



ACTUARIAL SOCIETY
of
HONG KONG
香港精算學會

THE ACTUARIAL SOCIETY OF HONG KONG

ASHK Newsletter

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win our Sudoku & History Quiz
game!

Editorial

by Mr. David Waples

Welcome to the April edition of the ASHK Newsletter.

The focus for this issue is the pricing and risk management of guarantees related to variable annuities. Recently, the SOA held a very well-attended seminar in HK on equity-based insurance guarantees with the attendance reflecting the strength of interest in the subject. Over 180 practitioners in the field attended the seminar.

James Creedon is our contributor for this edition on the subject. James' article provides an insight into the key features of the product pricing and the risk management of variable annuities. The risk management overview is a valuable summation of the approaches at a time when risk in financial portfolios has been highlighted by the sub-prime crisis.

Our President, Tony Cheng has provided a thought provoking message on the development and growth of the actuarial profession in Hong Kong and the region. He has identified six pointers for members to make a significant contribution to our profession.

The continued growth of insurance and financial services in Asia and the increasing complexity of corporate governance and reporting standards has resulted in greater corporate oversight in insurance operations. We have interviewed Kent Griffin, Regional CFO of AXA Asia Pacific, to share with us the approach AXA had taken in meeting the challenges of establishing and expanding the regional operation within his organization.

Away from the mainstream corporate environments, occasionally there are actuaries or colleagues who commenced on the traditional actuarial path, and then forged their own path. One such actuarial traveler was Alan Woods, whose obituary from the Actuary is published here. Glimpses of his life as a colorful racing identity in HK are captured here, while demonstrating considerable risk management techniques in the world of horse racing.

Message from the President

I would like to open by saying that it is a great privilege and honor to be installed as the President of the ASHK in 2008 and with this role comes a tremendous responsibility. This responsibility is heightened by the exciting times we live in where the business environment is rapidly changing, but also where the ASHK has the opportunity of increasingly becoming a powerful force in the business community.

We need to ask ourselves: Where do we (the ASHK) want to be in 3 years' time, in 5 years' time and in 10 years' time from now? Do we want to be at the forefront of innovation and leading change or do we want to be reactive and allow areas of work that are so well suited to actuaries being eaten away by other professions.



Mr. Tony Cheng
MBA, FIAA

How do we want to be viewed in the region? Do we want to be viewed as an Australian actuary or English actuary or an American actuary? Or do we want to be known as a HK actuary? Do we want to create a powerful brand for the HK actuary as a person who is a fellow of one of the distinguished actuarial bodies (such as then UK, Australia or US) but also has survived and prospered in the unique challenges presented in working in HK as an Actuary. Where else in the world does an actuary get exposure to such a multinational environment, working with people from Europe, China, Asia, Africa and the Americas. Where else in the world does an actuary get to deal with accounting, risk management, pricing and other issues that truly span the actuarial world under the intense pressure and demands that the HK work environment presents.

It is an exciting time for the ASHK. The number of fellows is now 360 and the total membership 683. Based on recent growth rates the number should double in the next 5 years and in 10 years we will have as many fellows as there are currently in Australia. Increasingly we have the opportunity to be a serious actuarial body on the world stage and positioned to be the leading actuarial body in Asia. This is an opportunity that is available to us all now, but there are a number of things we need to do:

1. Protect our actuaries and speak with the voice of many instead of the voice of one. This can be done by developing a world-class set of guidance notes and professional standards that reflect the local issues our actuaries face. Guidance from the ASHK not only facilitates best practices, but also gives the actuaries a reference and back-up when queried by their employer. Over the past twelve months the ASHK life insurance committee has commenced the process of establishing working groups to deal with the issues of Chapter 41, AGN 7 - Dynamic Solvency Testing, AGN 8 - investment guarantees and Benefit Illustrations. I have been thrilled with the participation of the members in these groups and the leadership shown by the various heads of these working parties. This needs to continue and be spread to the other areas of work in Hong Kong such as General Insurance, Investments, Risk Management and Pensions over the next twelve months and beyond.
2. We need to become a statutory body recognized by the government. This means when we speak to the business community they will need to listen. Peter Luk - one of our most distinguished and senior actuaries in HK will continue leading the charge on this issue that is strategically vital to our future in the long run.
3. The ASHK needs to strengthen its relationship with the regulators and understand their issues and how we can best add value to the benefit of all parties. Sim Ng - our immediate past president will lead this charge for us over the next twelve months continuing on the progress made during Sim's presidential year.
4. We need to be better positioned in the region. Work with other actuarial bodies in Asia, set up a dialogue with the actuarial bodies to ensure synergies and areas of common interests and mutual benefits can be examined.

However the key to the above is you, the members. We need your support, we need your dedication and contribution. We are all busy people whether at work or in personal life, but I rarely meet anyone who has contributed to the society and looked back and regretted the efforts made.

I want to share with you my background as an actuary. I recall my brother telling me about this profession when I was 15 and saying in Australia there were only a handful of these people. As I explored further over the years I realized this would be a great profession for me to get a head-start into the business world, to rise quickly to get to a stage early on where I manage an operation or business. My career evolved in this direction and I continued to move away from the actuarial profession and more into management and business. When two years ago it was suggested that I should run for council it was with a little concern as I never prided myself of being an actuary, but I ran for council anyway.

