SOCIETY OF ACTUARIES International Section

International News

ISSUE 55 JANUARY 2012

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Editor's Note

By Carl Hansen

Welcome to the January 2012 issue of *International News*. You may notice that we are shifting our publication schedule back slightly to January, May, and September starting this year. This will allow better, more timely coverage of SOA Annual Meeting activities, as well as background information on the new council members and officers. We hope that readers like the change.

I would like to acknowledge the contributions of the "retiring" International Section Council members: Alan Cooke, Joanna Chu, and Peter Duran. Thank you for your efforts on behalf of the International Section over these past three years. In particular, Alan is involved in a number of international initiatives and he has been very helpful as we scramble to meet our *International News* deadlines. Congratulations and welcome to the three newly elected council members: Douglas Carey, Sunil Sen, and Michael Witt. We invite you to get to know these three on page 5 of this issue. I am delighted to note that we have some recent contributors to *International News* in the group!

This issue includes two more 2011 Country Feature entries. Thank you to Ronald Poon Affat and Wenliang Wang for your excellent contributions on Brazil and China. In addition to some other timely articles, we also give readers an update on international activities at the SOA Annual Meeting in Chicago and at the International Actuarial Association's recent Pension, Benefit, and Social Security section meeting in Edinburgh.

We are always looking for new content or ideas for *International News*. Please see page 35 for more details on the 2012 Country Feature article competition. There seem to be many international developments currently. We hope that we can encourage section members to broaden our knowledge by submitting an article for this year's competition.

To save on printing costs this year, we have not printed the update of the annual embedded value survey in *International News*. The full text and charts is available on the International Section webpage (under the publications section) at SOA.org. □

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Chairperson's Corner

By Genghui Wu

As the new chairperson of the International Section and successor of a well performing council, I am very excited about having a strong team that we have developed within our council, coupled with the newly elected 2012 member talents. I am confident that we will continue to achieve our fundamental goal of effectively serving the needs of International Section members, with excellent participation by all council members, section ambassadors, and council friends,

I would like to take this opportunity to thank our outgoing council members, Alan Cooke, Joanna Chu, and Peter Duran for their tremendous contribution to our section over the past three years. Also I would like to welcome our new additions, our members elected Douglas Carey, Michael Witt, and Sunil Sen to be new council members effective October 2011. They will contribute in executing the council's mandates to better serve you in the next three years.

At this year's section council face to face meeting in Chicago, the council reviewed our historic and planned initiatives, compared them to our available resources, and set clear priorities for the year ahead. A few highlights on council priorities for the coming year that I wanted to share:

To better align council priorities with membership needs, we want to do more to reach out to members in 2012. We will continue to examine ways to effectively communicate through multiple channels and advanced tools, and make sure that we understand your needs.

The council intends to continue to utilize our diverse strengths through a renewed commitment to offer international content at Society of Actuaries (SOA) meetings. We have several sessions in the planning phases for the 2012 Health meeting, Life and Annuity Symposium, and Annual Meeting. Building on our successful efforts partnering with other SOA sections and actuarial groups, we are able to offer seminars in international locations. In 2011, the International Section sponsored a series of well attended IFRS seminars centered on Hong Kong. In addition, for the first time, the International Section offered a successful Variable Annuities Seminar in China as the result of timely response to local regulatory changes and addressing local member needs to fulfill their CPD requirements.

In 2012, while we continue to find great value in the traditional continuing education formats, we are reviewing other channels for delivering timely and informative continuing education programs to our members in the form of webcasts or other "quick-to-market" media, with the mandate to expand our commitment to broaden our educational coverage and professional knowledge transfer to our members around the globe.

The council is looking for additional ways to support and expand the international ambassador program which connects our members with the SOA in international markets, and we will continue to support and perform the international experience studies.

The section council has served as a communication link between International Section members and the SOA. In October 2011, the SOA Board of Directors approved the formation of the International Committee. The mandate and initiatives of this committee will influence the future direction of our section as we have been and will continue to be one of the effective execution channels for many SOA international initiatives.

The council is already looking forward to planning our annual gathering at the 2012 SOA Annual Meeting in Washington, DC. We are committed to bring an entertaining and a unique global networking opportunity to our section members, friends, and other international actuarial bodies.

The section continues to benefit from a great section newsletter, including articles on relevant topics from all over the world, consistent with our section mandate. We will continue to conduct our "Country Feature" article competition, which 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 am excited and fortunate to have the opportunity to work with a team of great talent. Our diverse backgrounds allow us to benefit from business knowledge, solution-based orientation to problems, strong creativity, a track record for excellent execution, passion and a commitment to the success of our section. I am confident that our dedication will enable us to deliver superior service to our members and to support SOA international initiatives as a whole.

Please feel free to contact me or any of the section council members should you have any questions or suggestions on the council's initiatives. We appreciate your input. ☐

Newly Elected International Section Council Members

Douglas J. Carey, FSA, EA, MAAA, FCA, Director, Deloitte Consulting LLP, Stamford, Conn.

PROFESSIONAL BACKGROUND

Global consulting actuary with 35 years in retirement and other benefit plans around the world. Expertise in global actuarial work, benefit plan design, funding and administration and global mobility. Additional expertise in the design and funding of Social Insurance Programs in emerging market countries.

SOCIETY OF ACTUARIES EXPERIENCE (SECTION AND COMMITTEE MEMBERSHIPS AND PARTICIPATION)

Member of Society of Actuaries since 1976 and fellow since 1978. Participation on various examination committees in the 1980s. Frequent speaker and panelist at SOA meetings and other actuarial conferences.

EXPERIENCE (RELEVANT TO CANDIDACY)

Member of the International Actuarial Association. For the past 25 years, I have worked with clients in the commercial and government sectors as well as NGOs to help them with pressing global retirement and benefit plan issues. I have also worked with actuarial associations in several emerging market countries to assess and help deliver training to build needed skills to deliver actuarial services in their countries and obtain actuarial qualifications. These global projects have given me an appreciation of the actuarial needs around the world and in working in other cultures.

WHY ARE YOU INTERESTED IN LEADING YOUR SECTION?

For many years, I have had a strong interest in giving back to the profession that has treated me so well for 30+ years. However, until recently, I have not been in a position to do so. Now, I am in a position to give back and I want very much to make a powerful and lasting contribution in the area in which I have developed considerable expertise. We operate in a global marketplace and our profession needs not only to respond but also to help lead. By connecting globally with other actuaries and actuarial associations around the world, and especially in emerging market countries, the SOA is in a position to make a very positive difference both the global profession and to helping lead the development of the profession in many less developed countries as well as connecting strongly with the profession in more developed countries. I believe my experience, skill set and desire makes me an ideal candidate for being a council member of the International Section.

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Newly Elected International Section Council Members | from Page 5

Michael W. Witt, FSA, MAAA,
Consulting Actuary, Milliman, Inc., Seattle, WA and Sao Paulo, Brazil

PROFESSIONAL BACKGROUND

I currently lead Milliman's Brazilian Life Practice. Prior to joining Milliman, I worked in the Individual Life and International divisions at Principal Financial Group in Des Moines, Iowa. My professional interests include Financial Modeling, Economic Capital, IFRS, and MCEV.

SOCIETY OF ACTUARIES EXPERIENCE (SECTION AND COMMITTEE MEMBERSHIPS AND PARTICIPATION)

I have contributed to *International News* on a few occasions, and am excited at this new opportunity to work with the International Section membership to expand the influence of the SOA in international markets.

EXPERIENCE (RELEVANT TO CANDIDACY)

I have worked in international roles for five years. During this time, I have worked in several markets, with my primary focus being Latin America. I have developed contacts with a number of companies and industry organizations (including actuarial organizations). As a result of my professional experience and interactions with international actuaries, I have developed a good understanding of the challenges and opportunities for actuaries in the new global environment.

WHY ARE YOU INTERESTED IN LEADING YOUR SECTION?

As new regulations begin to cross borders, it will be important for actuaries to have a strong source of education, collaboration, and research. I believe that the Society of Actuaries can fulfill this role, and I am committed to helping the SOA advance its international presence, with an emphasis on Latin America. I believe that there are opportunities to partner with actuarial organizations in Latin America to provide exposure and opportunities to the SOA membership. Additionally, the process for qualifying as an actuary in these markets does not provide actuaries with the knowledge and skills necessary to be effective risk managers. I believe that the SOA and their educational process can help to close this gap.

Sunil Wieland Sen, ASA, AAG, CERA,
Senior Associate,
PriceWaterhouseCoopers, Chicago, Ill.

PROFESSIONAL BACKGROUND

I am currently a consultant with PwC, specializing in the areas of risk management and projection analysis. This experience includes advising on regulatory stress testing, Solvency II, and due-diligence transactions.

SOCIETY OF ACTUARIES ACTIVITIES

I am a member of the International Section and also the Secretary of Actuaries Without Borders (AWB). In addition, I have also contributed to *International News* winning the 2010 Country Feature Article Contest.

RELEVANT BACKGROUND

My work is focused in the areas of mergers and acquisitions, Solvency II, Market Consistent and European Economic Valuations (MCEV and EEV), and financial risk management. Previously, I worked throughout the Benelux and European region and recently have returned home to work in the U.S. market. I have had the opportunity to work on several global engagements and thoroughly enjoy the intercultural exchanges.

WHY ARE YOU INTERESTED IN LEADING YOUR SECTION?

I have a strong passion for culture and its diversity and I feel a strong connection to emerging countries given my Indian heritage. I intend to bring both my thought leadership and project management skills to the International section, assisting in the SOA's transition in an ever increasing multi-national world. I also will leverage my international network from my experience abroad and relationships gained within AWB. As an International Section, we must solidify our relationships with other actuarial communities and find synergies where we can work together. □

Alan Cooke is a retired actuary living in Vancouver, Canada and was the chair of the International Section until this year's SOA Annual Meeting. He may be reached at *vancooke@telus.net*.

The International Section at the SOA Annual Meeting

By Alan Cooke

J. Leprich, G. Wu and B. Smith presenting the first door prize at the International Reception.

International Reception Buffet

More than 1,900 people attended the SOA 2011 Annual Meeting & Exhibit in Chicago from October 16-19. Attendees included members from across the globe and the International Section Council was very busy at the SOA Annual Meeting.

INTERNATIONAL SECTION COUNCIL MEETING

Our activities commenced at 5:30 p.m. on Sunday with our annual council meeting. At the meeting we welcomed three new council members (Doug Carey, Sunil Sen and Michael Witt) and said good-bye to three members (Joanna Chu, Peter Duran and Alan Cooke). The new officers for 2011/12 were elected and they are: Genghui Wu (chair), Benjamin Marshall (vice-chair), Doug Carey (treasurer) and Michael Witt (secretary). Genghui commented in more detail on the council's planned 2012 activities in his inaugural "Chairperson's Corner." We were very pleased that Christos Patsalides, our ambassador for Cyprus, was able to join us for our council meeting.

