad chapter, the CAA has been instrumental in providing valuable input for the new insurance legislation.
- The CAA will be increasing its presence by preparing policies and standards relating to public matters and disseminating its views to key stakeholders for the benefit of the wider society. We have had past presidents invited to speak with civil service unions and advising teachers and the police federation.
- The CAA were sponsors of this year's Jamaican Mathematical Olympiad, a competition identifying mathematical talent at an early age and providing resources to develop the skill. From the competition a team is also selected to represent Jamaica in a regional competition held in either Central America or the Caribbean.
- The CAA Steering Committee and the Practice Standard Setting Committee disseminated Exposure Drafts for Actuarial Practice Standards which were discussed at this year's CAA Standards and Advisory Committee Meeting with the intention of having Phase 1 approved at the AGM in November 2012. This project requires close collaboration with the regulators, especially with regard to transition for the legislation and the standards to be compatible.
- The development of close ties with the Actuarial Society of the University of the West Indies—the only institution in the

Caribbean to offer an Actuarial Science degree and courses approved for SOA VEE credits—and its affiliated Mona School of Business.

- Committed to being the actuarial standard setter for the region, the CAA has set up an Advisory Council comprising the presidents of the Caribbean associations for the actuaries, regulators, accountants and the insurance companies. This council meets twice yearly and discusses policy setting.
- The first Caribbean Experience study report is due to be published.

The CAA is being recognized for its knowledge and the assistance that can be provided to the community. With this thrust the stage is set for actuaries in the region to take on even greater involvement in more general professional matters, laying the foundation for transitioning into non-traditional practice areas.

#### AND NOW A WORD FROM OUR SPONSORS ...

As always, we take this opportunity to thank our kind sponsors for their continuing support; from this year's host country, the Trinidad and Tobago Convention Bureau, Guardian Life of the Caribbean, Colonial Life Insurance Company (CLICO); from Barbados, Bank of Montreal Insurance (Barbados), Eckler, International Reinsurance Managers (IRM), Sagicor Life Inc; from Jamaica, Duggan Consulting Limited; from the Bahamas, Colina; and last but certainly not least from Canada, Apex Consulting Ltd, GGY (Axis), Morneau Shepell, Munich Re, Oliver Wyman, RBC Insurance, Swiss Re, Valani Consulting.

## UPCOMING EVENTS

The CAA and the International Pension and Employee Benefits Lawyers Association will host a joint conference at the Half Moon Hotel in Montego Bay, Jamaica, April 22-24, 2012. The conference will address current issues relating to public and private pension plan design, governance, investment, operation and supervision, as well as deferred income arrangements for executives.

As we seek to broaden the scope of the actuarial profession outside the traditional practice areas,

we invite actuaries, educators, financial services professionals and business professionals from all fields to the CAA's 22<sup>nd</sup> annual conference at the Sheraton Nassau Beach Resort, Bahamas, on November 15-16, 2012. The conference will run concurrently with the International Actuarial Association's annual meeting. The Institute and Faculty of Actuaries will be offering a professionalism course on November 14, 2012. □

*Presentations and further details on this 2012's conference may be found on our website, [www.caa.com.bb](http://www.caa.com.bb)*

## MARK YOUR CALENDARS!

The Singapore Actuarial Society is the host of the 17<sup>th</sup> East Asian Actuarial Conference (EAAC), "Redefining Risk, Creating Value" being held at Resorts World Singapore from October 14-17, 2013. The EAAC brings together actuarial professionals in the Asia-Pacific region to discuss various international and topical issues.

If you are not familiar with Singapore, Resorts World is the premier destination in Singapore, with Universal Studios located on site. Other attractions include the casino, shopping and famous Singaporean food. For more details see [www.rwsentosa.com](http://www.rwsentosa.com).

We will continue to provide more details closer to the date.

## Ambassador's Corner

As mentioned earlier in the newsletter, one of the key SOA strategic initiatives is expanding the SOA's international presence. The fast-changing global environment, together with the continuing emergence of international growth and expansion opportunities, compel us to focus attention on the commitment of the SOA to international actuarial needs as well as the deployment of SOA resources to meet those needs.

One of the SOA's greatest assets in expanding our presence internationally is the International Section (you) and our ambassadors around the world. Quoting from The International Section website: "The Ambassador Program has been established by the International Section in countries outside North America to assist in carrying out the Society of Actuaries' international programs, identifying and developing subjects of international interest for communication to SOA members, identifying special needs of SOA members in different areas of the world, helping the actuarial profession to grow in underdeveloped areas, and functioning as a valuable resource and link between the SOA and national actuarial organizations and actuarial clubs."

The Ambassador is ideally suited to assist in promoting and advancing SOA initiatives. In conjunction with the SOA's International Committee we will be hosting discussions to help align ambassador initiatives with SOA's strategic objectives. Specifically, we will be asking our Ambassadors to assist in the following objectives;

- Expanding the marketing and recognition of SOA credentials.
- Effectively communicating the needs of our members in the context of a rapidly growing international environment,

- Advancing the reputation and impact of the actuarial profession globally, and
- Meeting the competitive challenges arising from other disciplines and credentials abroad.

The definition of success as an actuarial association in the international professional marketplace is changing rapidly and is no longer solely based on membership size. Brand recognition and assurance of quality standards, and maintenance of strong communities of actuaries, are hallmarks of a strong international presence. We will be looking to our Ambassadors to not only represent the SOA internationally, but to accelerate our market recognition and increase our global presence.

The Ambassador Program has been established by the International Section in countries outside North America to assist in carrying out the Society of Actuaries' international programs, identifying and developing subjects of international interest for communication to SOA members, identifying special needs of SOA members in different areas of the world, helping the actuarial profession to grow in underdeveloped areas, and functioning as a valuable resource and link between the SOA and national actuarial organizations and actuarial clubs.

