May 2012 Issue

Newsletter by the Actuarial Society of Malaysia

the malaysian actuary

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About the Malaysian Actuary

The Malaysian Actuary is a regular newsletter/magazine published by the Actuarial Society of Malaysia.

This publication is for general information purposes only, and intended only for members of the Actuarial Society of Malaysia. While all reasonable efforts are made to provide correct information, the Actuarial Society of Malaysia does not guarantee that the information provided in this newsletter is complete, reliable and accurate in every aspect. The articles in this newsletter are based on the views of the individual authors and do not necessarily represent the views of the Actuarial Society of Malaysia.

The Malaysian Actuary welcomes interested members who would like to contribute to the newsletter in any way, either by submitting articles relevant to the actuarial industry, conducting interviews or contributing puzzles. With regards to submitted articles, the Malaysian Actuary reserve the rights to accept, reject or request changes before publishing the articles. In addition, the editor may amend the article for grammar, punctuation and spelling. For more information on contributions, please contact the Malaysian Actuary editor at *editor@actuaries.org.my*.

Feedback on the Malaysian Actuary can be provided by filling up the form on the last page of each issue and submitting it to *editor@actuaries.org.my*. Nominations for suitable candidates for the “Up Close and Personal” section can also made via the same form.

Editor's Note

It's been a quiet few months on the communications front, but rest assured, we have not forgotten the promise we made at the AGM to all you members. What we were really doing was working to bring you an upgraded version of the newsletter. So here, we present to you, the first issue of the all new Malaysian Actuary!

From now on, this newsletter will no longer just consist of event updates, but also contain topics that we hope members will be interested to read about. These articles can touch on a wide range of topics, be it technical, professional or social in nature.

In this issue, we introduce to you a useful formula that general insurance actuaries can apply in reserving. We also feature some of the proposed changes to the education structure under the SOA and IFA.

We are constantly on the lookout for interesting articles to include in our newsletter, so if you have something inside you that you're simply dying to share, please contact us and we will gladly relief you of that burden lingering in your heart!

All work and no play makes Jack a dull boy. So we've also added in a "Just for Fun" section to tickle the problem-solving itch that surely exists at the back of every actuary's mind.

That's not all, but I won't bore you here – just read on to find out what else is in store!

And finally, if there's anything at all that you don't like about the newsletter, please give us your feedback, and we will try our best to make the necessary amendments ☺

We hope that you enjoy this issue of the all new Malaysian Actuary (and every other upcoming issue too)!

Cheers,
Charlene
Editor, Malaysian Actuary

President's Address

All too soon the mid-year is fast approaching! How have you used your first half of the year? I hope it has been filled with wonderful and productive times.

Before we step into the 2nd half of the year, I'd like to encourage members to spare a moment in your schedule to visit the International Actuarial Association (IAA) website to delve into the knowledge base and opportunities available. In addition to keeping abreast with the happenings of our local actuarial body and respective actuarial examination body, involvement in IAA is advantageous.

In the recent years, IAA has increased their presence in the Asia particularly with the organization of seminar and conferences in the region. Besides seminar and conferences, there are many resources available online through the IAA website such as papers and webcasts which provide food for thought. In fact, IAA has sections which cater to the current main actuarial practice areas namely Financial Risks and Enterprise Risk Management, Non-Life Insurance, Health, Life Insurance, Consulting, Pensions, Benefits and Social Security. Members can join the informative webcasts offered by IAA, where experienced professionals from around the globe offer their insights into the subject matter. Each section also offers prizes each year for the best paper submitted by members. In the past ASM sponsorships, I have seen an increasing number of members submitting papers to our sponsorship and I strongly commend members who have initiated writing papers on subject matters of their interest. The coveted prize by IAA is an added incentive in addition to the ASM sponsorship. Past winning papers are also available online for members and are interesting reads.

Besides the above, it interests me to note that IAA also has a section for Actuaries Without Borders (AWB). Much like the well-known Doctors Without Borders, our actuarial profession has also been provided with a platform in which we are able to serve those in need of our expertise and to foster the spirit of volunteering, irrespective of geographical boundaries. In the case of our actuarial profession, AWB sets to service entities and organizations particularly in countries which lack actuarial resources but are in need of actuarial advice. So who knows, in the future, the term "Actuaries Without Borders" might get mentioned in movies and TV dramas as often as "Doctors Without Borders"!