JOINT IABA/CAC/CAA NETWORKING RECEPTION

The International Association of Black Actuaries, in partnership with the Chinese Actuarial Club, and the Caribbean Actuarial Association, co-sponsored a panel presentation followed by a networking reception over a Caribbean banquet on Sunday. The International Section Council attended their networking reception immediately after its council meeting where there were also many representatives of the Institute of Actuaries of Japan in attendance. Much good Jamaican beer and food was enjoyed.

INTERNATIONAL RECEPTION

Our ever-popular Tuesday night annual reception sold out well in advance of this year's event. As usual it was an evening of networking and fun. This year's event was financially assisted by Milliman and DW Simpson and our co-partners for the event were the IABA, the CAC, the CAA and the Institute of Actuaries of Japan. This year's event featured several short speeches, hilarious skits, door prizes, many varieties of food and an open bar. Brad Smith, the incoming SOA president and chairperson of Milliman, talked about the SOA's international strategy and the important role of the International Section. His remarks were followed by a talk by Lesley Traverso (managing partner international, DW Simpson) on international actuarial employment opportunities. Mingguang Li (general secretary of the China Association of Actuaries) updated us on the actuarial profession in China. This was followed by a series of short addresses by our reception partners. The highlight of the night followed when our colleagues from the Institute of Actuaries of Japan entertained us with a series of amusing skits. Several photos from the international reception appear with this article. A good time was had by all and we look forward to seeing many of you again next year. Special thanks to Genghui Wu, Lina Xu, our financial sponsors and our partners for their efforts in making this year's event a success.

ANNUAL MEETING SESSIONS

The International Section was heavily involved with several sessions at the annual meeting. The materials for the sessions may be found on the SOA website.

On Monday afternoon, the International Section co-sponsored "IFRS: The Future of Accounting for Insurance and its Implications" with the Financial Reporting Section. Darryl Wagner, the former chair of the International Section, moderated and spoke at this session.

On Tuesday morning, Ben Marshall, the current International Section vice-chair, spoke at a session sponsored by the International Section entitled "Where Enterprise Risk Management Meets Capital Management." Two

Institute of Actuaries of Japan performers at the International Reception

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The International Section at the SOA Meeting | from Page 9

International Section Council members were involved later that morning with a second session. Theo Iaponas moderated and Lina Xu presented at "Managing Longevity and Mortality Risks and their Global Activities." Both sessions as well as the Monday session were coordinated by Genghui Wu, the current chair of the International Section.

Attendees at International Section Council meeting:
Back Row: G. Wu, T. Iaponas, D. Carey, C. Patsalides, A. Cooke
Front Row: M. Sikaras, L. Xu, S. Sen, M. Witt

Mingguang Li, General Secretary of the China Association of Actuaries

On Tuesday afternoon, the International Section, along with the Actuary of the Future Section and several other sections, co-sponsored back to back non-technical sessions discussing how to have a successful retirement. I was the moderator for the first session "How I'm Having Fun in Retirement" and a speaker at the second one "What Can I Do during My Working Years to Make My Retirement Years More Interesting?"

All of the sessions received favorable reviews and we anticipate a high level of participation next year as well. □

Ronald Poon Affat, FSA, FIA, MAAA, CFA, is a director of Tempo Assist in Sao Paulo, Brazil. He can be reached at *Ronald.poon@tempoassist.com*.

Brazilian Private Health Care Market—Ready for Liftoff

By Ronald Poon Affat

INTRODUCTION

The Brazilian private health care market ended 2010 with US $48 billion worth of premium. This already makes it Latin America's largest health care market and sixth in the world ranking. Even though less than a quarter of the population have a private plan, consumer surveys consistently say that after home ownership, private health care is now the second most desired product for the growing and socially mobile middle class. Brazil's leading investment bank, BTG Pactual, is projecting a remarkable compound annual growth rate (CAGR) of between 9 percent and 12 percent. This translates to premium of between US $110 billion and US $150 billion for 2020. This article will discuss the facts and figures behind such an audacious estimate.

QUICK FACTS AND FIGURES (U.S.$1 = BRAZILIAN REAL R$1.6)

Brazil's population stands at 200 million. Just 23 percent of the population (46 million people) has private health care insurance. The industry is subject to strict government regulation by the *Agência Nacional de Saúde Suplementar* (ANS). Health care companies include insurance companies (e.g., Bradesco, Sul America, Tempo), HMOs (e.g., Amil, Omint), self-funded plans (e.g., Petrobras, Citibank), cooperatives (e.g., Unimed) and philanthropic entities (e.g., Santa Casa). Table 1 sets out the membership distribution of just over 1,000 providers but one can see that it is very concentrated with 37 companies having a 50 percent market share. Table 2 shows that corporate policies dominate the market with a 75 percent share. The average monthly premium that clients pay for health insurance is US $88. Last, but not least, Table 3 shows that the health care sector's share valuation rose by 52 percent in 2010, substantially above the local stock market's (Ibovespa) less-than-impressive 1 percent. This is the reason investment bankers are sitting up and taking notice of health care in Brazil.

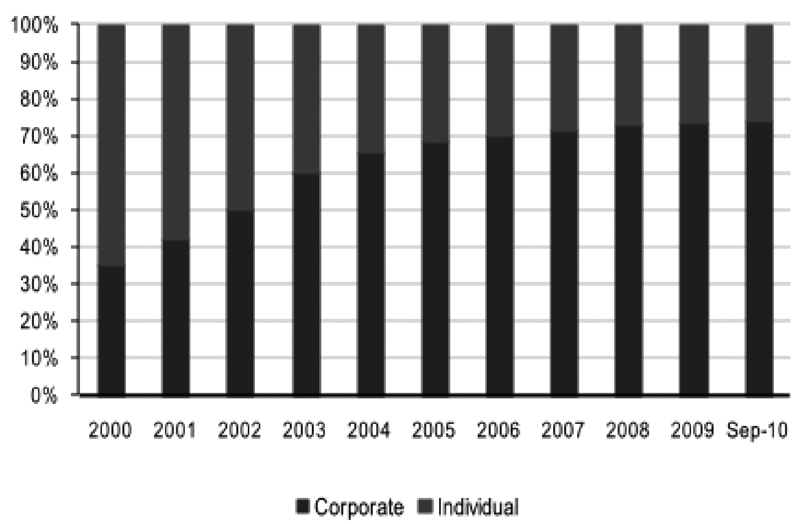
Table 1. Health Care Market Growing, But Still Concentrated (in 000's).

Health Care

Total	Number Operators	Number Average Lives
4.490.194	709	6.333
4.477.050	156	28.699
4.489.099	83	54.086
4.447.335	46	96.681
4.297.091	30	143.236
4.543.175	17	267.246
4.469.864	9	496.652
4.074.495	5	814.899
4.851.271	4	1.212.818
4.644.192	2	2.322.096

Source: ANS

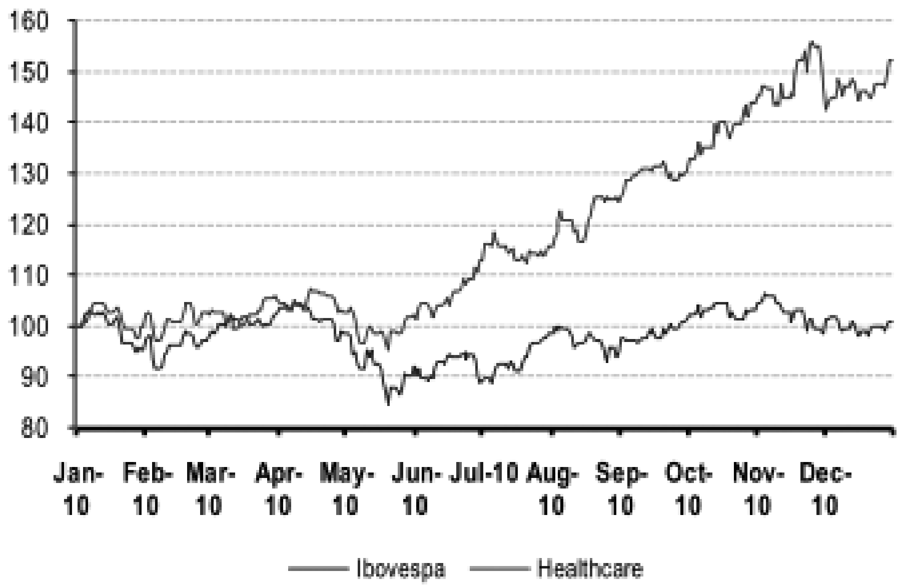
Table 2. Corporate Health Care Plans Reached 75% of Total Market in 2009.



Source: ANS, 2010

Just 23 percent of the population has private health care insurance.

Table 3. Health Care Companies and Ibovespa.



Source: Bloomberg and BTG

FACTS AND FIGURES BEHIND PROJECTED GROWTH

Table 4 shows that there is a 93 percent correlation between formal job creation and health care plan membership. Table 5 tracks the growth of middle-class consumers (households whose monthly income is between US $625 and US $3,100) from 63 million in 2005 to 93 million in 2010. If current employment and real wage trends continue, the middle class will grow 10 percent per year over the next four years. This will directly translate to a boost in health care plan penetration.

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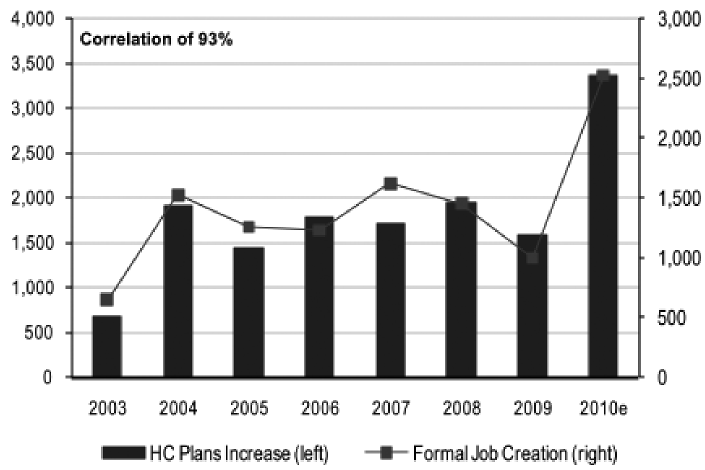
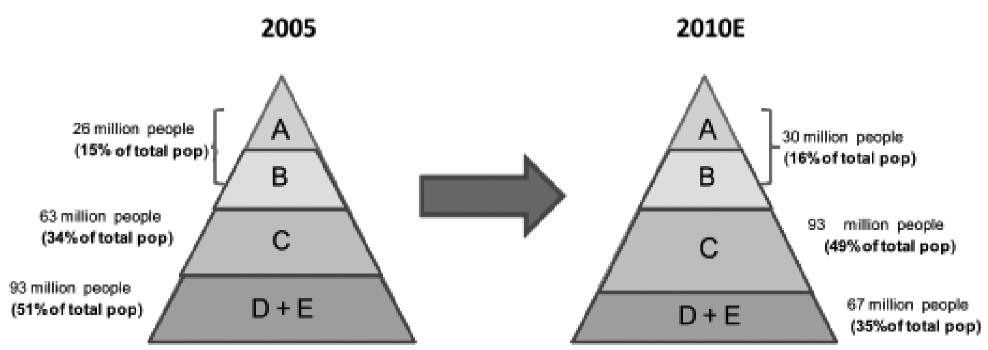
Table 4. Formal Jobs: A Key Factor to Growth in HC Plan Members.