A complete listing of the Society of Actuaries Ambassadors follows. This list can be viewed on SOA.org at <http://www.soa.org/professional-interests/international/intl-soa-ambassador-listing.aspx> along with a list of the country web pages that can be viewed at <http://www.soa.org/professional-interests/international/intl-country-web-pages.aspx>.

### Society of Actuaries Ambassador Listing

Argentina	Javier Campelo, ASA
Brazil	Ronald Poon-Affat, FSA
Channel Islands	Stephen Ainsworth, ASA, FIA
China	Xueyun Huang, ASA FLMI
Colombia	Luis G. Caro
Cyprus	Christos Patsalides, FSA, CERA, FCA
Egypt	Mohamed Amer, FSA, AIA
France	Luc Pomerleau, ASA
Germany	Dirk Nieder, FSA
Greece	Ioannis Chatzivasiloglou, ASA, MAAA
Gulf Region	Shoaib Soofi, FSA
Hong Kong	Tze Ping Chng, FSA, MAAA
India	Sanjay Mahboobani, FSA, MAAA
Indonesia	Eng Kim Yeoh, FSA, FCIA
Ireland	Pin Chung, ASA
Israel	Ethan Fish, FSA
Jamaica	Cathy Lyn, FSA, FCIA
Japan	Warren Rodericks, FSA
Lebanon	Iyad Hourani, FSA
Luxembourg	Mian Ikram Shakir, ASA
Malaysia	You Kim Lai, FSA
Mexico	Jorge Luis López Araiza Vega, ASA
Netherlands	Jan Hooper, FSA
New Zealand	Richard Geisler, FSA
Pakistan	Naveed Shahid, ASA, APSA
Singapore	Jill Hoffman FSA, FCIA, FSAS
Switzerland	Carlos Arocha, FSA
Thailand	Tommy Pichet Jiarameetaweesin, FSA
Turkey	Seda Ekizoglu, ASA
Taiwan	Alice Cheng, FSA
UK	Nick Dexter, FSA, FIA
Vietnam	Nhon Ly, FSA

CONTINUED ON PAGE 16

Ambassador's Corner... | from Page 15

## New Ambassadors:

The International Section is pleased to advise that an Ambassador has recently been appointed to Indonesia. In this edition of the Ambassador's Corner, we provide a biography and work plan for this new Ambassador. We will continue featuring articles from all of our ambassadors on their respective countries.

### INDONESIA



Kim Yeoh, FSA, FCIA  
 PT Prudential Life Assurance  
 Prudential Tower  
 Jl. Jend. Sudirman, Kav 79  
 Jakarta 12910  
 Indonesia  
 Tel: +62 21 2995 8100  
 Fax: +62 21 2995 8012  
 Email: kim.yeoh@prudential.co.id

#### Biography

Kim is fellow of the Society of Actuaries (SOA) and the Canadian Institute of Actuaries (CIA) as well as a CFA charterholder. She graduated from the University of Waterloo with a degree in Mathematics specializing in Actuarial Science and Statistics. Her area of practice is in life insurance and she is currently the Chief Actuary of PT Prudential Life Assurance,

one of the largest life insurance companies in Indonesia.

Kim likes to think of herself as a global citizen. She grew up in Malaysia, but is now a Canadian citizen and spent her formative professional years in Canada. Furthermore, Kim has worked in five countries (Canada, the United States, the Netherlands, Taiwan and Indonesia) across three continents. Her previous roles have encompassed investments, life insurance valuation and corporate actuarial. Though English is her main language, she is also fluent in Malay and conversant in Mandarin, Cantonese and Indonesian.

Kim is very active in giving back to the profession and has done so in different ways:

- She has served on several SOA examination committees, writing and grading questions.
- Presented at SOA meetings.
- She was on the CIA's Committee on Expected Experience in 2003 and is currently on the Committee on International Relations (since 2005). She is on the International Actuarial Association's Accounting committee, specifically the International Actuarial Standards drafting sub-committee.

She has also been active representing her employer in industry bodies while working in Europe, specifically the European CFO Forum and its committees on IFRS insurance accounting and embedded value.

Kim has already done some promotion of the profession since coming to Indonesia, for example:

- Conducted a visit to Institut Teknologi Bandung to talk about the role of actuaries
- Spoke at a workshop sponsored by PT Prudential Life Assurance and Indonesia's



Ministry of Finance, to introduce the insurance industry and the actuarial profession to selected university lecturers

- Spoke at a Society of Actuaries of Indonesia workshop on Gross Premium Valuation
- Visiting Universitas Gajah Mada to speak to students about the actuarial profession.

**Work Plan:**

- Continue to promote actuarial science as a career in Indonesia and to encourage more Indonesian students to become actuaries.
  - Give university talks regarding a career as an actuary and the SOA examination system.
  - Assist in establishing exam centers as needed.
  - Liaise with Indonesian students studying abroad about actuarial opportunities in Indonesia.
- Assist the SOA in communications with members and Correspondents in Indonesia.

- Contact members of the SOA in Indonesia. Develop a list of concerns.
- Contact new members as they arrive and assist in transition (SOA “welcome wagon”).
- Liaise with the Society of Actuaries of Indonesia.
  - Attend and participate in local actuarial events.
  - Assist in identifying appropriate Continuing Professional Development opportunities.
- Write an article for inclusion in *International News*.
- Write a year-end report on developments in Indonesia. □



William R. Horbatt, FSA, MAAA, is a consulting actuary with Actuarial Consortium in Short Hills, N.J. He can be reached at [Horbatt@ActuarialConsortium.com](mailto:Horbatt@ActuarialConsortium.com).