Over the last two years I have been so proud to be an actuary. To work with wonderful and so talented people whether they are the more senior actuaries such as Steve Miles, Roddy, Stuart or Peter that have seen most things or the up and coming actuaries that show a great dedication in changing the profession. I have truly seen the power of how a relatively small group of dedicated, incredibly capable and hard working people can make a significant change. We are all extremely busy and that is why we treasure any contribution you can make and these contributions will be valuable and I assure you make a change. Now not everyone is going to join council, but how can you contribute more and make a difference to the society. I was at the Philippines annual actuarial meeting a few weeks ago and the keynote speaker wrote a famous book that was titled *The 12 Little Things Every Filipino Can Do to Help Our Country*. These were small things and practical things that each person could do that would make a small, but permanent difference to their country. I have gone half way and came up with a list of 6 little ways to contribute to the ASHK:

1. Attend at least one event. Whether it is a lunch or evening meeting, our joint regional seminar, our first risk management seminar in Macao, AGM, Annual Dinner or one of our social events.
2. Fill out a survey. When the ASHK asks for your opinion we truly seek it. Take 5 or 10 minutes to complete the survey.
3. Speak proudly about being an actuary and also more specifically a HK actuary especially to non-actuaries. Most of us are actuaries only because someone in the profession encouraged us to do so.
4. Encourage actuaries new to HK to join. We have actuaries from 15 countries and this is one of the unique characteristics of the ASHK and the HK actuarial profession. Newcomers bring in new knowledge and in return the ASHK can obviously assist in their familiarization with HK actuarial issues.
5. Join something. Whether it is a committee, working group, council or whatever. The working groups are our future and without these we will not achieve our goal of providing guidance and protection to our actuaries.
6. As importantly - Allow and encourage your staff to join something. The chief actuaries in the audience control the ASHK's ability to have the younger members of our profession involved. They are the future of our profession and the earlier they get involved the better.

So I close my speech today by thanking you all for the opportunity to serve you as the President of the ASHK over the next year. I thank Sim for her guidance and the council for its support in the upcoming year. My best wishes to you and see you at the next ASHK event.

(Quoted from the Presidential Acceptance Speech in the ASHK Annual General Meeting on 13 December 2007.)

Council Update



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1. China Committee
(Chairperson: Mr. Stuart Leckie)

The China Association of Actuaries (CAA) has been officially formed. ASHK China Committee member, Mr. Dominic Lee will attend the launch ceremony. CAA is keen to join the IAA. The ASHK China Committee will continue to provide support and assistance to the CAA in applying for IAA membership. It would be prudent for ASHK to maintain and build good long-term relations with the CAA since there is a growing trend of ASHK members moving to work in mainland China.

2. Education Committee
(Chairperson: Prof. Wai-Sum Chan)

The objectives for the coming year are:

- Promoting the actuarial profession in Hong Kong to the general public (e.g., via Career Expo, talks to secondary school / university students)
- Building an "Education Corner" on the ASHK website
- Organizing education seminars

3. Experience Committee
(Chairperson: Ms. Amy Pei-Chun Tsai)

New Mortality and
Critical Illness Experience Study

The ASHK Experience Studies Committee will conduct a new experience study for mortality and critical illness benefit written in Hong Kong in 2008/2009. The new study is aimed to provide mortality and morbidity tables as industry benchmarks for both pricing and reserving, and provide a database for analysis of historic and emerging trends in key factors that influence life insurance product profitability. We hope that the ASHK Experience Studies Committee is able to draw on individual life insurance companies' support over the coming months in the provision and verification of experience data. Letter with details to individual companies will follow soon.

4. General Insurance Committee
(Chairperson: Mr. Pang-Hsing Chye)

The chief objective is to work more closely with the HKFI. Unlike life companies where the actuary plays an integral role, the non-life actuary plays more of a peripheral role. The underwriter takes more of a centre stage in a non-life company.

The Committee's general objective for the year is to come out of the corner and engage the GI industry and try to figure more prominently in the day-to-day operations of GI companies, as opposed to just being involved in reserve valuations. This will create more job opportunities for actuarial students as currently their choices on the GI-side are extremely limited.

5. Investment & Risk Management Committee
(Chairperson: Ms. Naomi Burger)

ASHK hosted the 1.5-day Risk Management in Financial Services Regional Conference in Venetian Macao on 28-29 Jan 2008. Over 220 professionals from Hong Kong and the region participated in this event to discuss and debate issues on risk management and how it can provide a potential future for the actuarial profession.

In the meantime, we would like to extend sincere thanks to the Main Sponsor, Gold Sponsors and Silver Sponsors for their kind support and contribution.

6. Life Insurance Committee
(Chairpersons: Mr. Sai-Cheong Foong & Mr. Simon Walpole)

The 2 main focuses of the Committee are the Appointed Actuaries Symposium and the 4 working parties. The format of the Symposium is to have less updates and more time for guidance notes; perhaps through separate evening talks prior to the Symposium. It would be useful to receive formal feedback on exposure drafts before the Symposium and to involve the OCI. There is also a need to wrap up the tasks of the working parties. The IA has issued the revised GN7 and MPFA has issued guidance for complying with GN7. ASHK will review MPFA's exposure draft and the corresponding ASHK AGN8 to decide if updates in the AGN8 would be required.

7. Membership and Publications Committee
(Chairperson: Mr. David Waples)

The Committee's objectives for the year are:

- Focus on improving communications internally and externally
- Issue quarterly newsletters in a timely manner
- Launch the new ASHK website by 3rd quarter

Look out for Actuarial Circle networking event later this year!

8. Strategy and Projects Committee
(Chair: Mr. Peter Luk)

Healthcare Committee

The first meeting was held on Friday December 21, 2007. A letter expressing our interest to get involved was subsequently sent to Dr. Chow, Secretary for Food and Health.

The government welcomed comments from the ASHK on the healthcare reform paper. The Committee had stressed to the government that ASHK's contributions would only be on the technical issues. Since the healthcare issue has become a political issue, it is suggested that perhaps the Committee could provide both the pros and cons for the various stakeholders on the question of who should pay. Prof Chan is the actuarial consultant to the government on the healthcare project.

Feature Articles



Author's Profile:

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"A variable annuity
is a combination of
an underlying
investment-linked
product with
optional guaranteed
benefits."