Source: Caged and BTG Pactual

Brazil currently has a young population. The median age is 29.3 years (males 28.5 and females 30.1). The decrease in birth rate will contribute to a gradual aging of the population. The over-60s represent 10 percent of the population, but this group is projected to rise to 14 percent by 2020. This will also be a driver for expanded health care per capita consumption. The average life expectancy stands at 73 years, and this is estimated to steadily increase to 81 by 2050. The combined demographic impact of population growth and aging (shown graphically in Tables 6 and 7) is estimated to contribute an additional 2 percent CAGR in health care premiums in real terms.

Table 5. Emerging Middle Class Consumers.

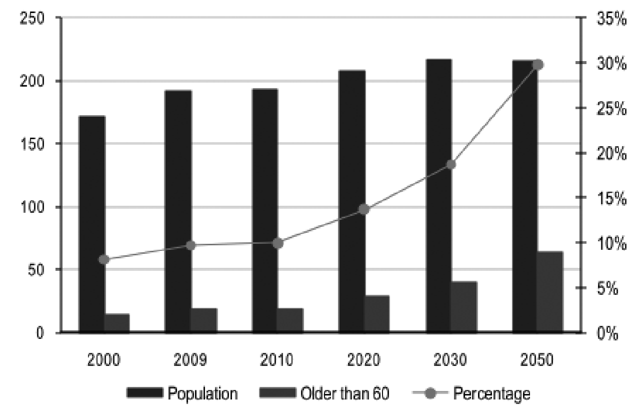


Source: Raymond James

There is a very low penetration of health care plans. As we said before, only 23 percent of the Brazilian population has private health care coverage, compared with 77 percent in the United States and 60 percent in Mexico. Brazil's health care as a percentage of GNP is 5.2 percent compared with 16 percent in the United States. The dominant source of growth in health care penetration is expected to come from lower income groups.

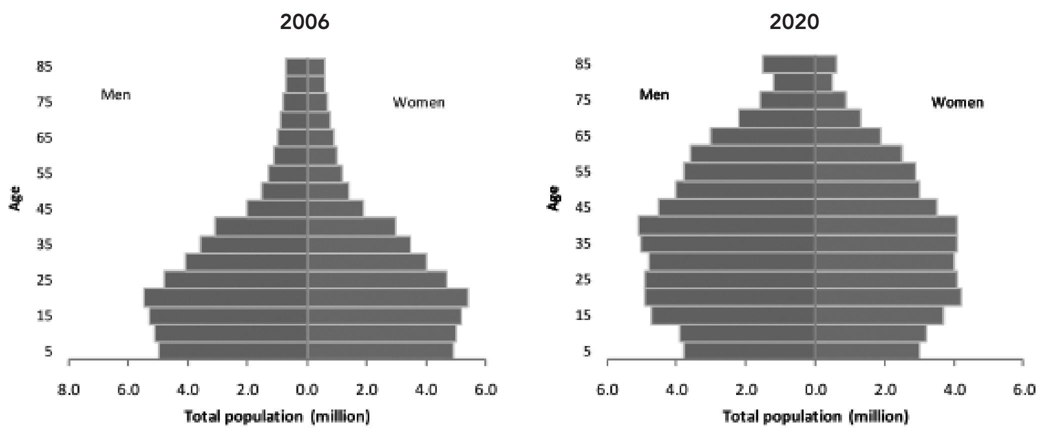
Private health care in Brazil has a limited geographic footprint. A Brazilian historian once referred to colonial life in Brazil as a "civilization of crabs," with most of the population clinging to the shoreline—and few were willing to make inroads into the terrifying interior. Today the same could be said for private health care. Geographically the main players are still fixated on large metropolitan areas focused on high-income regions. There is still plenty of growth potential in the interior. Table 8 confirms the distribution of plan membership.

Table 6. Increasing Share of Elderly People in Total Population.



Source: IBGE

Table 7. Brazilian Population Growth Expectation.



Source: Raymond James

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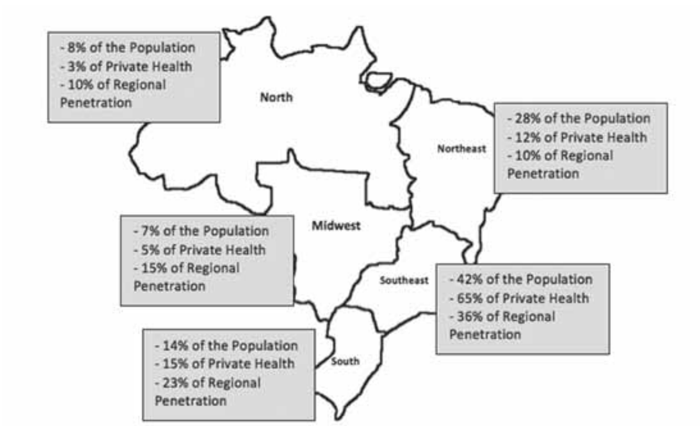
Table 8. Distribution per Brazilian Region.



Source: ANS, 2010

Sales channels are also quite limited. As mentioned before, the majority of current plans are sponsored by large companies via the traditional corporate brokers; this market is already considered to be a highly penetrated market. The next growth phase will be centered on small and medium enterprises (SMEs) and in the retail market. Even though there are 131 registered banks with 125 million clients, just one bank (Bradesco with 24 million banking clients) has its own health care insurance company. But the present landscape is about to suffer a seismic event. The largest state-owned bank in Latin America, Caixa Economica Federal (with more than 51 million clients), is about to launch its own health care company this year, 2011.

Beyond the health care specifics, global investors are attracted to Brazil for the potential to earn high rates of investment return. Short-term annual risk-free rates are 12 percent (JP Morgan projects an increase of rates to 12.5 percent by December 2011) with inflation projected to be 6.5 percent this year. Investors recognize that Brazil is the BRIC (Brazil, Russia, India and China) country that holds the best record for free and fair democratic elections, exhibits economic stability and has a government that is respectful of company law/shareholder rights and human rights.

THE CHALLENGES?

While global multinationals are well-positioned in the life, pensions, property and casualty (P&C) and reinsurance markets, the only multinationals that dare to venture into the health care insurance market are Allianz, ING (via a minority investment) and MetLife (but only in dental). So why is that? Regulation.

The ANS provides micromanaging oversight that defines minimum coverage, plan rules, general policies, transfer of plan members' rights between health care plans, monitoring of financial strength and even the annual rate increase for individual plans. When it comes to coverage, the plans are basically the same, with the main differentiator being the quality of the health care network or reimbursement level provided. Regulation prohibits lifetime annual aggregate limits, no limits may be applied to benefits during a single year, and annual deductibles cannot be incorporated within the plan design. Also individual policyholders and senior citizens' rights are well-protected, leading to the acceptance of only corporate plans by many carriers, which are less rigorously regulated. Keeping this in mind, it can be argued that Brazil provides the world's most generous form of private health care benefits.

Whenever due diligence is undertaken by an overseas investor, the following points are invariably cited:

- The HMO's technical reserves are not robust compared with international standards, so any acquisition would require capital injection to strengthen reserves. In addition to which, there have been several recent "high profile" bankruptcies in the sector that have left clients without coverage.

- The technical pricing models are simplistic, and underwriting standards are often either undocumented or not adhered to.

- The large players benefit from lower per policy expenses and are able to negotiate preferential discounts with hospitals, clinics and other health care providers. These pricing advantages drive down the smaller players' margins when they try to compete on price and try to grow "at any cost."

- For health care plan operators who attempt to "vertically integrate" their medical administrative procedures, invariably the lack of maintenance investment and professional management lead to loss-making and inefficient operations in both medical facilities and health plan operations.

- The definition of minimum health care coverages by the ANS stifles creativity in product development and limits cost reduction.

- The international reinsurance market is not prepared to follow the local market's pricing margins. Hence not a single reinsurance treaty has been executed with anyone. However, to be fair, the reinsurance law does not really give 'fair and direct' access to international reinsurers.

- Last, but not least, the cost of doing business in Brazil is expensive. Office rentals in the cities of São Paulo and Rio de Janeiro are amongst the world's top-10 most expensive. And São Paulo salaries for the "best and brightest" (usually attracted to the financial sector) are, on average, higher than in either New York or London.

CONCLUSION

So what is the best sector to invest in? There are many different answers to this question, depending on whom you speak with. Over the last 24 months, there has been a flurry of mergers and acquisitions (M&A) in all areas of the value chain, namely:

- Health care providers: health Insurance companies, HMOs and specialized dental companies.

  Key requirements include: having local underwriting expertise, the ability to operate with low expenses, being a tough negotiator with hospitals/clinics, allocating a large investment to raise brand awareness and establishing broker relationships. This sector is heavily regulated by the government and characterized by mega players who seek to protect their market share at any cost.

- Distribution channels: retailers that specialize in health care products.

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Lower risk. There are not many specialized health care brokers compared with other insurance lines. There exists the opportunity to expand client base on a national basis with only marginal costs. But very high initial administrative costs are associated with acquiring new business.

- Service providers: hospitals, clinics, etc.

  One needs to have proven expertise in managing these services and M&A should be considered to reduce unit costs. There`s fierce competition with low-margin mega players. Existing facilities are likely to be very costly to modernize, and it is difficult to find qualified and experienced professionals. Also the current legislation forbids foreign ownership of hospitals.

- Pharmaceuticals: The pharmaceutical industry in Brazil is the 10th largest market in the world, the second largest in Latin America, and accounts for a 3.5 percent share of the world market.

  Brazil's pharmaceutical market is one of the fastest growing markets in Latin America and has enjoyed steady growth since 2004. The government has moved to align the drug regulatory environment with international standards. Also, in 2007, Brazil launched a major 10-year biotechnology initiative that provides incentives for private-sector research and development (R&D) and production (source: Business Monitor International).

All in all, the opportunities greatly outweigh the challenges, and BTG Pactual's projections appear to be both reasonable and attainable. In order to maximize one`s investment, potential investors need to bring to the table specialized skills (e.g., underwriting, financial management, hospital management) or have a proven track record of consolidation and integration. Health care is one of the few products that's actively sought out by consumers, and this sector will most certainly be an integral part of the projected growth in the Brazilian economy.