# International Experience Study Update

William R. Horbatt

The International Experience Study (IES) is a joint research venture of the SOA's International Section and Research Department, the International Actuarial Association, local actuarial associations and corporate sponsors to provide actuaries around the world with practical experience information in emerging markets. Without such data it has been difficult for actuaries to evaluate and illustrate business performance and/or market attractiveness to senior management. The study has evolved to the stage where the SOA Research Department has provided a Microsoft Access/Excel experience study "tool kit" to actuaries in about 50 companies in Asia, Europe and Latin America. Studies are in progress or

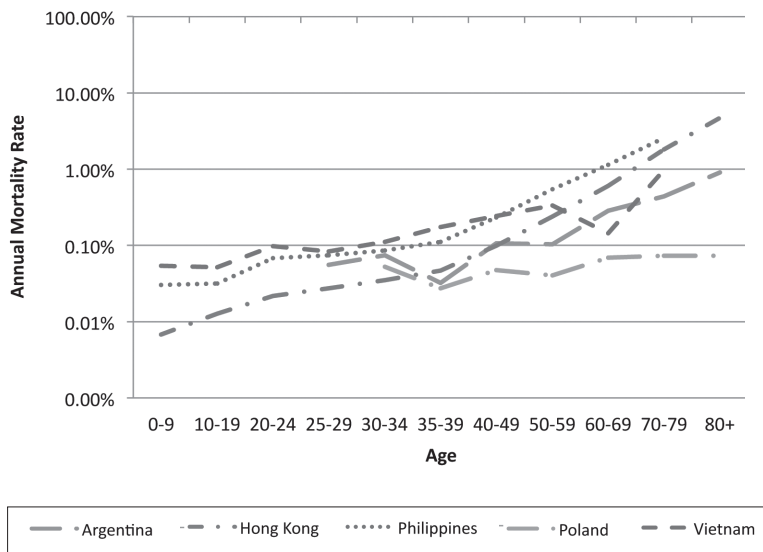
have been published for the following countries based upon experience during the 2000s:

- Argentina\*
- Caribbean\*
- Estonia
- Philippines
- Poland\*
- Vietnam

\*limited studies without all companies participating.

Discussions are also ongoing with actuaries in Colombia, Croatia and Kenya to produce additional studies. The most successful effort to date has been in Vietnam where the fourth consecutive study is under way.

FIGURE 1  
Mortality Rates (annual)



Some observations from the studies are:

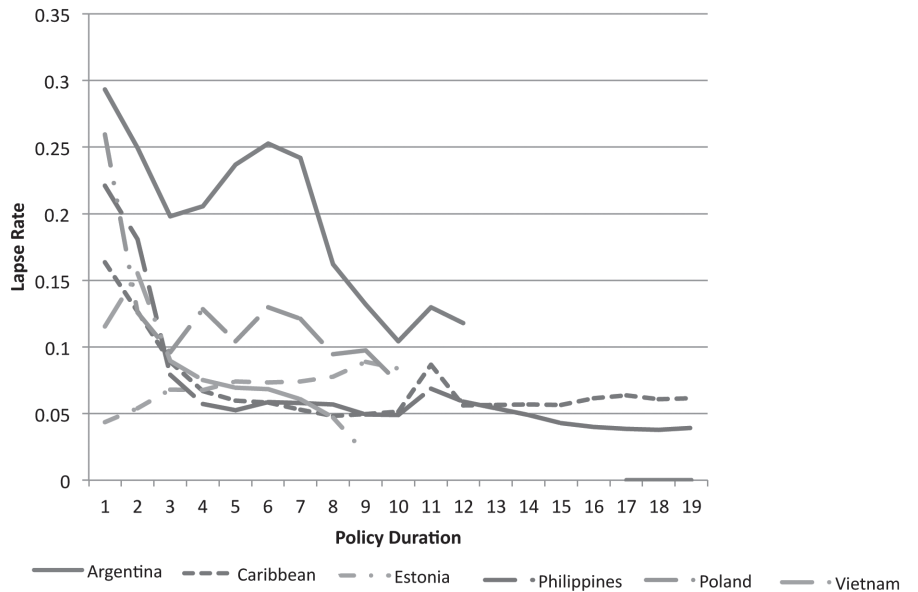
- Mortality experience is generally better than the 1975-80 SOA table but not yet approaching current U.S. insured mortality.
- Little evidence of selection has been observed in most countries and in one country anti-selection was observed.
- Significant differences have been found in some countries between male and female mortality. In one country female mortality is half male mortality, when measure by actual to tabular mortality.
- Lapses have generally demonstrated a decreasing trend as policies age, similar to older North American experience.
- Age / sex distributions vary greatly between countries.

Graphs comparing mortality and persistency from the most recent studies are shown in the figures 1 and 2.

The SOA IES is a joint effort of the SOA Research Department, the SOA International Section and the International Actuarial Association Mortality Working Group. The IES is especially grateful to corporate sponsors that have supported the initiative in terms of both time and money. Current sponsors are AXA, ING, MetLife, New York Life, Prudential and Zurich.

Additional information can be found at the SOA website under either the International Section or the Research Department pages.<sup>1</sup> Actuarial societies that wish to partner with the SOA in conducting an experience study should contact Cindy MacDonald, SOA Research Actuary, or Bill Horbatt, IESWG Chair for further information. They can be reached at [cmacdonald@soa.org](mailto:cmacdonald@soa.org) or [horbatt@actmasol.com](mailto:horbatt@actmasol.com). □

**FIGURE 2**  
**Lapse Rates**



**END NOTES**

<sup>1</sup> <http://www.soa.org/research/experience-study/ind-life/mortality/int-international-experience-study.aspx>



Sharon Huang, FSA, FLMI, is consulting actuary at Milliman in Shanghai, China. She can be reached at [sharon.huang@milliman.com](mailto:sharon.huang@milliman.com).

## Chinese Dragon vs. Indian Tiger: Developments in variable annuities

By Sharon Huang

According to Swiss Re's Economic Research & Consulting, by 2021 Asia will be home to two of the world's five largest economies. China will remain the second largest and India will become the fifth largest. China and India are currently the second and fourth largest life insurance markets in Asia measured by premium volume. For many years, the two countries have been key drivers of the growth of life insurance in Asia and have been a major focus of many multinationals due to their large population and low insurance penetration.