Till the next newsletter issue, happy reading!

Out and About...

MAA is now Zurich Insurance Malaysia Bhd.

Compulsory travel insurance for MATTA members from 1 March 2012. Appointed insurers: Ace Jerneh, Chartis, Hong Leong MSIG, Kurnia, Lonpac, RHB Insurance.

Compulsory medical coverage for foreign workers by June 2012. 25 companies and 2 3rd-party claims administrators participating.

ING selling Asia Pacific insurance operations. Potential bidders: Korea Life, AIA, Prudential, Great Eastern, Manulife, Generali, Metlife. Bid deadline May 2012.

HSBC to sell general insurance business to AXA and QBE for USD914mil.

RBC for Takaful expected to be effective January 2013 or 2014.

Etiqa considering acquisition in Indonesia; STMB expects Indonesian unit to generate 50% of its profits, from < 10% now.

Tune Money likely to buy controlling stake of 74.16% in Oriental Capital Assurance Bhd (OCA). Currently held by G Team.

Kurnia to be sold to AmG for RM1.55b, making it the largest general insurer in Malaysia.

DRB and Singapore's UOB may sell stake in Uni.Asia Life and General.

Japanese Marubeni Corp to buy 22% in Singapore's ACR for USD250mil.

Aviva may sell 49% stake in CIMB Aviva.

8 providers for Private Retirement Scheme (PRS) approved – AmInvestment Management, AIA, CIMB-Principal Asset Management, Hwang Investment Management, ING Funds, Manulife Unit Trust, Public Mutual, RHB Investment Management.

Approximating Case Reserves from an Incomplete Period's Claims Data

Kelvin Hii (FIAA, FASM)
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When performing the valuation of general insurance liabilities, one may choose to perform the valuation based on an incomplete period's set of data. Usually this valuation is performed as a "pre-run" with the intention of getting a feel of what the results could be. For example, one may choose to perform a year-end valuation based on the 11-months data (instead of the full 12-months data) to get a rough feel for the year-end result before the year-end itself.

The grossing-up of claims paid data is straight forward. By assuming that claim payments are uniformly distributed throughout the year, one can approximate the 12-month claims paid amount by grossing-up the 11-month claims paid amount by a factor of 12/11.

The approximation of case reserves is slightly more complicated. Given the 11-months' claims data (i.e. 11-month claims paid amount and case reserves as at the end of the 11-month), how should one estimate the case reserves as at the end of the 12-month? One approach would be to assume that the claims are reported uniformly throughout the year, thus selecting a case reserves amount such that the 12-month claims reported amount equals the 11-month claims reported amount grossed-up by a factor of 12/11. If this approach is adopted, there exists a useful formula that helps approximate the case reserves when grossing-up claims data from an incomplete period.

Formulae:

Assume the following timeline:

```
  |------------------------------------------------------|------------------|
t=a                                                     t=y                t=z
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where

"a" represents the start of the period of interest

"z" represents the end of the period of interest

"y" represents the a point in time in between the start and the end of the period of interest

Let

$\text{Pd}\ (a, y) := \text{Amount paid between t} = a \text{ and t} = y$

$\text{CR}\ (a) := \text{Amount of case reserves as at t} = a$

$\text{CR}\ (y) := \text{Amount of case reserves as at t} = y$

$\text{Rep}\ (a, y) := \text{Amount reported between t} = a \text{ and t} = y$

If we assume that claims are paid and reported uniformly across the period of interest, then we can approximate $\text{Pd}\ (a, z)$ and $\text{CR}\ (z)$ as: -

$$\text{Pd}\ (a, z)\ \approx \frac{z - a}{y - a}\ \text{Pd}\ (a, y)$$

$$\text{CR}\ (z)\ \approx \frac{z - a}{y - a}\ \text{CR}\ (y) - \frac{z - y}{y - a}\ \text{CR}\ (a)$$

Examples:

Example 1: If we want to approximate January 2012 – December 2012 data based on January 2012 – November 2012 data:

$$\mathrm{Pd}\ (Jan12, Dec12) \approx \frac{12}{11}\ \mathrm{Pd}\ (Jan12, Nov12)$$

$$\mathrm{CR}\ (Dec12) \approx \frac{12}{11}\ \mathrm{CR}\ (Nov12) - \frac{1}{11}\ \mathrm{CR}\ (Jan12)$$

Example 2: If we want to approximate April 2012 – June 2012 data based on April 2012 – May 2012 data:

$$\mathrm{Pd}\ (Apr12, Jun12) \approx \frac{3}{2}\ \mathrm{Pd}\ (Apr12, May12)$$

$$\mathrm{CR}\ (Jun12) \approx \frac{3}{2}\ \mathrm{CR}\ (May12) - \frac{1}{2}\ \mathrm{CR}\ (Apr12)$$

Example 3: If we want to approximate January 2012 – December 2012 data based on January 2012 – October 2012 data:

$$\mathrm{Pd}\ (Jan12, Dec12) \approx \frac{12}{10}\ \mathrm{Pd}\ (Jan12, Oct12)$$

$$\mathrm{CR}\ (Dec12) \approx \frac{12}{10}\ \mathrm{CR}\ (Oct12) - \frac{2}{10}\ \mathrm{CR}\ (Jan12)$$

Proof:

$$\text{Pd}\,(a,y) = \text{Amount paid between t} = a \text{ and t} = y$$

Assuming uniform distribution of claims payments between t=a and t=z :

$$\text{Pd}\,(a,z) \approx \frac{z-a}{y-a}\,\text{Pd}\,(a,y) \quad \dots \quad (\text{Eq. }1)$$

$$\text{Rep}\,(a,y) = \text{Amount reported between t} = a \text{ and t} = y$$

$$\text{Rep}\,(a,y) = \text{Pd}\,(a,y) + \text{CR}\,(y) - \text{CR}\,(a) \quad \dots \quad (\text{Eq. }2)$$

Assuming uniform distribution of claims reported between t=a and t=z :

$$\text{Rep}\,(a,z) \approx \frac{z-a}{y-a}\,\text{Rep}\,(a,y) \quad \dots \quad (\text{Eq. }3)$$

Substituting Eq.1 and Eq.2 into Eq.3 :

$$\text{Pd}\,(a,z) + \text{CR}\,(z) - \text{CR}\,(a) \approx \frac{z-a}{y-a}\{\,\text{Pd}\,(a,y) + \text{CR}\,(y) - \text{CR}\,(a)\,\}$$

$$\frac{z-a}{y-a}\,\text{Pd}\,(a,y) + \text{CR}\,(z) - \text{CR}\,(a) \approx \frac{z-a}{y-a}\,\text{Pd}\,(a,y) + \frac{z-a}{y-a}\,\text{CR}\,(y) - \frac{z-a}{y-a}\,\text{CR}\,(a)$$

$$\text{CR}\,(z) - \text{CR}\,(a) \approx \frac{z-a}{y-a}\,\text{CR}\,(y) - \frac{z-a}{y-a}\,\text{CR}\,(a)$$

$$\text{CR}\,(z) \approx \frac{z-a}{y-a}\,\text{CR}\,(y) - \frac{z-a}{y-a}\,\text{CR}\,(a) + \frac{y-a}{y-a}\,\text{CR}\,(a)$$

$$\text{CR}\,(z) \approx \frac{z-a}{y-a}\,\text{CR}\,(y) - \frac{z-y}{y-a}\,\text{CR}\,(a)$$

End

Education Special – Changes in SOA and IFA Routes to Qualification

Charlene Lee
Editor, Malaysian Actuary

SOCIETY OF ACTUARIES (SOA), US – FSA AND CERA REQUIREMENT CHANGES
(Source: Society of Actuaries Feb/Mar 2012 Newsletter)

Requirements up to Associateship – No Changes

In July 2013, there will be some changes to the examination process leading up to qualification as a Fellow of the Society of Actuaries (FSA). The requirements up to the Associate of the Society of Actuaries (ASA) qualification will still be the same, i.e.:

1) Preliminary Education Exams
    a. Probability (P)
    b. Financial Mathematics (FM)
    c. MFE (Models for Financial Economics)
    d. C (Construction and Evaluation of Actuarial Models)

2) Validation by Educational Experience (VEE)
    a. Economics
    b. Corporate Finance
    c. Applied Statistics

3) Fundamentals of Actuarial Practice (FAP) Course

4) Associateship Professionalism Course (APC)

Requirements for FSA – Changes to be Implemented

To go from ASA to FSA, candidates will need to choose one of five specialty tracks. Within each track, the following requirements will need to be completed:

1) 12 hours of traditional examinations (14 hours for CFE track)
2) 3 e-learning modules
3) Decision Making and Communication Module (DMAC)
4) Fellowship Admissions Course (FAC)

A) Change in specialty tracks offered

Current Tracks	New Tracks
Individual Life and Annuities (ILA)	Individual Life and Annuities (ILA)
Group and Health	Group and Health
Retirement Benefits	Retirement Benefits