I would like to thank Joao Carlos Santos of BTG Pactual for his help in providing supporting financial data. joaocarlos.santos@btgpactual.com.

The views expressed in this article are solely mine and not those of my employer or organizations with which I am affiliated. □

Wenliang Wang, MFE, ATTORNEY, ASA, CFA, FRM, is a senior counsel at DeRyook International Law Firm Shanghai Office. He can be reached at *elink88@sina.com.*

Employer Sponsored Plan in China—Reality, Issues and Policy Advice

By Wenliang Wang

This paper is a quick response to the new regulation set recently by four regulators in China for Employer Sponsored Plans: the Ministry of Human Resources and Social Security, the China Banking Regulatory Commission, the China Securities Regulatory Commission, and the China Insurance Regulatory Commission. The new regulation, The Administrative Measures on Enterprise Annuity Fund, came into force on May 1, 2011 and replaced the 2004 edition thereafter. The opinions hereunder are derived partially from experience and from a comparison with advanced markets, such as North America, and can also serve as a comparison study from the perspective of practitioners in North America.

BACKGROUND

A voluntary employer sponsored plan system was first introduced into China by the breakthrough regulation, The Trial Measures on Enterprise Annuity Fund, set by the four regulators in February of 2004, in anticipation that a new national public pension scheme would come into force in 2005. The enterprise pension system is purposed to add another reliable and significant funding resource for employees in private sectors, after considering that the employees within the middle income class in the private sector was then expected to achieve a 52 percent replacement ratio after retirement against 90 percent replacement ratio for those in public organizations and 93 percent for civil servants, where a significant difference was perceived. The incoming 2005 scheme was then expected to aggravate this difference further by various efforts to reduce the benefit level in the 2005 scheme. Consequently, the breakthrough regulation set a firm official standing upon employer sponsored plan practices which had been in the real world for more than a decade under a non-regulatory context in China.

The market didn't react quickly and favorably to the introduction of the enterprise pension system, and the ministry in charge had taken a long time in formulating implementation details with regard to licensing qualified practitioners and market players. The first official license to an Employer Sponsored Plan came into reality in 2006, a year later.

By the end of 2005, China had a total amount of assets under Employer Sponsored Plans of 68 billion Yuan, 24,000 sponsoring enterprises, and nine million participating employees. By the end of 2010, China had a total amount of assets under Employer Sponsored Plans of 291 billion Yuan, 37,000 sponsoring enterprises, and 13.35 million participating employees. Over the last five years, the assets under plan (AUP) has achieved an annualized growth rate of 33.75 percent, despite that fact that the participating population is an extremely small portion of the total workforce (650 million at the end of 2009 by public statistics, estimated 656 million at the end of 2010) in the private sector, approximately two percent. The AUP for Employer Sponsored Plans is also very small when compared to the total capitalization of capital markets in China, approximately one percent, while our American counterpart was a ratio of 61 percent by the end of the third quarter of 2010.

Currently, an Employer Sponsored Plan can be operated by only a licensed trustee, which can take a form of either an Enterprise Annuity

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Council, a non-profit organization controlled by one employer and its participating employees, or a financial institution in the market as the independent service provider. Enterprise Annuity Councils had been the dominating form before 2005, and continue to prevail in the market, while market service providers as a qualified trustee by various type of financial institution has a less than a 50 percent market share in AUP. There are 12 market providers licensed as trustees competing in the Chinese market: four public trust companies, three commercial banks, and five

Table 1
Pension Companies' Market Share Analysis

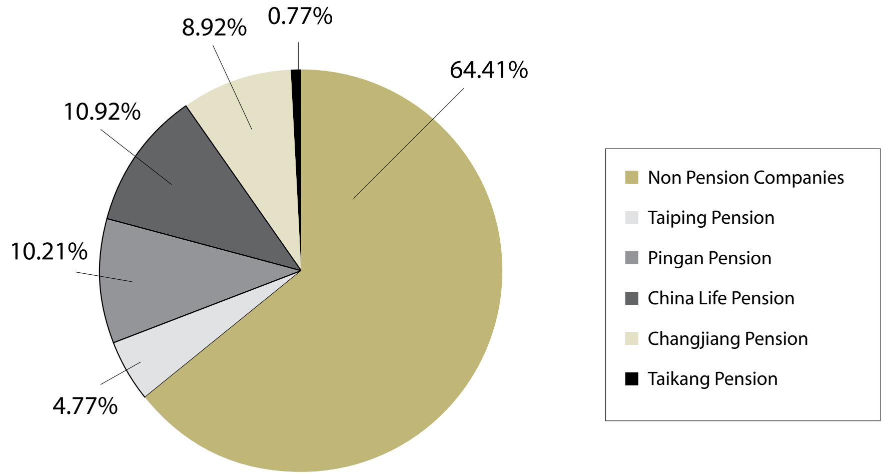
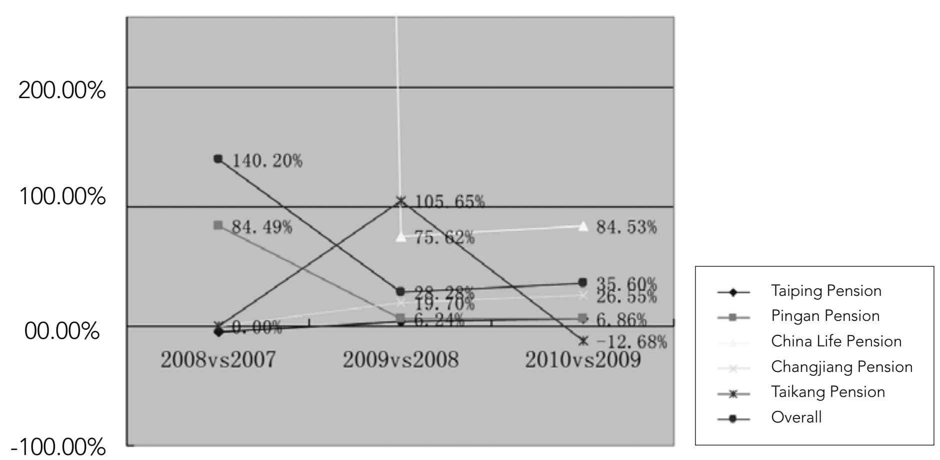


Table 2 series-A
Annual Growth Rate for Contribution Received



pension companies (usually affiliates of major insurance companies in China). The market shares of those five pension companies by the end of 2010 in terms of Assets under Plan are given in Table 1, while the business growth rate of those five pension companies over the last three years in terms of contributions received in the year, assets under plan by the end of year, and assets under management by the end of year are given in Table 2. (For purposes of this table, a zero value is assigned when no appropriate data exists for calculation of the year-to-year growth rate)

According to the observations in Table 1 and the Table 2 series, the pension companies had dramatic increases in the business of Employer Sponsored Plan in 2008, but then experienced a less significant growth of business in 2009 and 2010. The growth level is approaching a stable level quickly. However, it's reasonably expected that the pension companies shall achieve a more favorable market share expansion since the pension companies can provide the Employer Sponsored Plan a set of attractive annuity products through affiliate companies, which is an important advantage for pension companies as the market player to operate any DC plan.

A significant progress in the new regulation involves endorsement of Multiple Employer Sponsored Plans and amendment of the implementing rules with regard to Multiple Employer Sponsored Plans. Currently, there are 36 Multiple Employer Sponsored Plans created and provided by the 12 licensed financial institutions, including the five pension companies. Table 3 gives out the details.

Various efforts have been made by the policy makers the to prompt a continuous and healthy growth of Employer Sponsor Plans, but the outcome so far is not optimistic.

Table 2 series-B
Growth Rate for AUP

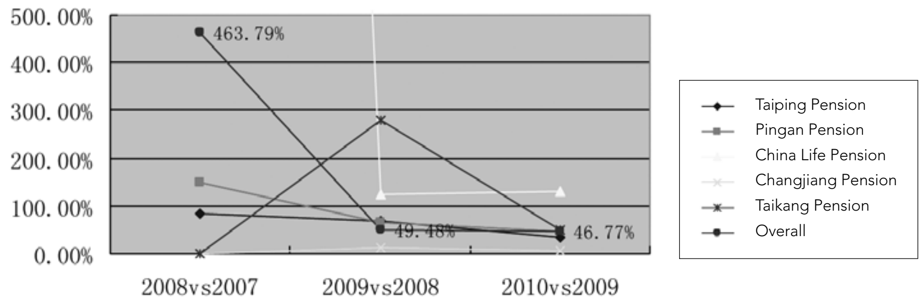


Table 2 series-C
Growth Rate for AUM

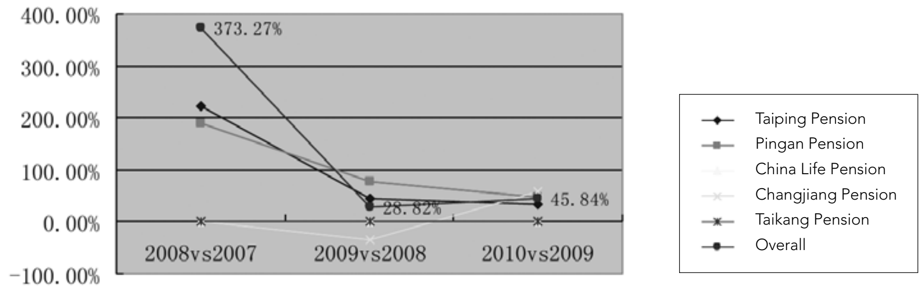
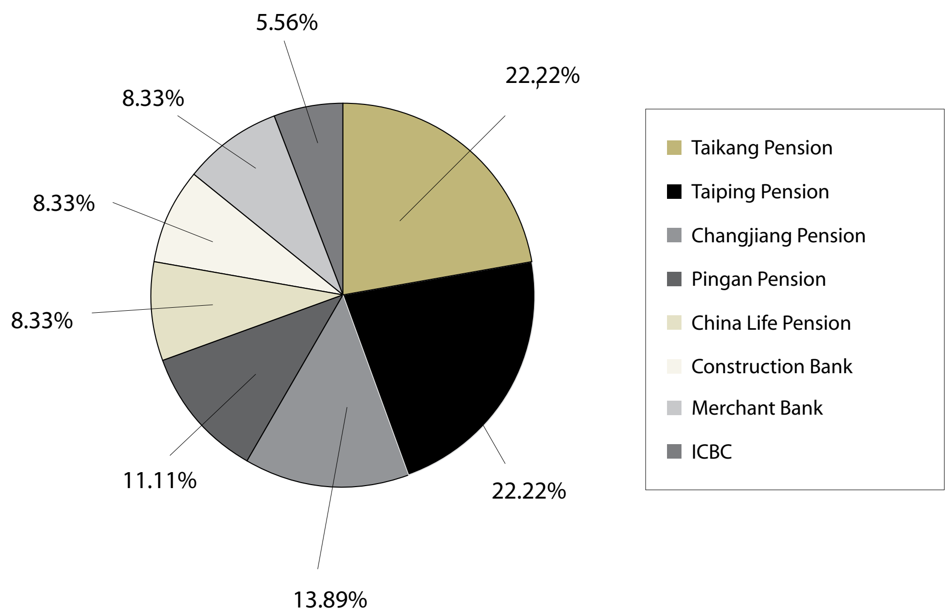


Table 3
Multiple Employer Sponsored Plan Product Distribution



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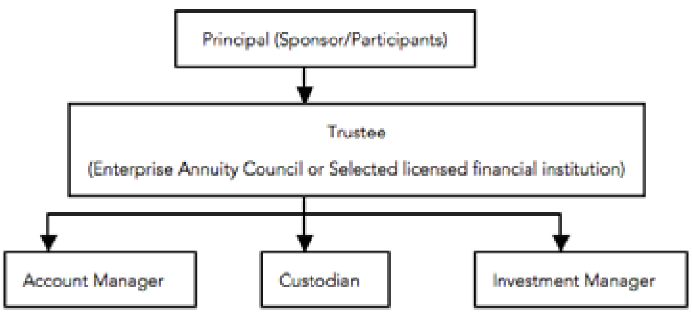
EXISTING ISSUES

We have identified various issues in the current Employer Sponsored Plan (ESP) regulatory regime which have significantly deterred market expansion of Employer Sponsored Plans in China.

