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Risk Management Seminar Visits Six Asian Cities

by David Ingram

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"You are always at the mercy of your dumbest competitor," George Tang warned the crowd at the Joint Regional seminar on Risk Management in Kuala Lumpur. In fact, George actually said that six times to five additional audiences in Taipei, Hong Kong, Shanghai, Seoul and Tokyo. George is an actuary at the MassMutual Mercuries Life Insurance Company in Taipei. He addressed many of the practical issues for risk managers practicing in Asia, pointing out that risk management goes beyond ALM to encompass operations, products, financials, investments, legal and market (sales) conduct.

The most popular part of George's presentation in each and every city was when he addressed Asian cultural issues that impede risk management effectiveness. Common behaviors such as reticence to say a direct "no" and the propensity to avoid controversial topics are often in direct conflict with effective risk management. George suggested strategies to overcome these problems such as presenting solutions along with problems and seeking personal opinions in private meetings.

Kuala Lumpur was the starting point for the traveling seminar. The seminar was jointly sponsored by the Faculty and Institute of Actuaries, the Society of Actuaries China Regional Committee and the Institute of Actuaries of Australia as well as local actuarial bodies in each city. The audience topped 100 in KL as it did in every city and the seminar was held in the shadow of the Petronas towers. Interest in KL was high since insurance companies in both Malaysia and Singapore are being challenged by their regulators and sometimes also by bank owners or partners to implement bank-style risk management.

"You are not alone. Insurers in many countries are suffering," said Steve Miles, a Tillinghast consultant from Singapore. Steve talked about strategies for a low interest rate environment. He described how regulators were taking completely different approaches to the problems caused by low interest rates in Japan, China and Singapore.

In Japan, regulators played for time, hoping that rates would rise, by bending solvency rules, manipulating interest rates and providing subsidies or preferred loans. Since interest rates failed to rise, those actions encouraged unhealthy competition and ultimately increased the cost to the taxpayer of bailing out the most troubled companies.

In China, regulators have permitted relatively weak reserving levels, allowing companies to cover shortfalls from unprofitable in-force business with future margins from profitable new business. The Singapore regulators have gone the route of developing a risk-based capital requirement. This requirement will encourage companies to look more at reducing the risk inherent in product structures.

Taiwan was the second stop on the tour. There the need for good risk management practices is becoming evident with the emergence of significant negative interest spread in the in-force business. ALM practices are being developed in many companies with the usual concern of how to match when the available assets are too short and/or too low earning. Regulators have recently changed the regulations on par business, in hopes that more companies will sell those products with significant margins that can cushion against future risks, but true par business has yet to become popular in Taiwan, and it remains to be seen whether it will be widely accepted as an alternative to non-participating and unit-linked/variable products. We left Taiwan as a typhoon was approaching. It fol-

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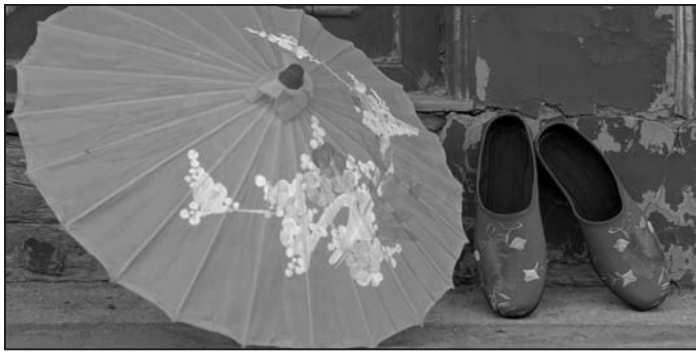
lowed us for most of the rest of the tour, but we kept one city ahead at all times.

Neil Parmenter, or Pong Ming Dur as he liked to introduce himself, the current president of the Society of Actuaries kicked off the seminar in each city with a talk about the importance of Asia to the SOA. Asian actuaries account for a large portion of the growth of the SOA over the past 10 years and the membership of the SOA in Asia continues to have strong growth. Neil also told of the importance of risk management to the future of the actuarial profession and the work that the SOA and the Casualty Actuarial Society are doing to help to position actuaries to be the first called for chief risk officer positions.

In Hong Kong, we saw the nightly laser light show and spoke to a very diverse crowd of aspiring and current risk managers. People from all over the world are working in the insurance industry in Hong Kong. Hong Kong has a large contingent of international companies, many of whom have brought risk management practices from their parent companies to Hong Kong. Risk management practice and regulation in Hong Kong are among the strongest in Asia but there is room for improvement and seminar attendees were looking for help to identify their next risk management development step.

"Market consistent embedded value is not a replacement for embedded value, but an enhancement" said Mark Saunders, managing principal and head of Tillinghast in Asia. As Mark explained, MCEV helps you obtain a robust measure of risk, bringing the concepts of modern finance theory into the valuation and risk assessment of insurance companies. Those concepts include: (1) risks that can be diversified away do not command a risk premium; (2) systemic risks can be replicated with a portfolio of traded assets; (3) two portfolios with the same cash flows have the same value; and (4) the value of a company is more (or less) than the sum of its discrete parts. With MCEV an explicit allowance is made for the cost of policy guarantees and policyholder options in assessing the value of the insurance company and/or line of business. In the MCEV calculation, the appropriate risk discount rate should be based on the real risks. Even though MCEV is not yet widely accepted, Mark recommended that it should be used to give additional insights into the business so that alternative perspectives can be understood and that sensitivity testing is essential. Mark concluded that MCEV helps you be better informed. The better informed you are, the better placed you are to succeed.



Following Mark's session we had the liveliest round of questions and answers yet. The Hong Kong attendees were clearly interested in these enhanced techniques and were up-to-speed on the issues as EV determination is common practice for Hong Kong insurers.