In May 2011, the China Insurance Regulatory Commission (CIRC) released details of the pilot program for variable annuities (VA) which are—according to the regulatory definition—unit-linked products with guarantees in the form of Guaranteed Minimum Maturity Benefit (GMMB), Guaranteed Minimum Accumulation Benefit (GMAB), Guaranteed Minimum Death Benefit (GMDB), or Guaranteed Minimum Income Benefit (GMIB). Unlike the VA mar-

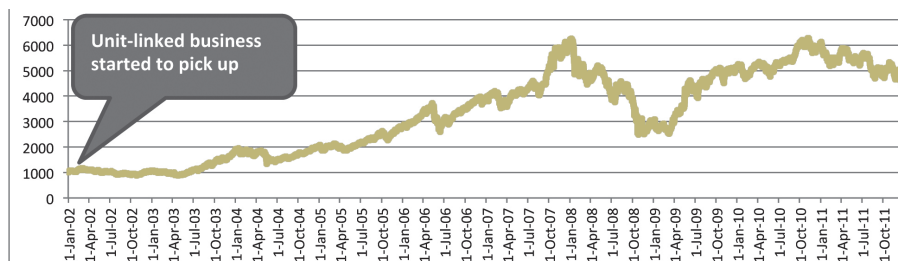
kets in the United States, Europe or Japan, where life insurers mostly use hedging to manage the underlying risks of the business, China will take a different approach, as the financial derivative market here is underdeveloped and insurers are restricted in the use of derivatives. Constant Proportion Portfolio Insurance (CPPI) and internal synthetic hedging are the two risk management mechanisms that life insurers can use per the rules from CIRC. CPPI is relatively easy to implement, making it the preferred choice for most insurers to enter the VA sector at current stage.

In India, the unit-linked products with guarantees are referred to as Net Asset Value (NAV)-guaranteed Unit-Linked Insurance Plan (ULIPs). The most commonly sold version of those ULIPs calculates the fund value at maturity on the basis of the highest NAV registered by the fund during the tenure specified by the life insurers. Similar to the situation in China, most of these plans work on CPPI to provide the guarantee. According to the Life Insurance Council in India, the highest NAV plans contribute around 20 percent of Indian life insurer's ULIP business. These products have become the largest selling ULIPs since September 2010 when the Insurance Regulatory and Development Authority (IRDA) introduced new charge-capping regulations for ULIPs.

Can we expect the success story of the highest NAV plans in India to be reproduced in China soon? Here are several factors we think that need to be considered.

### 1. The current importance of unit-linked business in the overall life insurance market

FIGURE 1  
India S&P CNX NIFTY



Source: National Stock Exchange of India

For many years, the two countries have been key drivers of the growth of life insurance in Asia ...

**should be considered.** In India, unit-linked business has dominated the Indian life insurance market for nearly a decade. Unit-linked business emerged at a good time, just as the stock market was starting one of the biggest bull market runs in recent history. (see Figure 1 on page 20)

The product quickly became one of the most popular investment products for individuals and is perceived as the single largest innovation product in India. The past decade witnessed its significant growth in premiums. However, new business volume declined, in recent years during the financial crisis of 2008-2009 and the stringent regulation on ULIPs since September 2010.

During the equity market crash in 2008, investors of unit-linked business had seen reductions in their fund value, as ULIPs at that time did not provide any guarantees and the major portion of their investments are in equity portfolios. Post financial crisis, capital preservation became a much more important investment objective for most people. Thus, many investors quickly accepted the highest NAV guaranteed plans which give the policyholders the potential to earn market upside with downside protection.

In China, the first unit-linked product was launched by Ping An Insurance Company in October 1999. The product attracted many investors by its transparency, flexibility and most importantly the potential to earn market upside and the sales volume picked up rapidly from 1999 to 2000. However, the equity market headwind quickly suppressed the momentum.

FIGURE 2  
ULIP First Year Premium

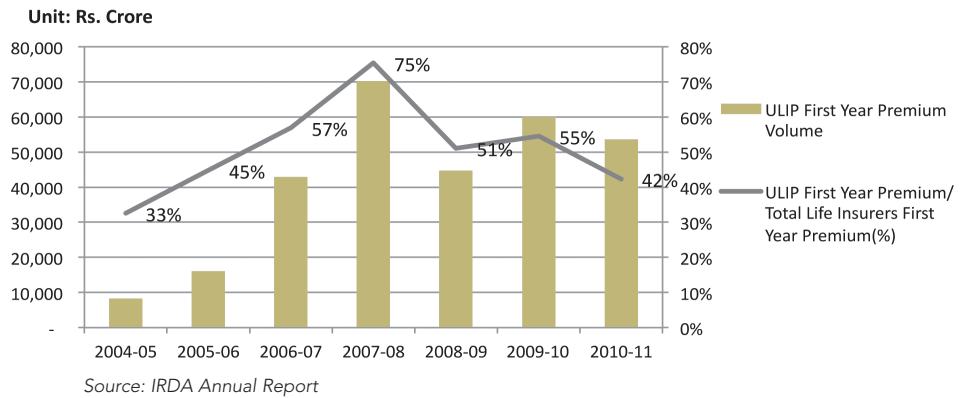
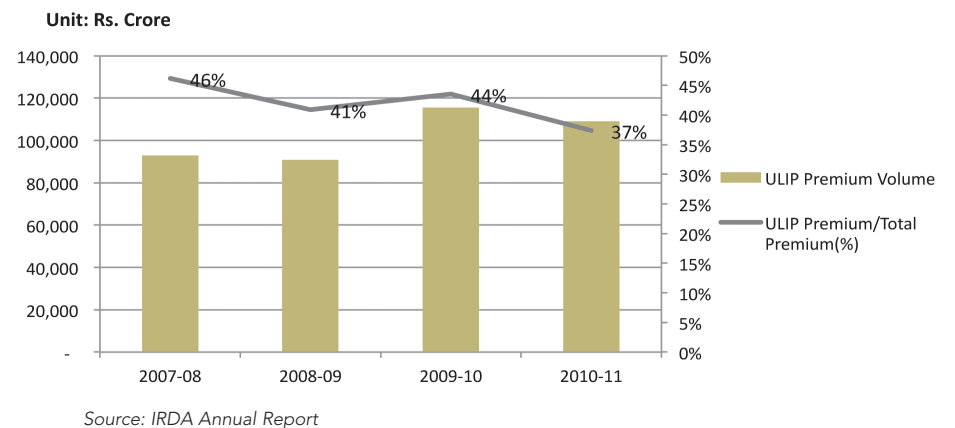