Plan Structure and Ethics Issues

Currently, the ESP has been required to adopt the following governance structure.



The public has raised several significant questions on the governance structure:

1. The regulation allows a licensed trustee to serve as the investment manager if the trustee is also a licensed investment manager. The dual role of a licensed financial institution as both a trustee and an investment manager, or even the potential of such dual role in future arrangement is perceived to significantly aggregate information asymmetry, performance valuation, and self dealing issues in practice.

2. The regulation requires that investment managers can purchase financial products that it supplies only subject to consent of the trustee. When the trustee serves as the investment manager also, such regulatory requirement is superficial per se. The regulation can be easily circumvented by purchasing financial products from the affiliates of the investment manager or trustee.

3. The lack of a comprehensive code of conduct on the pricing and sale of financial products by affiliates may lead to higher costs, a higher expense component in financial products, as well as undesired and/or inefficient use of assets under management. Additionally, fair dealing requirements have not been addressed for plans within a single trustee, and have not been adequately addressed within a single investment manager.

Accessibility

The market for Employer Sponsored Plans in China suffers from low accessibility. The responsible regulator has so far granted only 12 licenses to financial institutions to provide trustee services, and in fact excludes most well qualified market players to enter and compete in the market. The choices available to the market are limited in both number of service providers and in the geographic coverage. The existing licensed trustees operate primarily in three major cities in China and they have inadequate extension to most regions in China, although they usually have some kind of national business network through their affiliates. The current market players have a strong preference to develop nationwide plans for state owned and nationally operated enterprises, or focus on the biggest customers, and disregard local needs.

The lack of Multiple Employer Sponsored Plans has also contributed to low accessibility which the new regulation purposes to cure and also improve portability. Despite the current official endorsement of Multiple Employer Sponsored Plans, portability of the account for an individual participant under a specific Multiple Employer Sponsored Plan is significantly restricted, and consequently the choices available to individual participants are limited.

Voluntary basis

An Employer Sponsored Plan is on a voluntary basis, which means the employer is not required to provide any employer sponsored plan as a supplementary source to its required contribu-

We have perceived a very strong market potential for Employer Sponsored plans in the future ...

tion to the public pension plan for its employees. The employer also has full discretion to decide the amount of matching contributions to an Employer Sponsored Plan if it sponsors any such plan. Additionally, the lack of nondiscrimination rules allows the employer to arbitrarily select qualified employees or set disproportionate arrangements for different classes of employees. The voluntary basis has made Employer Sponsored Plans unattractive when cost is a concern of the employer. No initiative from employees or trade unions can be legally made to prompt establishment of an Employer Sponsored Plan, or even arouse the awareness of the value of such a plan to employees.

Tax Incentives

In absence of any tax incentives, the cost of Employer Sponsored Plans will be unaffordable for both employers and employees. As an example, currently the Shanghai Municipal Government requires that the employer must pay 22 percent of payroll to the public retirement plan and 12 percent of payroll to the public health and care plan. The employee must pay 8 percent of payroll to both the public retirement plan and the public health and care plan. The additional cost from an Employer Sponsored Plan will be a significant burden for both employers and employees. Consequently, only a handful of companies in a monopoly industry or other very prosperous industries can accommodate such additional costs. With serious concern about the disproportionate effect on different income classes, the national authority is reluctant to grant an explicit tax incentive to Employer Sponsored Plans, which usually results in more benefits to higher income earners. Nevertheless, some local governments have given out some types of tax incentives to qualified Employer Sponsored Plans, such as percent matching contribution from employers are tax deductible up to four percent of pay. The national authority has been considering the possibility to allow the Shanghai Municipal Government to grant tax deferred treatment to individual employees with regard to the matching contribution received.

Investment Restrictions

The regulation has set unreasonable restrictions on investments by an Employer Sponsored Plan:

1. The maximum allowed asset allocation to equity and equity related assets is 30 percent;
2. No foreign investment is allowed;
3. The types of permitted investment are strictly limited.

Such restrictions are perceived to unreasonably depress the yield for plan assets, reduce the diversification effect from a broad investment universe, and inappropriately address the needs of inflation protection as a common issue in an ordinary Employer Sponsored Plan.

Lack of Prudent Regulation

The licensed financial institutions in the market are subject to different regulatory systems in their primary business sector, and they receive additional regulation from the responsible regulator, the MHRSS. Conflict of regulatory authority and gaps between regulatory regimes have been identified to be in violation of the prudent regulation principle.

Policy Advices

After full consideration of the policy purpose, issues in the market, and relevant experience from advanced markets, we provide the following policy advice.

Uniform Regulation

Uniform risk capital based regulation can serve as the basis to reasonably incorporate existing diverse sources of regulatory requirements into

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a workable regulation regime without creating an unreasonable burden for licensed financial institutions of various types. Risk capital based regulation can also lead to a comprehensive ERM framework to cover operational risk, credit risk, and liquidity risk in addition to the market risk covered in the new regulation. A uniform regulation regime can also serve to facilitate ease of market participation in a controllable manner.

Workable Ethics Framework

Some workable framework readily available in the market on ethics and a code of conduct with regard to operation and supervision of Employer Sponsored Plans can be evaluated and selected as the basis to develop a set of implementing rules on operation. The selected basis may include the Assets Management Code and Pension Governing Body Code sponsored by the CFA Institute.

Various Incentives

Certain tax incentives, such as tax deferred treatment, will not create an immediate disproportionate result on the pyramid of income earners, but it will help to minimize the issue of significantly lower replacement ratios for higher salary earners in the future. Non tax incentive measures can also be explored. Opt-out opportunities for higher salary earners to conditionally leave the mandatory plan and instead participate in an industry plan may also serve a good function as the U.K. experience tells us.

Open Market

The improvement of market efficiency for Employer Sponsored Plans can be achieved through:

1. Allow more business players to enter the market, and particularly encourage those with experience in advanced markets and those having a strong incentive in serving the local interest.

2. Allow more permitted investment vehicles in a progressive manner, i.e., cross border investment, alternative investments.

3. Establish transparent and competitive pricing and sales practices with regard to using assets under plans to purchase or commit to purchase annuity products from the market, and allow more insurance companies to enter this market.

4. Educate participants through a well structured process, guidelines, and the introduction of intermediary services such as actuarial services in addition to legal and audit services already in the new regulation.

CONCLUSION

We have perceived a very strong market potential for Employer Sponsored Plans in the future despite the predominance of an overwhelming public pension system in China. Our society members also call for a reliable mechanism to facilitate appropriate financial arrangements to fit their specific retirement needs. The questions are whether our policy has gone or will go the direction as expected or intended? Whether our decision making system is readily and reliably responsive to the welfare of the general public? Whether we have a set of sound sources and resources to address the policy issues appropriately? The questions remain unanswered.

Notes:

The official term for an Employer Sponsored Plan in China is Enterprise Annuity Plan. The official term for a Single Employer Sponsored Plan in China is Sing Plan, while the term for a Multiple Employers Sponsored Plan is Collective Plan. We use the American counterpart term to accommodate the convention of the target audiences. In China, the officially recognized Employer Sponsored Plan is a DC plan. □

2012 COUNTRY FEATURE ARTICLE COMPETITION—CASH PRIZE OF U.S. $1,000!

Do you want **U.S. $1,000** for writing about something you find fascinating and become a published author? Read on:

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. If you are not an International Section member yet, simply join the section for U.S. $25 and then submit an entry. You do not need to be an SOA member to join the International Section so please pass the word on to others who may be interested. The deadline for entries is May 18, 2012. Markets vary by country due to such local factors as history, economic system, regulations, consumer behaviors, social values, and culture. The Country Feature Article Competition provides you with a forum to share your experiences, interesting facts, or statistics that reflect your country's distinctive qualities.

Your article can be about any non-U.S. topic or topics that you find informative and interesting. For example, it might be about local actuarial organizations and activities, the actuarial profession in traditional or wider fields, financial products, social security reforms, employee benefit practices, or the insurance sector in your country. It could be about market trends in pensions or insurance products. It could be technical or informal. The choice is yours!

ELIGIBLE AUTHORS:

- Any International Section member

RULES:

- The article must be a previously unpublished article.
- The write-up should be no more than 2,000 words.
- Photos, charts, tables or graphics are encouraged for illustration. Any photo sent should be in either .jpeg, .tif, or .eps format with a print resolution of at least 300 dpi. We accept photos taken by you or photos with permission to use provided by its original owner.

DEADLINE:

Please e-mail your submission to Jill Leprich *(jleprich@soa.org)* by May 18, 2012. Please give full contact details for the author.

SELECTION AND ANNOUNCEMENT:

The ISC will select and advise winners in June 2012, using criteria such as "That was so riveting" or "That explains what I always wondered about XYZ," etc.

We look forward to receiving your entry.

SOCIETY OF ACTUARIES

Actuaries
Risk is Opportunity.®

Chris Daykin, FSA, FIA, HONFFA, is chairman of the PBSS Section of the IAA. He can be reached at *chris@daykinactuary.co.uk*.

Pension and Social Security Actuaries Meet in Edinburgh

By Chris Daykin

On 26-27 September, 130 pension and social security actuaries from 26 countries met together for two days of intensive presentations and discussions. This was the fourth Colloquium organised by the Pensions, Benefits and Social Security (PBSS) Section of the International Actuarial Association (IAA).