Variable Annuities - Pricing and Risk Management of Complex Guarantees..... By James Creedon

Variable Annuities ("VA") offer the opportunity for life insurance companies to bridge the gap between traditional products with guarantees but low expected returns, and investment-linked products which offer equity market exposure but limited policyholder protection. While this can be a compelling offering to customers, the design, pricing and risk management of these products present new challenges to the industry. The nature and complexity of these products forces companies to use advanced techniques and also invest significantly in technology to manage this type of business. However, companies with the most advanced risk management frameworks and infrastructure can be rewarded with regulatory and rating agency capital relief, and will be in a better position to offer the wide range of investment choices and product features desired by customers.

Key features and product pricing

A variable annuity is a combination of an underlying investment-linked product with optional guaranteed benefits. Early versions may have only included guaranteed minimum death benefits, but we now see these products offering living or maturity benefits. These living benefits are normally classified into the following three categories:

- Guaranteed minimum accumulation benefit, guaranteeing a minimum benefit on maturity or reaching the guarantee date.
- Guaranteed minimum income benefit, guaranteeing a minimum income stream, or a guaranteed annuity conversion basis, on or after the guarantee date;
- Guaranteed minimum withdrawal benefits, guaranteeing a minimum income stream through regular withdrawals from the unit fund. These can be guaranteed for a fixed term or, in the latest variable annuity products, for life.



These basic guarantees can be expressed in a number of ways such as a percentage of premium or percentage of the account balance. Also, they can include additional features such as "resets", where the guaranteed benefit amount can be increased at specified dates.

By blending these guarantee benefits and features with the underlying investment-linked product, the provider can build a sophisticated offering tailored to specific customer segments. The interaction of the guaranteed benefit and the investment fund means that these products are similar to complex financial options traded in the financial markets. Given this, standard deterministic approaches to pricing the contracts do not capture the full range of risks such as exposure to changes in market interest rates or the volatility of the underlying funds. Therefore, a stochastic approach is required to price the guarantees.

Historically, a number of firms used a stochastic “real world” approach to pricing VA guarantees. A “real world” approach is where the stochastic simulations are calibrated to historic market data and include the expectation of excess returns on riskier assets. As experience emerged, this approach was shown to significantly understate the true cost of the guarantee. In particular, it resulted in a much lower value than was quoted in the financial markets or by investment banks for similar options or than the cost of actually hedging the guarantees in the financial markets. A number of companies incurred significant losses on VA products priced using this approach and now the vast majority of firms in the U.S., Europe and Asia price these guarantees using the same approaches used by investment banks and other players in the financial markets.

“The current best practice approach to accurately value the guarantees is to use a stochastic simulation model, with the simulations calibrated to the appropriate market values.”



As complex options, VA guarantees should be priced using financial economics. While there is no market price for most of the specific options in VA products, the cost of the option should be valued in line with market prices of similarly traded options such as equity-index put options. This approach also links the cost of the guarantee calculated for pricing to the cost of hedging it using derivative instruments, which is discussed later. One approach is using closed form solutions such as the Black-Scholes formula. However, given the complex features of the guarantees, no closed form solutions are available for valuing the cash-flows associated with most variations of VA products, although these can be used to check the results using a more complex approach.

The current best practice approach to accurately value the guarantees is to use a stochastic simulation model, with the simulations calibrated to the appropriate market values. The market values include the yield curve and appropriate implied volatilities for interest rates and for the underlying investment funds. This market-consistent cost of the guarantee also provides a starting point for the financial risk management of the product.

Alongside the market risk parameters, another key assumption in the pricing of the guarantee is the allowance for dynamic policyholder behaviour to changes in economic conditions. The effect of policyholder behaviour is normally greater for VA products than for more traditional products as the guarantee is more transparent and, in the vast majority of cases, it results in a higher cost of the option than using a deterministic lapse assumption. Data on policyholder behaviour is relatively scarce with limited or no experience in some markets. In pricing the guarantees, most companies assume that policyholders do change behaviour to reflect the value of the guarantee but do not act fully rationally to maximize its value. The estimates of policyholder behaviour can have a significant effect on the cost of the guarantee and, as experience emerges, it will be interesting to see how policyholders react to market conditions.

Risk Management for Variable Annuities

Even if the product is priced consistently with market prices, insurance companies need to manage their risk exposure to variations in experience. As equity backed options, the value of VA guarantees can change considerably in a short space of time creating a large risk exposure for the company. The main risks in VA products include:

- Market risk, which is the risk of adverse changes in market conditions;
- Basis risk due to mismatches in the performance of the investment funds and the stockmarket indices underlying the hedging assets (e.g. from non-hedgeable assets in the funds or active fund management);
- Policyholder behaviour risk, where policyholders behave differently relative to economic conditions than assumed in pricing or hedging;
- Liquidity risk: The risk that the insurance company does not have the liquidity to purchase or provide collateral to support the hedging assets or the risk that the market for the hedging instruments becomes illiquid.

The starting point for the risk management of your VA business is in the product design phase. A large number of risks can be eliminated or reduced considerably with smart product design. Product design features that can reduce risk include:

- Selecting investment funds so that the guarantees can be hedged efficiently to reduce market and basis risk;
- Restricting policyholder investments in riskier funds;
- Offering incentives to manage policyholder behaviour.

The next major obstacle to managing a block of VA business is mitigating the market risk. If unhedged, the exposure to VA guarantees causes a significant exposure to poor returns on the underlying investment funds and, for income or withdrawal benefits in particular, to changes in interest rates.

The market risk can be reduced by reinsurance, static hedging of the guarantees with an exotic option or using dynamic hedging.