FIGURE 3  
ULIP Total Premium

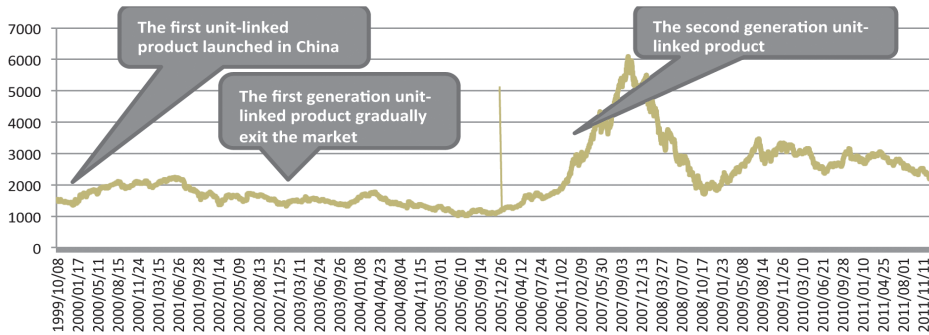


As figure 4 (page 22) shows, China's stock market went through a prolonged bear market phase from 2001 to 2004. Investors lost money, surrenders soared and regulators were overwhelmed by complaints of policyholders about

CONTINUED ON PAGE 22

the mis-selling. Insurance companies had to stop selling this product. From 2002 to 2005, unit-linked business contracted, and in 2005 the share of unit-linked business in the total premium of life insurers was less than 2 percent.

FIGURE 4  
China's Shanghai Composite Index (SCI)



Source: Shanghai Stock Exchange

The first generation unit-linked product gradually disappeared from the market.

In order to promote the healthy development of unit-linked business, CIRC released several rules on it to regulate the product charges, reserves and sales behavior. Unit-linked products were reintroduced again in 2006 when the stock market began to rise rapidly. In 2007, the share of unit-linked business reached its record high of 8.82 percent. This quickly decreased during the capital market turmoil in 2008. The attractiveness of selling unit-linked business has been further diminished after CIRC released the new accounting rules in 2010, according to which, most of the unit-linked premiums are not counted as premium income in financial statements. By the end of 2010, the share of unit-linked products was only about 1 percent.

We expect it would take more time on market education for Chinese investors to shift from

non-linked life insurance products to VA than for Indian investors to shift from unit-linked business to highest NAV guaranteed plans.

**2. The incentives for insurers to introduce the product.** The Indian life insurers introduced the highest NAV plans against the backdrop of the sudden decline of ULIP's share in first-year premium and total premium. The slowdown of the ULIPs further dragged down the total life insurance premium growth rate from 29 percent in 2007-08 to 10 percent in 2008-09.

Insurance companies wanted to reignite the growth. They came up with a new type of ULIPs, which are called highest NAV plans, to appeal to those cautious investors who would like to have some form of capital protection and at the same time do not want to lose the opportunity to participate in the growth of the stock market. This product quickly became popular in the market and most life insurers in India offer at least one NAV-guaranteed ULIP as part of their product suite.

In China, participating insurance was first introduced into the market by China Life in 2000. It has become the most important life insurance product since 2008, accounting for 71 percent of the total premium income of life insurers in 2010. The number jumped to 91.6 percent by the end of June 2011. Both the regulators and life insurers have been trying to diversify life insurance portfolios and VA is considered to be such an alternative.

Currently, the two life insurers who have already launched VA products in China are foreign insurers and for those who are actively preparing for this new product, most of them are also foreign insurers. For them, VA is con-

sidered to give them a chance to differentiate themselves from their dominant local competitors, who are not so sophisticated in risk management, and to enlarge their business scale.

Unlike the situation in India where almost every insurer goes for the highest NAV ULIPs, Chinese insurers' opinion on VA varies from company to company. Thus the sales volume is not expected to blow out.

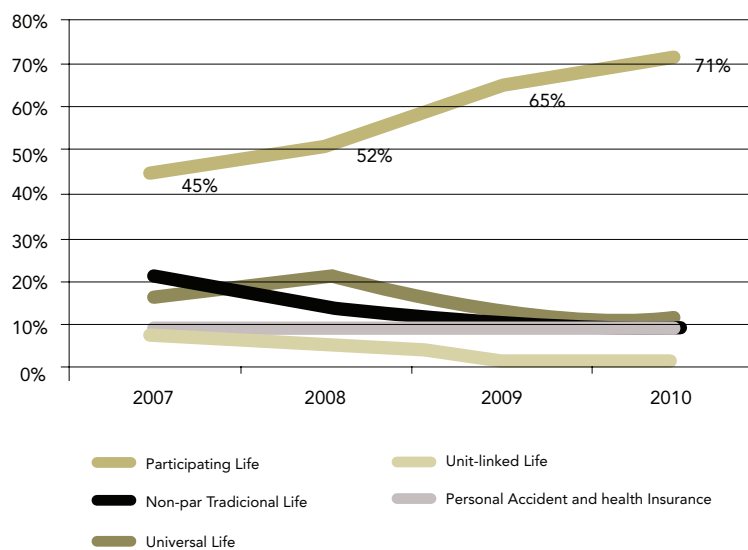
**3. The foreign insurers' market share.** Foreign insurers are the main driving force of launching VA and highest NAV ULIPs in China and India respectively. Compared with the domestic players, foreign companies have an advantage as they have immediate access to VA product expertise overseas, allowing them to pick up the know-how in a relatively short period of time.