The sections of the IAA, like those of the Society of Actuaries, are for individual actuaries to join. The PBSS Section focuses on both public provision of pensions and social security and private pensions and remuneration issues. The annual colloquia offer great opportunities for networking, as well as for learning new things. The international mix of presentations and participants makes attendance a very rewarding experience.

With five plenary sessions and almost 30 breakout sessions, there was an immense variety of topics covered, from pension reform to actuarial standards of practice, from new risk-sharing designs to managing the de-accumulation phase of defined contribution pensions. Several sessions dealt with mortality and demographic issues, in particular the challenges of projecting improvements in longevity and ways to insulate retirement schemes from longevity risk.

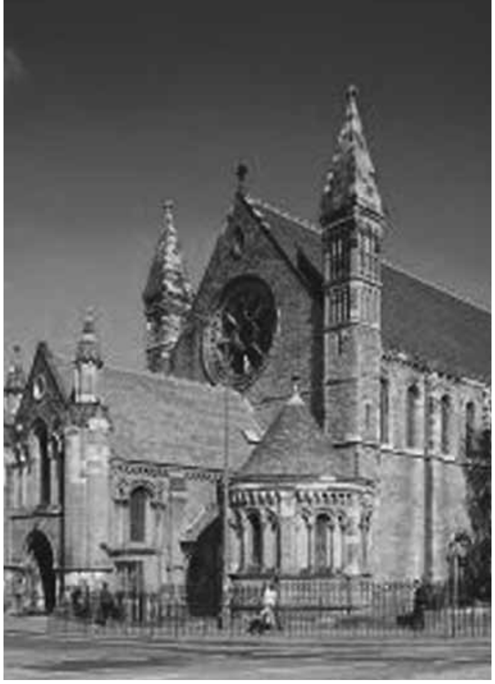
The venue for the meeting was the Royal College of Physicians, which was a lovely place to hold the meeting for the relatively small sized group (by U.S. meeting standards). The weather was exceptionally good for Edinburgh in September. For the gala dinner participants and accompanying persons were able to enjoy the refurbished beautiful interior of the Mansfield Traquair, built as a catholic church at the end of the 19th century and with amazing murals on almost every square inch of wall by Scotland's leading Arts and Crafts artist Phoebe Anna Traquair.

During the colloquium the PBSS Section held its Annual General Meeting and elected three new members of the committee: Florian Leger (France/Switzerland), Abraham Ernesto Hernandez Pacheco (Mexico) and Nobuhiro Shimizu (Japan).

In the final plenary session we heard the views of a top level panel of experts on the future of pension regulation. Fiona Stewart of the OECD in Paris set out seven key lessons to be learnt from the financial crisis:

- Private pensions are still necessary, alongside public pension systems—this diversification is a strength
- Pension provisions have a very long time horizon
- Supervision of pensions should be more risk-based and less compliance based
- Funding requirements should be designed to act in a counter-cyclical way
- A pension safety net is a vital component of national pension policy
- The design of defined contribution pensions needs further development
- Risk management and governance of pension plans needs to be improved

Although most pension plans did not invest in the financial instruments which became toxic, most plans were impacted by the global financial crisis through the combination of a general decline of all asset values and the increase of



Mansfield Traquair

liabilities resulting from lower interest rates. While this has directly affected members of defined contribution schemes, amongst defined benefit private schemes and public plan members, there has been a serious secondary impact on pensions in terms of loss of confidence in pensions alongside other financial institutions. A vital task looking forward is to rebuild confidence and to make pensions more secure and sustainable, which was the key theme of the conference.

In keeping with the IAA's number one strategic objective to establish and build relationships with supranational organisations, the Edinburgh colloquium welcomed the participation of representatives from the International Labour Office (ILO), the International Social Security Association (ISSA), the Organisation for Economic Cooperation and Development (OECD), the World Bank and the Inter-American Conference on Social Security.

The next PBSS Colloquium will take the form of a mini-Congress, organised jointly in Hong Kong with the IAA Health Section (IAAHS) and the consulting actuary section—International Association of Consulting Actuaries (IACA).

The meeting will run from the evening of 6 May to the afternoon of 9 May at the Sheraton Hong Kong Hotel and Towers. Preregistration and the call for papers are open on the IAA website at *www.actuaries.org/HongKong2012* and formal registration will open soon.

We hope to see many members of the SOA International Section at the mini-Congress in Hong Kong in May 2012. ☐

2012 IAA MINI-CONGRESS IN HONG KONG

A Mini-Congress of the International Actuarial Association will be held in Hong Kong from 6 May to 9 May 2012. This event is being organized and hosted by the Actuarial Society of Hong Kong and will be held at the Sheraton Hong Kong Hotel & Towers, Tsimshatsui, Kowloon. This Mini-Congress represents a joint collaboration of three IAA Sections, namely, International Association of Consulting Actuaries (IACA), Pension Benefits and Social Security Section (PBSS) and Health Section (IAAHS). Participation by IACA includes the Asia Pacific Association of Consulting Actuaries (APACA).

The theme of the Mini-Congress is The Actuarial Profession and Social and Economic Development. 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 features sessions in the areas of pensions and social security, healthcare, insurance, consulting practice, and other cross-disciplinary topics, such as ERM, professionalism, social and economic development issues, and the public interest.

The program and online registration are available through the Mini-Congress website at: *www.actuaries.org/HongKong2012/*. Discounted registrations fees are available for members of the IACA, IAAHS and PBSS Sections—any actuary can join by checking the box on the dues renewal for your own association, or if you missed that opportunity, by contacting the IAA Secretariat directly *(christian.levac@actuaries.org).*

Hong Kong's magnificent harbour has been the key to its development as a trading port and entrepôt for China, progressing through an industrial era to become a leading financial and services centre in Asia. The unique blend of eastern and western influences matched by diverse attractions and stunning countryside, has also made Hong Kong Asia's prime tourist destination.

For further information, contact the Mini-Congress Secretariat at *iaa2012@icc.com.hk*

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.*

Risk and Opportunity: China Variable Annuities Seminar

By Genghui Wu

On August 25, 2011, the Society of Actuaries (SOA) International Section, Investment Section, and China Regional Committee co-sponsored a new, special one-day seminar in Shanghai, China, specialized in Variable Annuity (VA) in China. This educational seminar was the result of a timely response to local regulatory changes and addressing local member needs to fulfill their CPD requirements.

In 2010, CIRC led the pilot project of VA development in China. The first pilot VA product was introduced in May 2011, coupled with the release of the very first VA guideline by CIRC. The opening up of the VA market in China has provided a tremendous opportunity and a brand new sales channel for insurance companies.

Due to the ever-increasing complexity associated with risk managing VAs, it has become challenging for current and potential VA writers to manage a mix of capital market risk exposures and policyholder behavior risks. It is vital for local VA developers to learn the lessons and experience from mature foreign VA markets, as well as understand the issues and risks inherited in VA development in local markets.

Conducted by seasoned practitioners from business and industry, this special one-day seminar shared unbiased global VA experience, local knowledge and practical VA implementation, with the objective of shortening the learning curve for both existing and potential local VA writers in this opportunistic and also risky business, promoting a healthy and competitive market environment for a long-term retirement

funding solution in China. The seminar provided in-depth coverage of the following:

- The evolution of VAs, lessons learned from VA markets in North America and other counties in Asia, and how the VA business behaved through multiple economic cycles
- Current VA pricing and valuation framework in China, and its implication of reserving challenges and capital requirements to company's financials
- Understand the VA market targeting and planning, product positioning and value proposition

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Risk and Oppportunity … | from Page 29

- Product development and practical implication using CPPI either as a standalone or as an investment portfolio for managing VA risk

- Quantification of VA risk exposures; Realization of risk management tools, techniques and best practices

- Current state of China local VA market development and concerns

With well over 90 local actuarial professionals attending, the entire seminar was very interactive and productive. The feedback was very positive, stating that well prepared content and effective communication provided meaningful insights to the members and seminar participants, prospects and local actuarial communities with respect to VA global experience, practical tools & implication, and advanced risk management. A couple of constructive criticisms also gave us valuable input for future improvements, including the format of handouts, and the length of the seminar.

I want to take this opportunity to extend my great appreciation to all the presenters and moderator for their volunteering support and numerous hours of efforts in preparing and presenting the material. These presenters are: Rikiya Ino from Milliman, Leon Cai from Huatai Life China, Daniel Lin and Jimmy Liang from MetLife China, KC Chan from Sun Life Assurance Company of Canada, and Tony Ho and Eric Yau from APAC with Barrie & Hibbert.

I also want to thank the SOA and the China Regional Committee (CRC) staff members who provided tremendous support in organizing the seminar: Pat Kum, Martha Sikaras, Colleen Fiore, Wilbur Lo, August Chow, and Sharon Huang. □

William R Horbatt, FSA, MAAA, is consulting actuary at ACT-MASOL in Short Hills, N.J. He can be reached at *Horbatt@ACTMASOL.com*

2011 Asian Financial Reporting Seminars

by William R. Horbatt

For the sixth year in a row the International Section has sponsored financial reporting seminars in Asia with seminars in Hong Kong, Manila and Taipei during late August and early September. The one and a half day Manila and Taipei seminars were jointly organized with the Actuarial Society of the Philippines and the China Region Committee, respectively while the International Section shared responsibility with the SOA Professional Development Department and Financial Reporting Section for the three day Hong Kong seminar. In total, over 300 Asian actuaries attended the seminars.

The seminars were almost totally revamped this year with a focus on developments towards Phase II of IFRS. In addition, workshops were added throughout the seminars to permit attendees to gain a hands on feel for the material (some attendees said this was just done to keep them awake). The International Section is particularly proud about the manner that the Manila and Taipei seminars built stronger bonds with local actuarial organizations, regardless of the number of SOA members in the countries.

Actuaries from Indonesia, Singapore and Vietnam have expressed interest in local IFRS seminars in 2012 and we hope that these seminars become reality. Seminars outside of Hong Kong (even outside Asia) are available to any local actuarial association that is interested in handling all "on the ground" arrangements like renting a meeting venue and recruiting attendees. Risks (and rewards) from these seminars are shared between the International Section and the local actuarial society although we attempt to price them to simply "break even" so that the maximum number of local actuaries can afford to attend. Please contact either myself or Ben Marshall *(benjamin.marshall@rbc.com)* if you have any ideas on possible future seminar topics. □

Ambassador's Corner

NEW AMBASSADORS:

The International Section is pleased to advise that Ambassadors have recently been appointed for three more countries: China, South Korea, and the Netherlands. In this edition of the Ambassador Corner, we are providing biographies and 2011-12 work plans for these new Ambassadors. We will continue featuring articles from all of our ambassadors on their respective countries.

CHINA

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Biography

Sharon is a consulting actuary at Milliman's Shanghai office. She joined the firm in 2011.

In her current role, she provides support to local and multinational insurance companies in the areas of actuarial due diligence, product design and pricing and financial reporting. Prior to joining Milliman, Sharon worked at the largest life reinsurer in China for six and half years where she gained experience in reinsurance, product development, market research, alternative distribution channel management and market entry strategy.