The advantages of reinsurance or static hedging are that it allows quick entry to a market, removes the need to setup an in-house hedging program and reduces, but does not remove, the need to build up expertise in risk management and infrastructure for VA products. The main disadvantages are that these approaches mean passing on an expected profit margin to a third party, they reduce the flexibility available in the product design and the reinsurer or investment bank may not accept all risks, such as variations in policyholder behaviour, leaving you with significant residual exposure.

“Even if the product is priced consistently with market prices, insurance companies need to manage their risk exposure to variations in experience.”

“In addition to managing the investment risk, companies also need to monitor the key other risks such as persistency and how persistency rates vary with market conditions.”

In the U.S. and Europe, the largest writers of VA business have built in-house hedging programs to dynamically hedge the VA market risk. Dynamic hedging is based on creating, and actively managing, an asset portfolio that moves in the same way for changes in market conditions as the value of the guaranteed liabilities. This means that the asset portfolio should meet any shortfall arising from the value of the guaranteed benefits being greater than the value of the investment funds under all possible financial market situations.

This works by determining the sensitivity at each point in time of the value of liabilities to key economic and market factors and creating a portfolio with these same characteristics. The key economic factors include the value of the underlying investment funds and interest rates.

As an example, for a GMAB product we can see that the value of the guarantee increases as fund values fall as the value of the shortfall at maturity increases. Therefore, to hedge this exposure we would want an asset that increases in value as the fund values increase. One example of such an instrument is to short-sell an equity index future. This means that we receive income as markets fall and vice versa.

To build a complete matching hedge portfolio, assets need to be selected so that the overall portfolio moves broadly in line with the value of the liabilities for changes in market conditions. However, the sensitivity of the liabilities changes regularly, so the hedge assets also need to be re-balanced. This normally involves calculating the value of the liabilities, its sensitivities and trading the required assets on a daily basis to allow regular updating of the hedging portfolio.

The people and I.T. resources required for this are significant with, on the people side, a standard hedging program involving actuaries, accountants, financial modelling and I.T. specialists and traders. Also, as the valuation of the liabilities and its sensitivities requires stochastic modelling, to value these on a daily basis requires a large amount of dedicated computer processing power and very efficient modelling techniques. Companies with dynamic hedging capabilities have set up dedicated hedging teams to manage this process, and to monitor their positions constantly as markets move.

A key issue in the ability to hedge VA guarantees is the ability to find market instruments that move in line with the guarantees. If the underlying investment funds match closely to an equity market index such as the S&P 500, this is relatively straight-forward as equity index futures contracts are available. However, if the investment funds are actively managed, region- or industry specific finding matching assets can be more difficult. The risk of differences between the movement in the value of the hedging assets and the liabilities is known as “basis” risk and needs to be monitored closely to check the effectiveness of the hedging strategy. This risk also highlights the need to consider the risk management strategy during the product design phase – A company may want to offer customers funds that would be difficult to hedge effectively which increases the risk exposure of the company.



A further issue in some markets is that the regulatory environment can restrict or remove the ability to implement a dynamic hedging program. For example, some markets do not allow insurance companies to short-sell or purchase derivative contracts even where this is used to match the liabilities. Also, while the hedging is normally carried out on a mark-to-market basis, traditional statutory and accounting bases can result in volatility of results on these bases. While it is the responsibility of the insurance company to demonstrate the effectiveness of its hedging program to the regulator, as regulatory and accounting bases move towards a mark-to-market approach, such as Solvency II, these barriers to hedging will be reduced.

In addition to managing the investment risk, companies also need to monitor the other risks such as persistency and how persistency rates vary with market conditions. Moreover, there are significant operational risks in managing VA business –from unit pricing and transaction processing through to ensuring the hedging process is robust and limiting the chance of human error.

Why dynamic hedging?

While setting up dynamic hedging can be a large initial investment, it offers a number of significant advantages including:

- A deeper understanding of the risk
- Limited credit risk as market-traded instruments are used
- Additional flexibility in product design as not limited to the options offered by third parties
- Economies of scale in terms of people and I.T. and also the transaction costs of trading on a regular basis
- Ability to react and change trading strategy over time
- Do not pass on a profit margin to a third party



There are downsides – such as the cost of setting up the program – but we are seeing that the largest VA sellers are favouring this approach and see dynamic hedging services as a significant source of advantage over other providers.

Conclusion

Variable annuities have already been a major success story in North America and Japan. These are now spreading quickly to markets in Asia including Hong Kong, but the challenges faced by insurers should not be under-estimated. However, with the right pricing and risk management processes in place insurers can overcome these challenges and be well positioned to offer a range of attractive VA products to customers for many years.

“... with the right pricing and risk management processes in place insurers can overcome these challenges and be well positioned to offer a range of attractive VA products to customers for many years.”

Regional Actuarial Services

Interview with Mr. Kent Griffin By Winnie Ching and Adrian Liu



Over the last decade, many multinational insurers have seen their business growing and expanding rapidly in Asia. As the volume of business increases and more new markets are being explored, many companies see the need to set up regional actuarial operations to oversee its Asian businesses.

The setting up of a regional office presented many challenges to companies in terms of culture, personnel and organiza-

tional structure. In this issue of the ASHK Newsletter, we have interviewed Kent Griffin, the Regional Chief Financial Officer of AXA Asia Pacific, to share with us the approach AXA had taken, and also some of the challenges and rewards of having a regional operation.

Q1: Thank you for seeing us today. We understand that AXA's Regional Actuarial Services ("RAS") was set up around three years ago. Can you give us some background on the set up of RAS?

A: Before RAS was set up, the structure of AXA in Asia was that there was a large, well established operation in Hong Kong, with a number of smaller operations in Singapore, Indonesia and China running more or less independently from each other.