Finance/ERM	Corporate Finance & Enterprise Risk Management (CFE) ***NEW***
Investment	Quantitative Finance and Investments (QFI) ***NEW***

B) Change in structure of traditional examinations

The 12 hours of exams will now be split into 2 x 5-hour exams and a 2-hour exams, instead of the 2 x 6-hour exams under the current system. For the CFE track, the 14 hours will be done via 2 x 5-hour exams and a 4-hour ERM exam.

C) Change in examination syllabus

In the past, the Finance/ERM and Investment tracks shared one common 5-hour exam – the Financial Economic Theory and Engineering exam (FETE). Now, each track will have its own track-specific exams. Under the CFE track, the candidate must take the 4-hour ERM exam in addition to the 2 CFE-specific exams. For the Investments track, the candidate will be taking a 2-hour exam focusing on Investment Risk Management.

For the existing tracks that are to remain, there will be slight changes to the exam structure, where the first 5-hour paper will focus on basics while the second will be on advanced topics. Currently the split is based on Design/ and Pricing (DP) and Company/Sponsor Perspective (CSP). The 2-hour paper may consist of specialized topics relevant to the track, or may cover basic ERM concepts for the specialty.

The final syllabus and exams have yet to be finalized, but the tentative new exam syllabus is as follows:

Track	First 5-Hour Exam	Second 5-Hour Exam	2-Hour Exam
Individual Life and Annuities (ILA)	• Not nation-specific • Life insurance & annuity marketplace • Product features • Assumptions • Modelling • Monitoring	• Nation-specific • Financial statements and management • Reinsurance • Valuation • Capital and solvency • Professional standards • Audit standards	• Not nation-specific • Asset-liability management • Enterprise risk management

Track	First 5-Hour Exam	Second 5-Hour Exam	2-Hour Exam
Group and Health	• 3-hour portion not nation-specific • 2-hour portion nation-specific • Financial measures • Government programs • Taxation • Regulation • Employee benefits	• Not nation-specific • Disease/claims management • Reserving • Product development • Provider contracting • Employer strategies • Predictive analytics • Business analytics	• Not nation-specific • Risk/enterprise management • Actuarial appraisals • Population management
Retirement Benefits	• Nation-specific • Cost methods • Funding • Regulation	• Nation-specific • Plan design • Accounting • Executive benefits	• Not nation-specific • Retirement plan investment • Risk management
Corporate Finance and Enterprise Risk Management (CFE)	• Corporate finance • Capital structures • Organizational structure and governance • Option pricing • Financial risk management	• Capital management • Financial accounting / taxation • Advanced ERM topics • Decision making process / case studies	<No 2-hour exam. 4-hour ERM paper is required.>
Quantitative Finance and Investments	• Option pricing • Financial modelling • Maths, stats, stochastic calculus • Portfolio management • Fixed income • Equities • Derivatives and hedging • Asset-liability management (ALM) • Liability-driven investment (LDI) • Strategic Asset Allocation (SAA)	• Advanced topics on all the areas in the first paper • Liability manufacturing • Environmental factors (accounting, rating agencies, regulation etc.) • Performance measurement and attribution	• Investment risk management

D) Change in e-learning modules

The FSA e-learning modules supporting each track will undergo some modifications to ensure they coordinate well with the new exam structure and syllabus.

CERA Option

If candidates wish to obtain both the FSA AND CERA qualifications, one of the three e-learning modules must be the Operational Risk module. In addition, candidates must take the 4-hour ERM examination in place of the track-specific 2-hour examination. This means they would have to take an additional 2 hours of examinations in order to get the CERA credential along with the FSA qualification.

This option will not be applicable to candidates taking the CFE track. Under the CFE specialty, candidates must take the Operational Risk module and the 4-hour ERM examination. As such, all candidates qualifying as FSA under the CFE track will also obtain the CERA credential.

INSTITUTE AND FACULTY OF ACTUARIES (IFA), UK – CERA REQUIREMENT CHANGES
(Source: The Actuarial Profession March 2012 Newsletter)

From 1 September 2012 onwards, in order to obtain the CERA qualification, not only do candidates have to complete the ST9 – Enterprise Risk Management examination, but they will also have to attend a compulsory seminar upon passing ST9. The seminar will allow candidates to investigate and discuss practical applications of enterprise risk management. This aspect would not have been able to be covered under a traditional exam.

Hence, the minimum requirements for the CERA qualification from the IFA are now:

1) All Core Technical (CT) subjects, CT1 – CT9
2) All Core Application (CA) subjects, CA1 – CA3
3) Work Based Skills (WBS)
4) Professionalism course
5) Specialist Technical Paper 9 (ST9) – Enterprise Risk Management
6) CERA seminar ***NEW***

By completing 1) to 4) above, the candidate would have been eligible for Associateship. Subsequently, on completing the ST9 exam and attending the seminar, the CERA qualification will be obtained.

Fellows who have taken ST9 either as one of the ST subjects in obtaining Fellowship or as an additional ST subject will also be awarded the CERA credential upon completion of the new CERA seminar.

INSTITUTE AND FACULTY OF ACTUARIES (IFA), UK – PROFESSIONALISM REQUIREMENT CHANGES

(Source: Professional Skills Training Handbook published 25 April 2012)

The old professionalism requirements under the IFA include the following:

1) 1-day Associate Course – to be taken before obtaining Associateship
2) 2-day New Fellows Course – to be taken within a year of qualifying as a Fellow
3) 1-day Professionalism Event – to be attended every 10 years post-qualification

The new requirements are as follows:

1) Stage 1 – Online Professional Awareness Test (OPAT)

Effective: 1 March 2012

Applicable to: All students who join the Profession on or after 1 March 2012.

Description: New students must take and pass this test. Only upon passing will students be allowed to enrol in CT9 Business Awareness Module.

2) Stage 2 – Professional Skills Course (PSC)

Effective: February 2012

Applicable to:
A) Members admitted into the IFA on or after 1 July 2006 AND who have not completed any of the courses under the old requirements; **OR**
B) Members admitted into the IFA before 1 July 2006, but qualify as a Fellow or wish to transfer to Associate after February 2012.

Description:
A) The PSC must be completed i) within one year of qualification as a Fellow or ii) between the 4^{th} and 6^{th} anniversaries of admission to the Profession, whichever is earlier.
B) The PSC must be completed i) within one year of qualification as a Fellow or ii) prior to transferring to the category of Associate.

3) Stage 3 – Professional Skills Training for Experienced Members

Effective: June 2013

Applicable to: Associates and Fellows who have completed the professionalism requirement under the old regime.

Description: Still under development, to be announced.

Up Close and Personal...

with *Teh Loo Hai*

AA-for-hire, consultant, headhunter, blogger and father of 2, Teh Loo Hai (FIAA, FASM) talks about his bold move away from the traditional actuarial career path. All of you out there aspiring to be your own boss – here's some inspiration for you!

Q: Being a very active member of the industry for such a long time, you must have witnessed first-hand the transformation and maturation of the Malaysian actuarial field. What do you think has changed over the past 20+ years?

A: A lot has changed over the past 20 years. We have a lot more qualified actuaries now compared to 20 years back. Our work has also become more sophisticated. We used to be only conducting net premium valuation with practically all assumptions and methodology predetermined for you. Product pricing was done with commutation functions. Everything was on best estimate basis so life was pretty much straight forward.

For the profession, we have seen ASM transforming itself into a more professional body than a social club. A lot more can certainly be done both for ASM and the actuarial profession and in particular I would like to see ASM and the profession playing a more active role in influencing public policy, be it in retirement or in healthcare financing. The profession also has much to offer to the world, we should be in a very good position to lead in setting takaful actuarial standards for example.

Q: So, tell us a little more about your history in the actuarial industry – where you've been, what you've done, and how you chose the path leading to where you are now.

A: I started my career with the NSW Government Actuary's Office after I graduated from Macquarie University in Australia. After spending 8 years with them, I moved on to join Tillinghast Actuarial Consulting Firm in Sydney before I decided to come back home to have a taste of working life in Asia. I then spent a 10-year career with Great Eastern including a good 5 years as their Appointed Actuary. Then I joined PwC in Malaysia but soon decided to come out on my own as a freelance consultant cum actuarial recruiter.

Q: The path you have chosen – consultant (pretty much a one-man show) and headhunter – that's probably not how a normal actuarial fresh graduate would envision his/her career path to be. What inspired you to make this bold move away from the traditional route?