She has worked with life insurers in China on issues pertaining to:

- Product development
- Premium rating
- Asset Liability Management Modeling
- Due diligence and EV appraisal
- Alternative distribution channels
- Market entry and business planning
- Improving cash flow and capital strain using reinsurance

Sharon is fluent in English and Chinese. She is a fellow of the Society of Actuaries and a member of the SOA China Region Committee, associate of the China Association of Actuaries and a fellow of the Life Management Institute

2011-12 Work Plan

- Participate in the quarterly conference call with Regional Ambassador Coordinator
- Contribute to International News
- Help arrange two or more seminars/webcasts in China
- Encourage the local actuaries here to participate in 2011 Country Feature Article Competition
- Considering that more and more actuaries who are now working/studying in the United States or Europe have interest in coming back to work in China, I plan to provide them some help to introduce the job market in China and relocation.

SOUTH KOREA

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Biography
Hyuk-Sung Kwon is assistant professor and department chair in the Department of Statistics and Actuarial Science at Soongsil University in Seoul, Korea. Prior to joining Soongsil University, Hyuk-Sung was assistant manager, long-term product strategy department at Samsung Fire & Marine Insurance. He has been published in the Journal of Korean Insurance Academic Society, The Korean Journal of Applied Statistics, Insurance: Mathematics and Economics and the Journal of Insurance Studies. He holds a Ph.D. in Statistics (Actuarial Science Concentration) University of Western Ontario and is an associate of the Society of Actuaries.

2011-12 Work Plan
Assist the SOA in communications with members and correspondents in South Korea.

- Invite visiting SOA members for seminar on industry or academic issues.
- Assist in extending exam centers as needed.
- Assist in logistics for official visits to Korea by SOA members.
- Identify and develop subjects of interest for communication to SOA members through the *North American Actuarial Journal, The Actuary*, etc.
- Report important issues around Korean insurance industry.
- Motivate university students to pursue SOA designations (ASA, FSA, CERA).

THE NETHERLANDS

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Biography
Jan is a consulting actuary at Arcturus, her own consultancy in partnership since 2001. Arcturus is an actuarial consultancy providing actuarial support to life and non-life insurers on an interim basis. Prior to Arcturus, Jan operated Hooper Actuarial Services, where she did project work for various insurers.

She is fluent in English and Dutch. She is a fellow of the Society of Actuaries and member of the Dutch Actuarial Society (A.G.).

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2011-12 Work Plan

Assist in establishing exam center (if not already established) and coordinate SOA examinations.

- Attend two local actuarial events (participate as speaker when possible).
- Contact members of the Society of Actuaries in The Netherlands.
- Identify needs and concerns amongst the local SOA members.
- Contact new members as they arrive and assist by providing information as needed.
- Assist members of the SOA in identifying appropriate continuing education opportunities in The Netherlands and the rest of Europe.
- Assist in the logistics for official visits to the region by members of the SOA Board of Directors.

UPDATES

LATIN AMERICA AND CARIBBEAN

JAVIER CAMPELO

Javier Campelo, ASA, is Society of Actuaries' Ambassador for Argentina & Regional Ambassador Coordinator for Latin America and Caribbean. He can be reached at jcampelo@re-consulting.com.ar.

PRESENTATION AT THE SCHOOL OF ECONOMIC SCIENCES AT THE UNIVERSITY OF BUENOS AIRES

On June 23rd, we gave a presentation at the School of Economic Sciences at the University of Buenos Aires (FCE - UBA).

The aim of this talk was to present the SOA to current and possible future Argentine actuaries and point out to them the great benefits of SOA membership.

There were about 60 Argentine actuaries/actuarial students in attendance. We provided information about the SOA exams, as well as the study materials and the textbooks. Additionally, we promoted the Society of Actuaries' international activities, and distributed various SOA international publications.

We extend our congratulations to our team, who worked so hard in facilitating this project. We also would like to thank the President and authorities of the Students Union at the FCE -UBA and the President of the Actuarial Commission at the Professional Council of Economic Sciences (CPCE) for their involvement in this so worthwhile endeavor.

We are also very thankful to Ronald Poon Affat and Darryl Wagner, Members of the Board of Governors, and Alycia Slyck, Regional Ambassador Coordinator of the Society of Actuaries. They are always supportive of our activities in Latin America and the Caribbean and continue to inspire us in our undertakings. □

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The European Battle Over Sex: Human Beings are Above Statistics

By Andres Webersinke

Insurers in the European Union (EU) were busy preparing themselves for the new Solvency II regulations when the European Court of Justice (ECJ) surprised the industry with its judgment on March 1, 2011, to end gender discrimination in insurance aimed at supporting the fight against unfair discrimination.

Insurers, the public, politicians and lobbyists all have the same basic idea of eradicating any form of unfair discrimination, but it is once again the method by which this was achieved that results in disbelief and the need for a more vigorous response by the industry in addressing issues such as fairness and transparency.

WHAT HAPPENED? A BRIEF SUMMARY

To refresh memories, in 2003 the European Commission adopted a directive proposal for implementing the principle of equal treatment between women and men in the access to and supply of goods and services. During the various stages of consultation, we witnessed several controversial discussions. Nevertheless, the European Commission did not yield to the request to allow gender-specific calculations of premiums and benefits for the purposes of private insurance within Europe. In other words, back in 2003 the European Commission had already insisted on unisex rates. Since this meant a significant change in the usual practice, a transition period was offered for their implementation and, furthermore, this equal treatment rule was only to apply to new business.

Some Member States lodged objections, but finally all consented to the so-called Gender Directive (2004/113/EC), passed on December 13, 2004[1], albeit with some changes. Article 5(2) of the directive provided an exemption from the principle to eliminate gender discrimination for insurance contracts subject to special derogation rules, i.e., gender is a determining factor; differentiation must be based upon accurate and published data; national parliaments had to implement such an exemption prior to a set deadline. Furthermore, these Member States shall review their decision every five years taking into account a report presented by the European Commission.

Looking at nine main product lines, Table 1 lists those EU Member States which explicitly disallow gender-specific insurance pricing in some cases. Whereas all 27 EU countries opted for an exemption for life and annuity business, nine nations insist on unisex pricing for some product lines, most often in the case of motor insurance. Some countries, most notably Belgium, limited the use of gender in pricing insurance premiums to a "bare minimum."

Table 1 – Use of gender as a rating factor according to national law

	Life	Annuity	Disability	LTC	Critical Illness	Travel	Accident	Motor
Belgium			X	X	X	X	X	X
Bulgaria							X	X
Cyprus			X	X	X	X		X
Estonia				X				X
Ireland							X	
Latvia								X
Lithuania								X
Netherlands							X	X
Slovenia								X

THIS SETS THE SCENE FOR WHAT CAME NEXT

A legal process was initiated by a Belgian consumer organisation and, it should be added, by two

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men challenging the derogation as incompatible with the EU Treaty. The Belgian Constitutional Court took the case (C-236/9) to the ECJ to decide on the validity of the exemption from the prohibition of all gender discrimination for the insurance industry. The March verdict rules that Article 5(2) is invalid with effect from December 21, 2012. From this date onwards the use of gender as a factor in calculating insurance premiums and benefits will be banned in the EU.

Given the history of the directive the judgment is no surprise. The industry underestimated the desire of the European legislative and judiciary to promote equality between men and women in all activities. The directive offered no more than an exemption. The fact that almost all Member States implemented this exemption for almost all lines of insurance "lulled" the insurers into believing that there is no change from what seems like a perfectly fair, reasonable and well-understood approach to risk differentiation.

THE INDUSTRY'S REACTION

It is somewhat remarkable to note that the industry's answer to this judgment is little more than a shake of the head. The focus was more on the exact implementation of this ruling and only on where it mattered most (in biometric risks, such as death, longevity and health). Admittedly, the ECJ did not argue with the fact that statistics showing differences between men and women are merely used as a proxy for differences in lifestyle and behaviour but referred to fundamental rights enshrined in the EU Charter making it difficult to argue for a different position. This along with a lack of political will to re-open a drawn-out discussion already held in 2003/04 indeed directed the focus on accepting and implementing the ruling.

The moderate reaction of the industry was perhaps fuelled by the understanding that it should not prove to be too difficult to aggregate two pricing tables. All that is needed is the right gender mix.

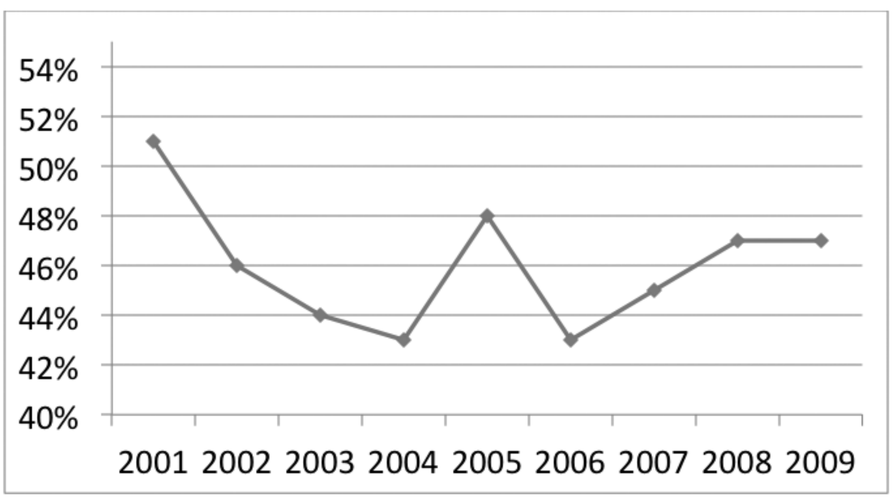
CALCULATING THE GENDER MIX

The simplest solution would be to start with the most conservative pricing basis. However, in a competitive environment or in cases where the final premium heavily depends upon the gender a new pricing factor is needed—the gender mix. The assumption on the gender mix requires an equally careful assessment as for all other pricing assumptions. Past experience is always useful but with the entire industry switching simultaneously, evaluating the competition and changing customer's behaviour will be particularly challenging.

CHANGING CUSTOMER'S BEHAVIOUR

In 2001 the German government introduced a pension plan with state bonuses and privileges for employees. Annuity providers developed qualifying plans accordingly—the so-called Riester-Annuity (named after the politician who devised the scheme). In order to qualify plans had to be gender-neutral from the beginning of 2006. Figure 1 shows that this change lead to a last minute sale to men in 2005. Having said this, the share of policies sold to men in 2006 was not any different from 2004. The fact that these plans are low premium policies and state-funded will affect the

Figure 1 – Proportion of Riester plans sold to men based on a Gen Re analysis amongst several German life insurers



buying-behaviour differently to what can be expected for other insurance plans following the ECJ ruling. In any case, the need for financial protection is not going to change.