As the market share of foreign insurers in China and India differed, the impact of the new product introduction on the market varies between the two countries.

Birla Sun Life insurance company was the first to launch a CPPI based NAV guaranteed unit linked plan in 2008. At that time, 20 out of 22 life insurers in India were foreign JVs and foreign insurers' market share in life insurance was more than 25 percent. Birla Sun Life's market share was about 2 percent. (source: IRDA Annual Report 2008-09)

AXA-Minmetals Assurance and Sino-US United Metlife launched the first two VA products in China in 2011. By the end of 2010, 28 out of 62 life insurers were foreign JVs and the market share of foreign insurers in China's life insurance market was only 5.6 percent. In the five cities where pilot VA products can be offered, i.e., Beijing, Shanghai, Shenzhen,

**FIGURE 5**  
Total Life Premium by Product



Source: China Insurance Yearbook.

Guangzhou and Xiamen, foreign insurers' market share is much higher. For example, in Beijing, Shanghai and Shenzhen, foreign insurers' market share was 18.7 percent, 17.2 percent and 10.6 percent respectively. However, until domestic companies join the forces of VA providers, we expect the volumes sold in China to be limited.

**4. Competitiveness with investment products offered by other financial institutions.** Unit-linked life insurance is in essence a fund management business which should be compared to a mutual fund.

In India, the competition from mutual fund players is relatively small as they are not allowed to incorporate capital guarantees. For a long time, capital protection mutual funds have

CONTINUED ON PAGE 24

## Chinese Dragon vs. Indian Tiger | from Page 23

been banned in the India market. In August 2006, the Securities and Exchange Board of India (SEBI) lifted the restrictions and allowed issuers to launch capital protection-oriented funds (CPFs). According to SEBI rules, CPFs are funds where the structure of the scheme ensures protection of the original investment at the scheme's maturity. However, explicit guarantees are prohibited. The CPFs are closed-

ended products. Thus, if investors want to exit before the maturity, they will have to sell the units on the stock exchange. As there are hardly any buyers or sellers in this segment, these funds are illiquid. Besides, a precondition to the launch of CPFs is that it must be rated on a quarterly basis by a registered credit rating agency regarding the portfolio's ability to protect the capital invested therein.

Table 1

	AXA VA	Metlife VA	Typical CGF
Premium Payment	Single Premium, minimum RMB100,000	Single Premium, minimum RMB100,000	Single payment, minimum RMB 1,000
Term	7 Years	10 Years	2-3 years
Guarantee Provided	GMMB: 100% of principal at maturity	GMAB: 80% of the highest unit price	100% of principal at maturity
Guarantee Charge	1.5% of Account Value per year	1.2% of Account Value per year	0.2% of Account Value per year (included in the fund management charge)
Guarantee Strategy	Internal Synthetic Hedging	CPPI	CPPI OBPI
Death Benefit	- Death due to illness: Max (105% of Account Value, RMB 1MM) - Accidental Death: Max (110% of Account Value, RMB 1MM)	- Death due to illness: 100% of Account Value - Accidental Death: Max (200% of Account Value, RMB 5MM)	None
Premium Allocation Charge/Initial Charge	2%	For less than RMB 1MM : 2.0% For RMB 1MM – 5MM : 1.5% For more than RMB 5MM: 1.0%	0.2% -1%
Bid-ask Spread	2%	0%	0%
Fund Management Charge	1% p.a.	1.5% p.a.	1.0% -1.5% p.a. (including the guarantee charge) and 0.2% p.a. for trustee fee
Surrender Charge/Redemption Charge	5% / 4% /3%/ 2% / 1% in the first 5 years. Free from 6th policy year.	2% / 1.5% /1.5% in the first 3 years. Free from 4th policy year.	2%/1.5%/1.2% in the first 3 years.

Capital guaranteed funds (CGF) have been offered in China since 2003. Due to their “underperformance” during the 2006-2007 bull run, capital guaranteed funds have not been very popular among individual investors. By the end of 2010, there were only five capital guaranteed funds operating in China and the total assets under management (AUM) of these mutual funds were RMB22.8 billion (1 RMB  $\approx$  0.158 U.S. dollars), accounting for only 0.91 percent of the AUM of all mutual funds. The situation changed in 2011 when many investors suffered a loss during the capital market downturn. Seventeen new capital guaranteed funds were introduced last year and the AUM of CFGs more than doubled to reach RMB 51.5 billion, which accounts for 2.35 percent of the total AUM of all mutual funds operating in China by the end of 2011. The CGFs are open-ended with high liquidity. However, there is no capital guarantee for redemptions before the maturity date.

Table 1 compares the two VA products currently offered in China with the typical CGF.

We expect that the current VA offerings in China will meet strong competition from CFGs as the latter fund charges are very competitive and the mutual fund management firms have more flexibility on the choice of investment vehicles, e.g., stock index options can be included in their portfolio while insurers are restricted from access to it.



Different tax treatment among various financial products would be another important factor for investors to consider when making choices.

In India, premiums paid under ULIPs are eligible for tax deductions under section 80C of the Income Tax Act, 1961, subject to certain conditions, and the insurance benefits paid under these plans are tax-exempt under Section 10D of the Income Tax Act, 1961.

In China, there is no tax deduction for premiums paid by individuals for buying commercial insurance including the VA. The insurance benefits under these plans are treated in the same way as other investment products like mutual funds or stocks. As a result, VA products in China have no tax advantage over the investment products offered by other financial institutions.