Around 2002 to 2003, senior management started to ask the questions of what it really means to be a region, and to research on the idea of setting up a regional structure for Asia Pacific. The objectives of the regional office is on the one hand to provide governance and strategic direction, and on the other hand to benefit from synergies within the company by identifying functions that can be shared among the local offices and putting them under the responsibilities of a regional shared services platform. The RAS was set up as a "shared services center" in response to this initiative.

Q2: What are the key functions that fall under the scope of RAS and how does it work with the local actuarial teams in each of the Asian markets?

A: The RAS is primarily responsible for providing actuarial services on a regional basis, in particular developing and maintaining the technical tools to support common processes that are required by all markets in the region. This enables AXA to provide robust and auditable results in an efficient and timely manner. This does not only enable the actuarial functions to be performed more efficiently but also allow better quality control.



Interviewee:
Mr. Kent Griffin

Regional CFO at
AXA Asia Pacific

"The setting up of a regional office presented many challenges to companies in terms of culture, personnel and organizational structure."

Specific areas of work of RAS includes statutory valuations, profit and value reporting, pricing, capital analysis, asset liability modeling as well as other ad hoc, project type work. RAS is not only responsible for developing the actuarial models and providing the results, but is also relied upon by the local offices in providing additional resources during busy periods as well as providing peer review of work performed by local actuaries. Effectively, RAS serves as an internal actuarial consultancy that is familiar with each of the nine Asian markets we operate in, and at the same time is close to the regional management and in tune with the regional company strategy.

Whenever the local actuarial teams need RAS to perform a particular task they are required to put in a formal request, RAS will then quote the expected man-days and levels and areas of experience and technical expertise that are required for the task. Each local team is given an annual budget to fund the usage of shared services resources.

Q3: What do you see as the key benefits of having RAS for Asia and why was Hong Kong selected as the location for RAS?

RAS needs to instill strong, robust and auditable financial reporting and analyses in the region. In order to achieve this goal, a large pool of capable talent is essential. This is possibly the most important reason for setting up RAS in Hong Kong, despite its salary and rental levels being the one of the most expensive in the region.

I think the main benefits of having RAS is that it has created a collaborative culture to share knowledge and experience across the region. I think it may be more noticeable in the area of product development where tools or systems developed for a new product in a particular market can readily be adopted in another market when they are launching a similar product. RAS offers a large pool of talent that each of the nine local offices can leverage and enables a strong knowledge management process to be built regionally.



From the perspective of career development for our actuaries, RAS can develop people with a broad knowledge across nine markets without the need to physically rotate them into these markets.

Having said that we must not underestimate the importance of the role of the local actuaries. They play essential and crucial roles in the operation of the business by communicating with the local authorities and understanding the market subtleties which are critical to the success of the business.

Q4: You mentioned that one of the greatest benefits of having RAS is to provide standard tools, such as models, programs or processes, that can be used across all local offices and are robust and easily auditable. How does each of the local offices get confidence in the work done by RAS, and be comfortable with outputs from such models, programs or processes?

I think it is very important to have a relationship of trust and professionalism between RAS and the local actuarial teams. It would not be value adding for the local teams to spend their efforts in checking very detail of the work of RAS. RAS provides results to the local offices and the local teams perform reasonableness checks on the results to ensure that they are comfortable to take informed decisions to drive the local business.

“...The main benefits of having RAS is that it has created a collaborative culture to share knowledge and experience across the region.”

Q5: What are some of the key challenges of RAS?

While RAS has been operational for a number of years, there is always scope to improve the overall processes. Besides technical aspects, one key challenge is the continual need to better communication between RAS and the local teams, and this can be complicated by language and cultural differences. Another challenge is how best to allocate finite resources to requests by all the local teams.

Q6: How is the performance of RAS evaluated?



Performance evaluation of RAS is done both quantitatively and qualitatively. On the quantitative sense we measure the time or man days it takes RAS to complete a certain task e.g. how long does it take to perform a VNB (Value of new business) analysis, etc. We also assess how well RAS has performed its function by measuring the number of corrections that needed to be made in completing a task, whether a piece of work need several revisions to finalize or is error-free from final draft.

We also perform qualitatively assessment through seeking regular stakeholders' feedback on the work performed. Credits and recognitions are also given to RAS efforts that are out of scope of the assignment and for initiatives to devise and apply new or alternative methodologies in performance of the required tasks.

Of course, RAS strives to do a great job so that regional management in Hong Kong and local teams alike can share the benefits of synergies across the region.

“... One key challenge is the continual need to better communication between RAS and the local teams, but this is often complicated by language and cultural differences.”

Puzzle Corner

Do you know the answers?

Question 1



Question 2



Answers: (1) Margin Squeeze (2) VNB

Market Update

1. Mandatory Provident Fund (MPF)

Several revised Guidelines and Code have recently been approved by the Management Board of the Mandatory Provident Fund Schemes Authority.

Revised MPF Guidelines

1. Guidelines on Custodians (Guidelines I.3);
2. Guidelines on Application for Approval of Constituent Funds (Guidelines I.5);
3. Guidelines on Application for Approval of Pooled Investment Funds (Guidelines I.6);
4. Guidelines on Annual Statements of Registered Schemes (Guidelines II.4);
5. Guidelines on Debt Securities (Guidelines III.1);
6. Guidelines on Reports Relating to Payment of Mandatory Contributions (Guidelines IV.2);
7. Guidelines on Election Forms for Transfer of Accrued Benefits (Guidelines IV.3);
8. Guidelines on Payment of Accrued Benefits – Documents to be Submitted to Approved Trustees (Guidelines IV.4);
9. Guidelines on Contribution Period in Respect of a Relevant Employee (Guidelines IV.11);
10. Guidelines on Person Exempt under Section 4 (3) of the Mandatory Provident Fund Schemes Ordinance (Guidelines IV.15);
11. Guidelines on MPF Exempted ORSO Schemes – Application for Exemption of ORSO Registered Schemes (Guidelines V.2); and
12. Guidelines on MPF Exempted ORSO Schemes – Preservation of Benefits (Guidelines V.4)

Following the passage of the Mandatory Provident Fund Schemes (Amendment) Bill 2007 by the Legislative Council on 9 January 2008, the Mandatory Provident Fund Schemes (Amendment) Ordinance 2008 was gazetted on 18 January 2008. To reflect the new legislative amendments, 12 sets of relevant Guidelines as set out above have been amended accordingly. Further amendments have also been made to two sets of these relevant Guidelines (Guidelines IV.2 and IV.4) to more accurately reflect the current scheme operational arrangements.