A: Somehow I had always wanted to be my own boss one day. I had even made my aspiration clear during my appraisals a few years before I left my earlier job. Also I thought that with the advance in technology, you could virtually work anywhere in the world but there are not that many employers that allow you to do that. Consider this: why should each of us waste two hours a day in traffic jam to get to work from home and home from work? Since nobody could give me that sort of work environment, maybe I could create one! So I became a freelance consultant but so far have not succeeded much in creating more jobs that let others to work from home.

The headhunting part came about because I felt strongly that the non-specialist headhunters were not doing their job well. In my earlier capacity as appointed actuary, I often received calls from headhunters that tried to sell me manager or even assistant manager posts. Those headhunters definitely did not do their homework before they picked up the phone to call. Also I thought the need of senior actuaries and actuarial staff was not well addressed. When I wanted to quit my job in my earlier career, there was nobody that I could talk to in confidence and I had to search for suitable opportunities on my own and obviously I could not call up each potential employer as very soon the whole industry would know of my intention. So it was with great difficulty that I managed to change job and I didn't have a chance to get advice on what else were out there and what sort of range of remuneration that I could command. With my background I thought I had competitive advantage over non-actuary recruiters in understanding the needs of both employers and potential candidates and I should be able to do a better job. And in business, it matters a lot whether you can do a job better than your competitors.

Q: Another big role you play in the industry is via TAS Search. From your experience in this area, what do you think is the major factor resulting in many Malaysians searching for jobs outside of Malaysia? Is it the working conditions here that appear inferior, or is it more of the explorative attitude of Malaysians that is causing this trend? What do you think can be done to improve the situation?

A: There are many factors involved and I won't be able to list them all here. Generally, the salary level in Malaysia is still lower than some of our neighbouring countries although we have also seen us catching up quite a lot in the last 5 years or so. In terms of career opportunities, Malaysia is still not the business hub for most multi-national corporations (MNCs) as compared with countries like Singapore and Hong Kong where MNCs have their regional offices, so the career choice is comparatively limited. Looking at it on the positive note however, Malaysians are very versatile, have good command of multi languages including English, Bahasa and Chinese, and we are hard working. Hence as Malaysians we have a very strong brand and we are well sought after. I frequently have requests from companies from our neighbouring countries making specific requests that they only want Malaysian candidates!

The sad thing is I almost always managed to get Malaysians to come back home to work only because of family reason and not for other reasons! What can be changed? It is not going to be easy. But basically we need to at least be able to compete on equal footing with our neighbouring countries on those reasons listed above that are draining our talents away.

Q: Lastly, what do you do in your free time for relaxation? Actually, amidst all that AA and consultant work, actuarial talent searching, reading up on current events and updating your blog/facebook, do you really have ANY free time at all?

A: Free time? Yes, how we all wish that we have more of it. I think it all boils down on efficiency. I am actually constantly looking for ways to increase efficiency and continuously strike for a better work-life balance. Delegation is also key but it is hard when you are freelancing on your own.

One way of managing stress that I learned is to prevent it from arising in the first place. I believe that if you enjoy what you do, it would help a lot as things would not be as stressful. And I am glad to say that after being out on my own for over 6 years, I still enjoy my current multi non-traditional roles.

Teh Loo Hai is Appointed Actuary of MCIS Zurich. He is also Managing Actuary of TAS Actuaries, an actuarial consulting company, and provides actuarial recruitment services via TAS Search. His company website is www.actuaries.com.my.

Recent and Upcoming Events

Recent Events

17 February 2012	ASM Talk: Predictive Modelling
23 February 2012	Annual General Meeting and Talk
4 April 2012	2nd General Insurance and Takaful Conference
6 April 2012	ASM Talk: Focus on Takaful
7 April 2012	ASM Badminton Tournament 2012