For sure the ECJ judgment will be used by agents and brokers to sell more annuity business to men in the last months of 2012. Similar effects can be anticipated for other products—sometimes increasing the share of men and other times that of women. The opposite may then take place in early 2013. This will have unpleasant consequences for reserving purposes for example since the gender mix assumption will reflect the medium to long-term expectations.

DATA ANALYSIS

These expectations can vary significantly from office to office. Looking at immediate annuity business and separately at term assurance, Gen Re conducted an analysis of data from over 20 German life insurers. The following is a brief summary of the results.

Figure 2 depicts the proportion of men (by number of policies and weighted by sum assured) for immediate annuity business. About 50% of immediate annuity plans were sold to men, but weighted by sum assured the proportion of men is just over 6%-points higher. The variation even amongst the larger players is significant. The weighted proportion varies between 52% and 59% amongst the top four writers. The maximum proportion of men increases to 77% if the next three top insurers are included. This clearly demonstrates the need for a careful analysis of the data.

Whereas immediate annuity business is sold in almost equal shares to men and women (over all companies), this cannot be said for term assurance. Here the proportion of policies sold to men is over 60%. Weighted by sum assured the share increases by 3%-points. A reason for the narrower relationship could be the lower premium level charged to women. However, surprising again is the significant differences from one insurer to the

Figure 2 – Proportion of men in immediate annuity business (top 7 immediate annuity writers within the Gen Re datapool; only policies in force for less than 10 years)

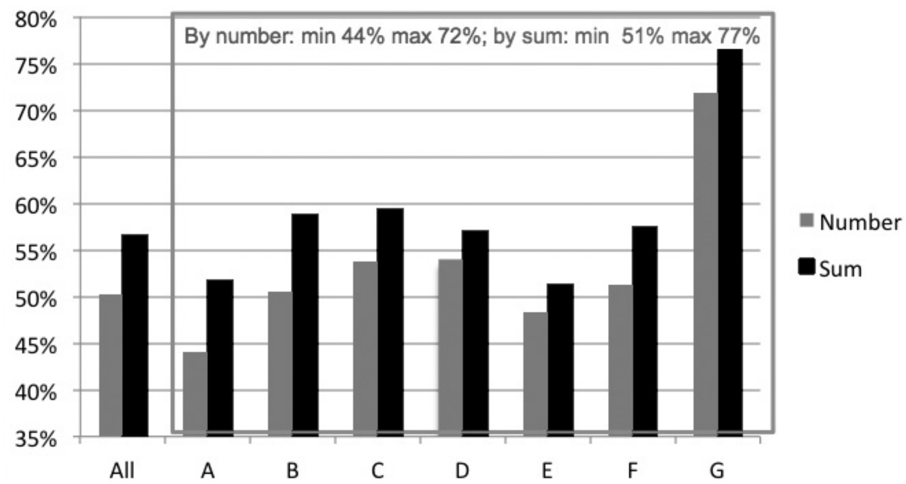
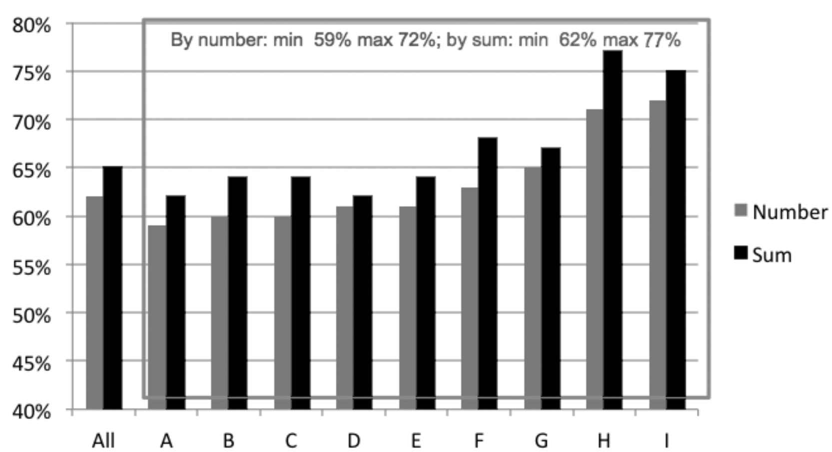


Figure 3 – Proportion of men in term assurance business (top 8 term assurance writers within the Gen Re datapool; only policies in force for less than 6 years)



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other. Whereas one insurer must calculate with a 23% share of female customers another will benefit from a rate which is two thirds higher and almost 40% (Figure 3).

The gender mix for life insurance also depends on the entry age and duration. Men typically start owning life insurance cover later in life than women—affecting the chosen duration.

However, insurers should also analyse how the gender mix is changing during the duration of a policy. Lapse rates, for example, may be different and thus change the mix over time. The gender mix for annuity and long-term care policies will change significantly with increasing duration as higher mortality and morbidity rates reduce the share of insured men paying premiums.

Other factors influencing the proportion of male customers are the target market, build-in options (may be exercised differently by men and women), trends (e.g., as a result of an increasing employment rate amongst women) distribution channel, etc. It can be expected that brokers sell higher sums assured to more men whereas the banking channel sells more annuity business to women than men (at least in the German example).

BEYOND THE GENDER MIX

Where premium competitiveness is key a new mindset is required. How can an insurance company selling term assurance via direct marketing attract more women in order to have an overall attractive premium level? How can a bancassurer ensure that annuity business is sold as expected to both men and women?

One answer to these questions is to introduce new attributes with the aim of accurately pricing the risk categories and thus offering fair and competitive terms to the target market, avoiding indirect discrimination, of course. Motor insurance is a good example. In the group of young vehicle drivers (below age 25) men have a higher claims index than women (in Germany the claims ratio is between 25 to 33% higher[2]) but already today many motor insurers use carefully chosen criteria to distinguish multiple risk categories. Gender is not the sole key differentiator.

This is different for most life insurance products. Gender differences typically remain with increasing age and across most medical conditions. But the principle for further differentiation is also well understood in life insurance. Insurers offer lower premiums to so-called preferred lives (in the case of mortality or morbidity cover) or enhanced annuities to people less healthy than the average seeking a regular income at retirement age.

One can expect increasing activity in this area but not a sudden switch or rapid movement towards new types of risk categorisation. After all, established insurers cannot afford to target men or women alone. Both sexes are part of a typical target market and unless the current target market is completely changed, new attributes will only be introduced over time or where competitiveness is affected by the court ruling—in particular by those companies who have too much of the "wrong" sex.

As such the concerns around the gender mix require some managing and steering to ensure the actual gender mix is aligned or is better than the mix used in the premium calculation.

This may be achieved by means of innovative product design, better use of target group typology, targeted sales documentation, discounts for partner policy and appropriate sales incentives to name a few. This is familiar ground for sales and marketing experts. Having said this, other industries such as the car or grocery sector are ahead of the insurance industry in terms of influencing and understanding the buying pattern of customers.

OPEN QUESTIONS – INDIVIDUAL RISK ASSESSMENT

The judgment left a number of questions unanswered. Particularly noteworthy is the question of its applicability on individual risk assessment in life insurance.

In Critical Illness insurance, for example, a particular family history of breast cancer may lead to a specific exclusion for a female applicant. For men, however, the decision may be a different one. It seems inappropriate to apply in all cases an exclusion so as not to differentiate between the sexes, or better said, not to discriminate between the sexes.

Extra mortality loadings for unfavourable health conditions are calculated comparing standard mortality with that of a diseased population. These studies are gender-specific to identify differences by gender. Even if the relative extra mortality is the same for both sexes, different disease prevalence amongst the sexes will result in an imbalance of the total extra premium charged across a portfolio, if these loadings are applied to unisex rates. This list of issues can be extended to include different laboratory norm values for different sexes, different meanings of a positive electrocardiogram reading for men and women (in particular in younger ages), etc. It is important that the industry voices its opinion to avoid that the changing Gender Directive will adversely impact the way the industry goes about individual risks assessment.

SUMMARY

The ECJ judgment on gender equality has a number of immediate and long-term consequences for the industry. At this stage only the decision is known. The European Commission promised a report providing guidance on the interpretation of the judgment. This report, however, can only be expected in early 2012. The European Committee on Women's Rights and Gender Equality had a first debate on the ECJ judgment and its implementation on May 25, 2011, providing a first glimpse into the thought process of decision makers[4]. The committee's Rapporteur (Zita Gurmai, Group of the Progressive Alliance of Socialists and Democrats in the European Parliament) made it already clear that the ECJ's decision was a very important one and that she will make sure that "consumers will not pay higher premium rates for not being discriminated against." Other opinions ranged from underlining the principle of the "fight against discrimination being more important than economic consideration" (as voiced by Raül Romeva I Rueda, Group of the Greens/European Free Alliance and Rapporteur for the outstanding anti-discrimination directive on age and disability) to the pragmatic question of "what do we try to achieve" (as asked by Marina Yannakoudakis, European Conservatives and Reformists).

While this debate is ongoing, insurers should be preparing for the new unisex environment. This will definitely include the analysis of the gender mix in new business by various factors as described above but also the effects this has on reserving. Which reserving basis should or can be used in future? Insurers should maintain a degree of flexibility in order to react swiftly should competitors introduce innovative product ideas or use new attributes with better risk selection effects. This will require new management tools to monitor the gender mix for both reserving purposes and new business development.

The long-term effects, however, should also be considered. The notion of the right to underwrite is once again openly debated. To categorise risks is the principle of private insurers. The EU continues to debate the insurer's right to differentiate risks by age and disability. Some politicians and lobbyists gained impetus from the recent ECJ ruling on gender. Sooner or later this will impact other jurisdictions with perhaps similar results. The industry is called upon to make its processes more transparent. Every decision to rate or decline a risk, every decision not to pay the full claim amount should receive a thorough examination on fairness. At the same time the industry needs to organise itself better and across national boundaries to educate the decision makers and lobbyists about the way risks are assessed and how competition ensures that more and more individuals—almost everyone—in the society can have access to financial protection products at a fair price. ☐

END NOTES

1. The Directive entered into force on December 21, 2004, giving the Member States a period of three years to implement the provisions into national law.
2. CIVIC Consulting. July 16, 2010. Study on the use of age, disability, sex, religion, or belief, racial or ethnic origin and sexual orientation in financial services, in particular in the insurance and banking sectors – Part III: Annexes.
3. Based on calculations from the German Insurance Association (GDV): *http://www.gdv.de/Themen/LebensversicherungAltersvorsorge/Produktfragen/Beruecksichtigung_des_Geschlechts_bei_Kalkulation/inhaltsseite22105.html* , accessed on August 19, 2011
4. Parliamentary Committee Meeting. Event: Committee on Women's Rights and Gender Equality (FEMM). Brussels, May 25, 2011, 09:14 - 10:55. Accessed through the multimedia library (http://www.europarl.europa.eu/en/multimedia-library/).

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