Code on Disclosure for MPF Investment Funds (“Code”)

In addition, Part F of the 2nd edition of the Code has been amended to set out the new content requirements for annual benefit statements. Consequential amendments to Parts A and G as well as the Explanatory Notes of the 2nd edition have also been made.

Copies of revised Guidelines and the latest edition of the Code could be downloaded from the MPFA website at <http://www.mpfa.org.hk>.

2. Healthcare Reform

The Government released its Consultation Document on Healthcare Reform on 13 March 2008. It set out 6 different options for the supplementary healthcare financing, namely, Social Health Insurance, Out-of-Pocket Payments, Medical Savings Accounts, Voluntary Health Insurance, Mandatory Health Insurance and Personal Healthcare Reserve. Consultation period starts from the date released to 13 June 2008.

An ad hoc Committee chaired by Mr. Peter Luk has been set up. The Healthcare Committee is drafting a response regarding the reform.

The Healthcare Reform Consultation Document and related materials are available at District Offices, major public libraries, public hospitals and public clinics and can be downloaded from www.beStrong.gov.hk.



New Members Welcome

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<p>Fiona Chi-Kwan AU, <i>FIA</i> (2007), Benfield Asia Pte Ltd Kenneth Wing-Yiu AU, <i>FSA</i> (2007), Sun Life Paul CARRETT, <i>FIAA</i> (1998), Goldman Sachs Priscilla CHAN, <i>FIAA</i> (2006), ING Asia/Pacific Oi-San CHOO, <i>FIA</i> (2006), Aviva Ltd J. Peter DURAN, <i>FSA</i> (1977), <i>MAAA</i> (1980), Deloitte Donald KROUSE, <i>FSA</i> (1999), Transamerica Jody Chung-Sze LAU, <i>FSA</i> (2006), <i>FCIA</i> (2006), Sun Life Hui-Chin LOH, <i>FIA</i> (2005), Gen Re Dale POUNDER, <i>FSA</i> (1978), <i>FCIA</i> (1978), <i>FIAI</i>, Sun Life Financial Delme PRITCHARD, <i>FIA</i> (2006), Prudential Carl Anthony REDONDO, <i>FIA</i> (2003), Hewitt Associates Wing F. WONG, <i>FSA</i> (2004), Milliman Inc Joanne Chin-Wen YEO, <i>FIA</i> (2005), Prudential</p>
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Associate
<p>Michael Chi-Hang WONG, <i>ASA</i> (2005), Sun Life</p>
Student
<p>Louis PERROY, <i>FIA</i> (1993) Ray Man-Fai WONG, SOA Student</p>

Membership Upgrade

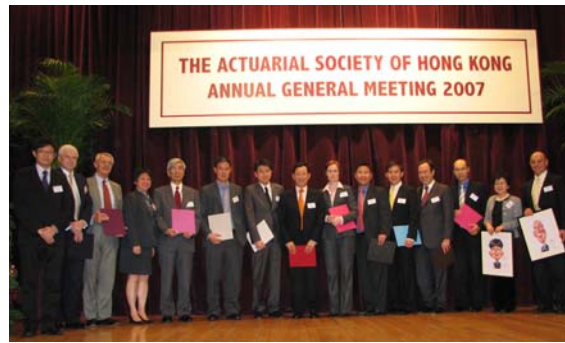
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Student
<p>Gary Ka-Wai CHIU</p>

Events Highlights

ASHK Annual General Meeting, 13 Dec 2007



ASHK Risk Management in Financial Services Regional Conference, Venetian Macao, 28-29 Jan 2008



The Actuarial Society of Hong Kong, 2202 Tower Two, Lippo Centre, 89 Queensway, Hong Kong
Tel (852) 2147 9420 Fax (852) 2147 2497 Website: www.actuaries.org.hk

Note: Views expressed are not necessarily those of The Actuarial Society of Hong Kong

ASHK Evening Talk, 18 Feb 2008



Education & Careers Expo, 21-24 Feb 2008



IAAust President in Hong Kong

The President of the Institute of Actuaries of Australia, Mr. Greg Martin visited Asia in March. The ASHK invited him to give a Lunch-eon Talk on “Capital Management Trends in Insurance” on 27 March 2008.



On the same evening, the IAAust Presidential Dinner was held in the Shanghai Garden in Hutchison House. IAAust volunteers were invited to attend.