Details of the recent events are given in the write-ups below.

Upcoming Events (Tentative, subject to change. Look out for emails!)

June 2012: ASM Pool Challenge
For the first time ever, ASM is giving you the chance to show off those pool skills you've been keeping dormant inside you for years. Start practising now for your shot at glory and great prizes!

July/August 2012: ASM Treasure Hunt
Back by popular demand, there will be yet another treasure hunt this year. Will the winners of the last hunt stand victorious again, or will new blood ascend to the throne?

Q3 or Q4 2012: 2nd Life and Takaful Conference
Building on the success of the previous conference, ASM is planning to organise a 2nd Life & Takaful Conference in the 3rd quarter of 2012. Please stay tuned!

ASM Talk: Predictive Modelling (17th February 2012)

Written by Kelvin Hii

On 17th February 2012, **Gear Analytics** and **NMG Consulting** collaborated to present a half-day Predictive Modelling talk to members of the Actuarial Society of Malaysia.

From left to right: Kelvin Hii, Roshan Perera, Xavier Conort, Matthew Maguire, Wong Li Kuan

Mr. Xavier Conort from **Gear Analytics** kicked off the afternoon with his talk, which focused on the more technical aspects of Predictive Modelling.

Xavier first shared with the audience the popularity of predictive modelling in the North American General Insurance industry, and shared an example of a success story based on analytics: - Progressive Insurance was able to achieve both rapid market share growth while maintaining an impressive Combined Ratio against the industry.

The use of predictive modelling is not limited only for the General Insurance industry. The Banking industry was also known to have made massive use of their database to optimize option pricing, credit scoring, cross-selling and fraud detection. In fact, the Internet, Retail, Telecommunications, Accommodation and Aviation/Transport industries have had the most transformation in data and analytics over the past decade, having made creative use of their data through innovative predictive modelling algorithms. Analytics have become part of our everyday life, for example: - Google search engine, recommendations on Amazon, LinkedIn suggestions for connecting with others, Face recognition on images, anti-spam software.

The demand for employees with analytics and data science background has been increasing rapidly over the past decade and looks to continue into the near future. Just to mention a couple of quotes: -

(1) A chief economist at Google quoted that "the sexy job in the next 10 years will be statisticians"; and

(2) A McKinsey study has identified data & analytics as the next frontier for innovation, competition and productivity.

With this, predictive modelling has become an increasingly required skill for actuaries. It has also become more necessary for actuaries to switch from Excel to more powerful tools. (In 2006, the Actuarial Toolkit Working Party of UK Institute and Faculty of Actuaries likened the Microsoft Office suite for actuaries to a Swiss army knife for a dentist: - it can do most of the job but you would rather choose a dentist with a better tool).

There has been increasing accessibility to the predictive modelling world. R is one of the most powerful statistical software and commonly used, which can be downloaded for free. One can easily get access to the many free material and courses for R.

Xavier then delved into the technical aspects of predictive modelling. He started by giving a brief overview of the intense research work during the last two decades and shared on the current actuarial approach in fitting models. He first talked about Generalized Linear Models: - assumptions, modelling steps, outputs, limitations & critiques. Xavier then shared tips on how to relax the independence assumptions, how to remove undesirable collinearly and cautioned against underfitting/overfitting.

In moving beyond Generalized Linear Models, Xavier introduced other popular predictive modelling techniques:

- Generalized Additive Models can help smooth trends.
- Generalized Linear Mixed Models can help obtain credibility estimates.
- Decision trees can help detect and incorporate interactions (which is the most challenging aspect in GLM modelling).
- Random Forest uses the wisdom of crowds in Machine Learning, but loses out in interpretability and doesn't work well in the presence of imbalanced data.
- Boosted Regression Trees require low modelling efforts, gives high accuracy and interpretability.

Xavier wrapped up his talk by outlining three key success factors required for a predictive modelling project: -

(1) The ability to ask the right questions and get buy-in from top management;

(2) The ability to gather data and build models which addresses the questions with appropriate accuracy; and