**4. Macro-economic environment which would have an impact on investor's purchase behavior.**

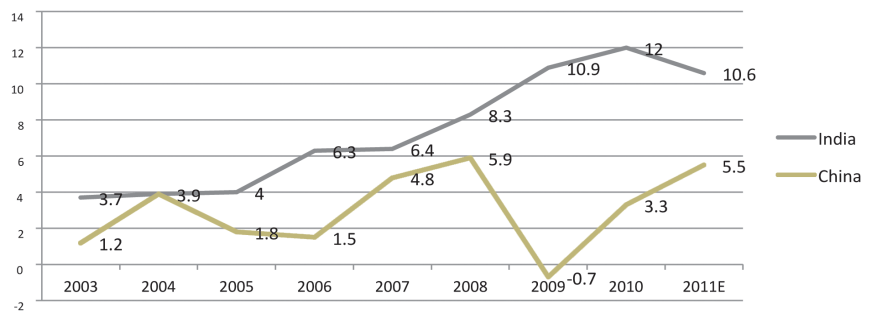
Among so many macro-economic indicators, inflation rate, interest rate and stock market index seem to be the key ones that the retail investors pay most attention to.

**Inflation rate:**

We see in Figure 6 that India's inflation rate started to pick up from 2003 with the situation worsening until the inflation rate reached 12 percent in 2010. China is also under the pressure of an increasing inflation rate since 2009, though the problem is not as severe as in India.

High inflation rates make the fixed benefits provided by traditional insurance plans depreciate in real value and the aspirations of policyholders are consequently difficult to meet. Investors would be interested in those products which have more of an investment component, including the VA.

**FIGURE 6**  
Annual Percentage Change of CPI



Source: IMF, World Economic Outlook, September 2011

**Interest Rate:**

We also need to consider the yield of government bonds which is usually used as the risk-free rate to calculate the bond floor (F) in a CPPI strategy. According to the calculation algorithm of CPPI strategies, the exposure to risky assets is determined as a multiplier (m) of the cushion, which is the difference between the portfolio value and the floor.

The higher the interest rate, the lower the floor and the higher the safety cushion could be, which means insurers would have more exposure in risky assets for a potential upside return. Conversely, if the interest rate is quite low, like the situation in Japan, the safety cushion would be very low. A big fall in the stock market could drive the CPPI product into a cash lock<sup>1</sup> position and the upside potential can be lost.

In Figure 7 (page 26), we see that in recent years, the 10 year government bond yield in India has remained relatively high. Although the yield decreased to some extent in 2008 due to the financial crisis, it picked up quickly and has stayed at a high level compared with most other countries. China's government bond yield is lower than India's. However, it still gives

CONTINUED ON PAGE 26

Chinese Dragon vs Indian Tiger | from Page 25

room for insurers to have a reasonable safety cushion under the CPPI mechanism.

**Stock Market Performance**

In the past 10 years, China’s capital market has been much more volatile than India’s. The stock market index in China at the end of 2011 returned to its level of about 10 years ago. More and more investors have become aware of the risks in capital market investments and are interested in those products which can provide certain floor guarantees. CPPI, as a very good portfolio investment strategy, should have a market in China.

Besides those external factors that would influence the development of VA business, the fund performance of the VA product itself would also have impact on investor’s choice.

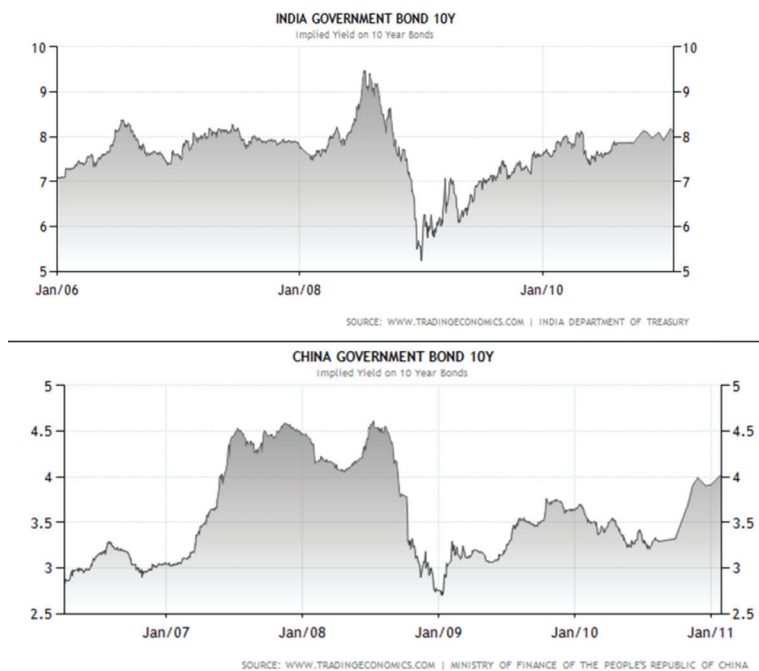
In India, we looked at the performance of the first highest NAV ULIPs, Birla Sun Life’s Platinum Plus I.

**Key Product Features of Platinum Plus I:**

- 10-year benefit period
- 3 years premium paying term
- Guaranteed Maturity Unit Price: Highest unit price recorded on the 88 Reset Dates is guaranteed at Maturity
- Reset Dates are the 15th of every calendar month (or if not open for business, the next business day) till June 2015

We can see in Figure 9 (page 27) that the fund of Platinum Plus I went up and down together with the capital market. When capital market jumped down, the fund value dropped less than the stock index. When capital market picked up, the fund value also increased less than the stock index. By November 15, 2012, the guaranteed maturity unit price is 12.86 which is the highest unit price achieved on the reset date of November 15, 2010. Hence, the fund has provided good downside protection during the big drop of capital market in 2008-09 and also the potential to earn market upside.