SOA Equity-Based Insurance Guarantees Seminar, Hong Kong, 31 Mar - 1 Apr 2008

Day 1



Day 2



SOA Insurance Seminar on Economic Capital, Hong Kong, 2-3 Apr 2008

Day 1

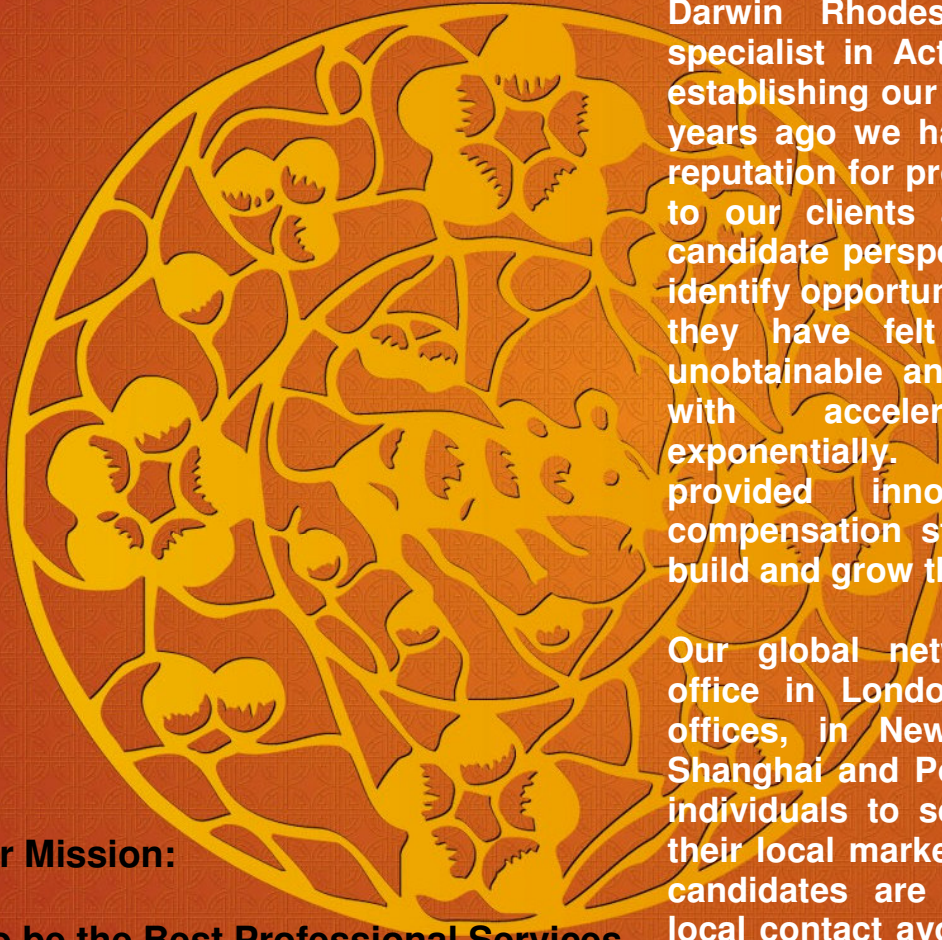


Day 2



DARWIN RHODES

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Prize to give away!

A prize will be presented to the member who submits the first correct entry of **both the Sudoku and history quiz**. Join the game and submit your entry to ASHK Office by email:

actuaries@biznetvigator.com **NOW!!!**



			8	6	4			
7			9		1			4
		6				3		
9		4				5		6
	6						2	
8		1				7		3
		5				9		
2			5		3			1
			4	2	7			

How to play: fill in each square with a number so that each row, column and each 3 x 3 block contains 1 to 9

One of the solutions for last issue's Sudoku:

5	8	4	9	2	1	3	6	7
1	3	2	8	6	7	9	4	5
7	6	9	3	5	4	1	8	2
8	2	3	6	1	5	4	7	9
9	4	7	2	8	3	5	1	6
6	1	5	7	4	9	8	2	3
3	7	8	4	9	6	2	5	1
2	5	6	1	3	8	7	9	4
4	9	1	5	7	2	6	3	8

Know Your History (Name the year in which the following events occurred):

1. A bead and wire abacus is used in Egypt
2. Fermat and Pascal lay the groundwork for probability theory
3. William Jones introduces the symbol p to represent the ratio of the circumference to the diameter of a circle
4. Nobel prizes are established
5. Martin Cooper invents the cell phone

Message Board (Contributed by members)

Coke Chicken (cooking time: about 30 mins)

Ingredients:

- 1 Whole Chicken
1 can of Coca Cola
1/2 bowl of Dark Soya
5 whole pieces of Garlic



1. Heat up some oil in a wok and add garlic
2. Fry whole chicken over medium flame till golden brown. Approximately 5 mins
3. Pour dark soya over chicken. Pour 1 bowl of coca cola over chicken and turn to high flame for 3 mins
4. Reduce flame and cover the wok. Pour some more coca cola over chicken and spoon gravy over chicken
5. Turn chicken over and cover wok. Add remaining coca cola and continue to spoon gravy over chicken. Cover wok. Poke drumstick with a chopstick to check if chicken is cooked
6. Dish up and cut chicken into pieces with poultry scissors

Crispy Chocolate Chips Cookies

Ingredients:

- | | |
|-----------------------|-------------------------|
| 70g Butter (softened) | 1-2 tbsp Low-fat Milk |
| 50g Icing Sugar | 1/2 tsp Vanilla Extract |
| 95g Flour | 1/4 tsp Salt |
| 1 Egg Yolk | 1 cup Chocolate Chips |

1. Preheat oven to 180 °C for 10 mins
2. Cream butter, icing sugar and egg yolk
3. Beat in salt, vanilla extract and low-fat milk
4. Combine the sieved flour
5. Stir in chocolate chips
6. Drop dough by spoonfuls onto ungreased baking sheet
7. Bake for about 10-15 mins in the preheated oven, or until edges nicely browned
8. Let stand for 2 mins on cookie sheets; move cookies to wire rack to cool