We landed in Shanghai and the entire group of speakers and our invaluable coordinator, Pat Kum of the Actuaries Office in Hong Kong brought us directly to Zhou Zhuang, a traditional Chinese water village with canals running throughout the town and picturesque footbridges. A packed hall heard our seminar the next day and a presentation the following day from a locally based actuary, Terrence Cummings of AIA, on the topic of annuity longevity concerns. Many students and recent graduates were in the audience who are all hoping to put their recent risk management learnings to good use. Insurance industry focus in Shanghai has been on growth, not risk management however. The regulations and underdeveloped capital markets currently restrict investment options significantly. This will change in time and more sophisticated risk management should become possible in future.

"Many insurance companies are struggling to close the gap between the design and planning stages and the actual execution and integration of their ERM programs," said Robert Fok, PWC Director of Actuarial Services in Hong Kong. Robert spoke about a recent survey of global risk management practices. The survey report-

continued on page 20 ◗

RM Seminar Visits Asian Cities

◗ continued from page 19

ed the responses of 44 companies in Asia, Europe, North America, Australia and Africa. Most companies have several key components of ERM in place such as enterprise-wide risk identification, risk assessment, risk response and controls and monitoring. However the survey found that ERM is not yet aligned with strategic planning. ERM is not fully integrated across companies and there is often an absence of clear standards for risk taking. In total, only 8 percent of the companies polled felt that their ERM system was fully in place and operating effectively.

> The savvy corporate leader uses risk management as both a sword and a shield ...

City number five was Seoul. By this time we were waking up not knowing where we were and dreaming that we were being asked to do each other's presentations. Risk management is a hot topic in Korea. Events following the "Asian currency" crisis of 1998 seem to have driven home the importance of ALM to Korean insurance companies. Most would like to develop sophisticated ALM programs but are stymied by the lack of long-term assets in the Korean financial markets. The Korean regulator has been working on a requirement that companies adopt a full-scale risk management program, phased in over several years. Companies are beginning to implement ERM and find themselves with questions about how it is being done in other areas of the world.

"Many life insurance products have the characteristics of highly complex financial derivatives," Paul Headey stated. Paul is the head of the Milliman Hong Kong office. His presentation discussed ways of hedging insurance product options and the impact such strategies could have on product development. Since there are few if any traded financial instruments that can be used to replicate insurance product options, the delta hedging process is often used. With delta hedging, the sensitivity of the insurance contract to changes in the marketplace is matched by securities with the same sensitivity. Frequent rebalancing is usually necessary to keep a delta-hedging program effective. In some cases insurance companies can purchase a static hedge contract customized by a bank for their risks. Rolling hedges are used for currency exposures that last beyond the horizon of any FX contracts. Insurance risks usually have fatter tails or extreme situation loss characteristics than most market traded instruments. Risk managers were urged by Paul to be careful when modeling risks, and that they should start simple and refine their models as they learn.

Tokyo provided a very warm—well, actually a very hot—welcome to our final stop on our seminar. Japanese companies have been practicing many of the aspects of risk management for several years, but are still developing their capabilities to fully quantify their risks. The audience presented many challenging questions to the speakers as participants were clearly hoping to go away with knowledge that they could immediately use and they wanted to make sure that they fully understood the presentations.

"The savvy corporate leader uses risk management as both a sword and a shield," was a quote from John Hunkin that Dave Ingram used to open his presentation. Dave is a Milliman consultant in New York City. As head of the SOA Risk Management Section, Dave has seen the risk management operations of many North American companies. Key to the success of an ERM program is the development of a risk management culture. He presented a set of 12 risk management best practices as a sample of one way that a risk management culture can be defined in a company.

1. Board and senior management are responsible for risk management.
2. Senior management understands all firm activities and understands the basis of the risk management system.
3. Authority and responsibility are clearly defined and risk measurement and management are independent from risk taking functions.
4. All material risks are identified and measured; exposures are aggregated and

management attends to the largest exposures.

5. There are risk limits for all material risks and a system for enforcing the limits that is part of an internal control system.
6. The firm has staff with sufficient expertise to perform the risk management functions and adequate systems support.
7. Risk surplus is allocated to business units and products and used for capital budgeting purposes.
8. Stress testing is a part of the risk management process.
9. New products and ventures trigger consideration of potential risks and new risk management procedures.
10. Financial reporting allows management to view the risk-adjusted returns of business units, products and activities.
11. Product pricing and rate setting reflects the risk adjusted return.
12. The firm has a process for quickly resolving identified risk management weaknesses.

Dave urged each audience member to develop their own list of risk management best practices, taking into account their company culture, capabilities and goals.

Suddenly, the sixth seminar was over and we swore never to give those presentations again. No sooner was I back to New York than I was asked to give my best practices presentation in the fall in Nebraska. Well, it was a hit all over Asia, why not Nebraska? These seminars really did permanently enlarge my world. Hopefully we did the same for our audiences. ✦

Book Review

Risk Management by Michel Crouhy, Dan Galai, Robert Mark

by Fred Tavan

This book is a 'must-read' for any serious student of risk management. It provides a comprehensive introduction to the subject. Presented within the framework of a financial institution, it covers the design and operation of a risk management system, the technical modeling within the system, and the interaction between internal oversight and external regulatory requirements. The mathematical models and methodology of risk management are presented rigorously, and they are integrated with the empirical evidence on their application.

This book covers the entire field of risk management from policies to methodologies, as well as data and technological infrastructure.

The reader can learn about using different VaR approaches to measure and manage market and credit risk. Approaches other than VaR are also detailed. Pros and cons of each approach are summarized for quick reference. RAROC concepts are described and provide a good starting point for a student's education in this area. Operational risk management is covered in a practical way and a framework is described for operational risk assessment.

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