FIGURE 7  
10Yr Government Bond Yield



In China, as VA was just launched in 2011, there is little historical data to do the analysis. In order to compare with the performance of Platinum Plus, we use a hypothetical product and the stock market index from 17th March 2008 to February 29, 2012 to do back casting to try to provide some insight on how the product would perform.

**Key assumptions for the hypothetical product:**

- Product Term: 10 years
- Initial Fee: 2 percent
- Bid-Offer Spread: 0
- Guarantee: GMAB, 85 percent of historical highest NAV
- Guarantee charge: 1 percent
- Multiplier 3.5
- Trading Rebalance Tolerance: 15 percent
- Trading Cost:

- Risk-Free asset: 0
- Risky asset: Subscription: 1.5 percent; Redemption: 1 percent
- Risk Free Assets: cash with long-term level annual return 3 percent
- Risky Assets: Shanghai Composite Index from 03-17-2008 to 02-29-2012

We see in Figure 10 that China's capital market has not recovered to its level before the financial crisis. When the stock index decreased by 55 percent from March 17, 2008 to November 4, 2008, the NAV of the sample product only decreased by 16 percent and it remains quite stable thereafter.

### CONCLUSION

Making an in-depth study and complete analysis of India vs. China's CPPI based unit-linked business with guarantees seems to be a hard task. The ULIPs are under reform in India mainly due to the recent scrutiny from IRDA. The stories are far from complete there. On March 9, 2012, the third VA product and also the second CPPI VA based product was launched in China. It is too early to make prediction about the future development of China's VA business. However, we could benefit by drawing relevant lessons from India.

The author would like to thank Mr. Hart Wang, Deputy General Manager of Actuarial Department, Old Mutual-GuoDian Life Insurance Company, for his great contribution to the hypothetical China VA product performance back cast simulation. The author is also grateful to Mr. Paul Sinnott (Managing Director, Greater China and Southeast Asia Life, Milliman) and Mr. Wing Wong (Principal, Milliman) for their kind contribution to this article.

### END NOTES

<sup>1</sup> Cash lock is the situation when the cushion is close to zero, all the investment in risky assets needs to be converted to investment in riskless asset.

FIGURE 8  
India S&P NIFTY vs. China SCI

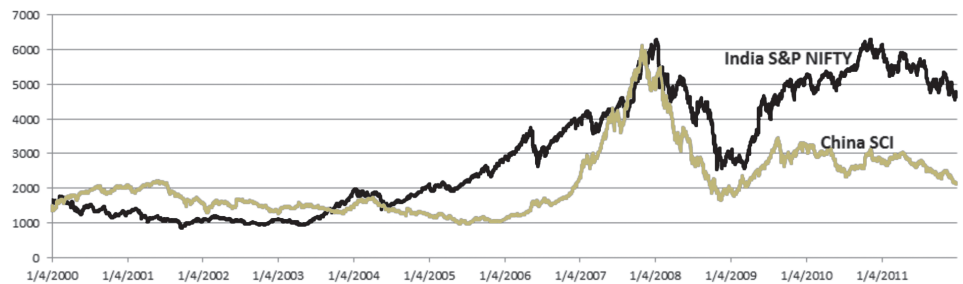
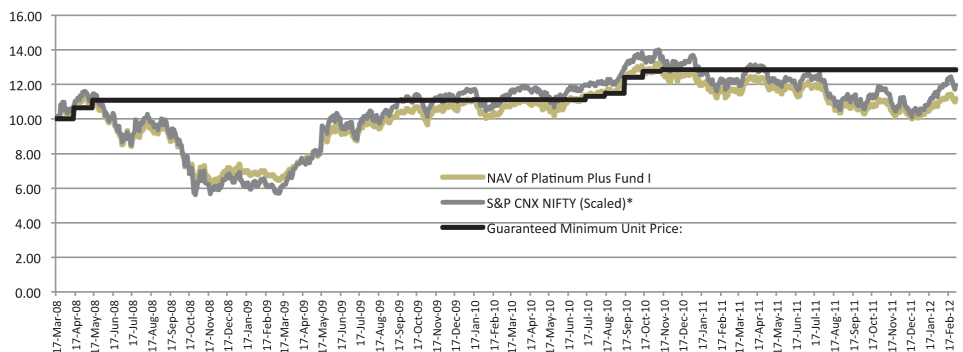
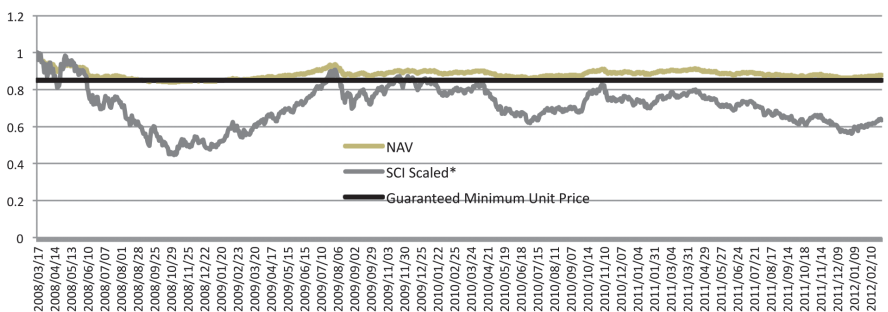


FIGURE 9  
Performance of Platinum Plus Fund I



\*Note: S&P CNX NIFTY was scaled by making the index on 17, March 2008 equal to 10.  
Source: Birla Sun Life Insurance, National Stock Exchange of India

FIGURE 10  
Performance of Hypothetical VA Product in China



\*Note: SCI was scaled by making the index on March 17, 2008 equal to 1.

**SOCIETY OF ACTUARIES** International  
Section

475 N. Martingale Road, Suite 600  
Schaumburg, Illinois 60173  
p: 847.706.3500 f: 847.706.3599  
w: [www.soa.org](http://www.soa.org)

# International News

Non Profit Org  
U.S. Postage  
PAID  
Carol Stream, IL  
Permit No 475