Obituary

Betting Supremo Slips Away

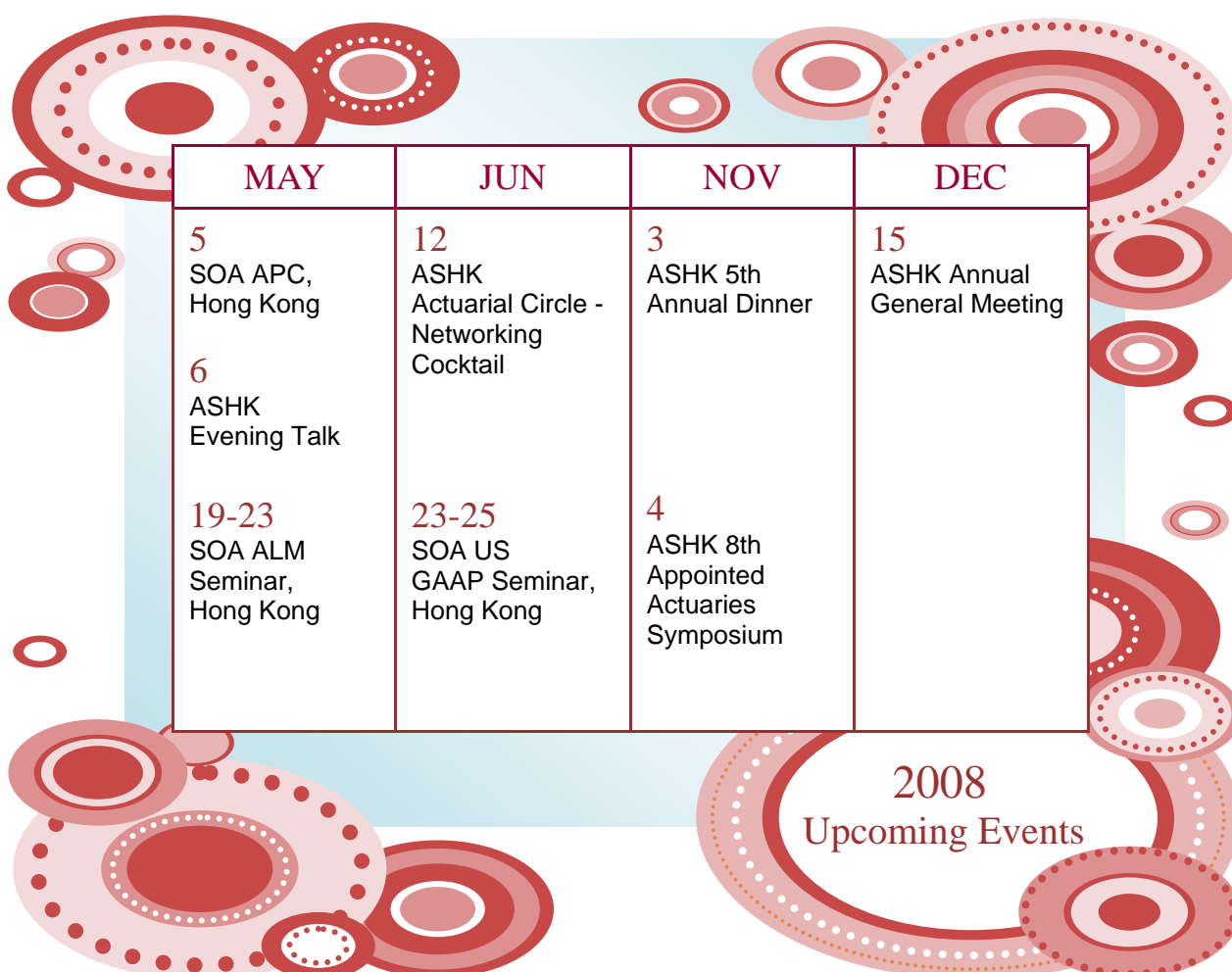
The South China Morning Post of 28 January carried news of the death of Australian Alan Woods, erstwhile actuary and the world's most successful horse-racing gambler.

Born in 1945 in Murwillumbah, New South Wales, Woods showed an early aptitude for mathematics at school but was a losing punter in his earliest days at university and gambling played little part in his life until his 30s. It was while working as an actuary in the late 1970s that Woods learned to count cards at blackjack and became a serious gambler for the first time in his life. He travelled the world for the following three years as a professional card-counter, undertaking all kinds of disguise and subterfuge to avoid identification by the world's casinos.

However, his earnings at blackjack were tiny compared with his subsequent career in racing. Woods turned to horseracing in New Zealand in 1982, then shifted his life and focus to Hong Kong, and its big betting pools, in 1984. A founding partner in the earliest computer betting team in Hong Kong, which split after a dispute between the partners in the early 1990s, Woods established his own hugely successful betting operation, with employees based around the world. He had built a fortune estimated at more than £300m before his death.

Woods grew to the point of dominating the Hong Kong betting scene in recent years, over and above other successful computer teams. He enjoyed his wealth and was famed in Hong Kong racing circles for his bacchanalian parties and celebrations. Once a regular in Wan Chai's bars and nightclubs, Woods had become more reclusive and relocated to Manila several years ago, but his operation continued to lay out between 1% and 2% of Hong Kong's entire annual racing turnover (which totalled \$64bn in the last completed season).

(This article first appeared in March 2008 of The Actuary Magazine (UK) and is reproduced with permission.)



MAY	JUN	NOV	DEC
5 SOA APC, Hong Kong	12 ASHK Actuarial Circle - Networking Cocktail	3 ASHK 5th Annual Dinner	15 ASHK Annual General Meeting
6 ASHK Evening Talk			
19-23 SOA ALM Seminar, Hong Kong	23-25 SOA US GAAP Seminar, Hong Kong	4 ASHK 8th Appointed Actuaries Symposium	

2008
Upcoming Events

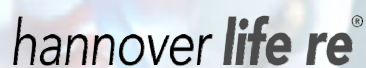
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We welcome members' contribution to the following sections of the ASHK Newsletter: Feature Article, Actuaries on the Move, Do you Sudoku? and Message Board.

Send correspondence to the ASHK Office at the address below. When sending in correspondence which has been created in a word processing program, when possible, email a copy of the file to either the editor's or the coordinators' e-mail address. Publication of contributions will be at editor's discretion.

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