(3) The ability to take advantage of modelling outputs.

Next, the **NMG Consulting** team covered the more practical aspects of the application of predictive modelling in the insurance industry.

Mr. Matthew Maguire started by giving a brief introduction about predictive modelling. He gave an example of the movie "Moneyball", which was based on the Oakland Athletics baseball team in 2002. This team had used predictive modelling in selecting their team and applied rating factors instead of "conventional wisdom. The Oakland Athletics were able to be as competitive as the other teams that cost three times as much. The key points of the movie (from a predictive modeller's perspective) were the need for lots of data, the required 'buy-in' from the management and the replication and loss of competitive advantage. Matthew then described the difference between the Predictive (predict what response are going to be to future input variables) and Informative (extracting information about how nature is associating the response variable to the input variable) philosophies.

Mr. Kelvin Hii discussed the application of predictive modelling in life insurance. He first described the role of predictive modelling in the life insurance pricing and its limitations and challenges, and followed by examples on how the predictive modelling can be extended for underwriting, direct marketing, cross-selling and customer retention analyses. Kelvin concluded by commenting that the future of predictive modelling in the Malaysian life insurance industry looks positive, especially since there has been increases in computational power and a wide scope for potential use. Those who act first will get first-mover gain benefits.

Mr. Roshan Perera and **Ms. Wong Li Kuan** presented a general insurance case study based on the Motor ratemaking project that they were involved in for one of NMG's Sri Lankan client. Having been approached by this company that has lost business to the new entrants, the company was particularly interested in improving their understanding of their underlying business. The aim was to identify profitable sub-classes within their Motor portfolio through predictive modelling. This was the first time in the history of Sri Lankan insurance industry that a company uses a technical pricing model to determine the risk segments within which to operate and price its products. This was particularly relevant to the Malaysian industry as the Sri Lankan industry is also predominantly Motor insurance (even though the Sri Lankan Motor industry is already de-tariffed, most companies still follow the tariff rate). Li Kuan covered topics such as data preparation, data quality, data cleansing, exploratory data analysis, risk segmentation, model development and real world implementation issues. Roshan then covered the new developments in Motor insurance such as aggregators and telematics.

The afternoon was concluded with an invitation to the ASM members to a one-day predictive modelling workshop, co-organized by Gear Analytics and NMG Consulting.

ASM Annual General Meeting 2012 (23rd February 2012)

Written by Charlene Lee

The Annual General Meeting this year was held at Equatorial Hotel, KL. The changes in the ASM Council members are as follows:

Position	Council Member 2011-2012	Council Member 2012-2013
President	Liew Pek Hin *Malaysian Life Reinsurance Group Berhad*	Liew Pek Hin *Malaysian Life Reinsurance Group Berhad*
President-Elect	-	Yap Chee Keong *Great Eastern Life Assurance (M) Bhd*
Vice President	Yap Chee Keong *Great Eastern Life Assurance (M) Bhd*	Wan Saifulriza Wan Ismail *Towers Watson (Malaysia) Sdn Bhd*
Secretary	Merissa Chong *Malaysian Life Reinsurance Group Berhad*	Merissa Chong *Malaysian Life Reinsurance Group Berhad*
Treasurer	Ng Hui In *Prudential Assurance Malaysia Berhad*	Ng Hui In *Prudential Assurance Malaysia Berhad*
Professional Development	Nicholas Yeo *Hannover Re Malaysian Branch*	Kelvin Hii Chee Yun *NMG Consulting*
Education	Tang Khai Sheng *Bank Negara Malaysia*	Tang Khai Sheng *Bank Negara Malaysia*
Communications	Chew Han Wah *JPWall Consulting Partners*	Charlene Lee *Munich Re Retakaful*
Events	Thai Mei Lih *Prudential Assurance Malaysia Berhad*	Thai Mei Lih *Prudential Assurance Malaysia Berhad*
Immediate Past President	Patrick Cheah *AmLife Insurance Berhad*	-
Auditor	Lee Kok San *HSBC Amanah Takaful (Malaysia) Sdn Bhd*	Tan Kok How *ING Insurance Berhad*

The Council thanks all members for their support and will continue to strive to improve the society.

ASM Talk: The Financial Sector Blueprint – "Strengthening Our Future" (23rd February 2012)

Written by Adrian Chan

ASM invited Mr. Yoon Yew Khuen from BNM to give a presentation on Financial Sector Blueprint 2011 – 2020 ("BluePrint") that was released by BNM sometime prior to the ASM Annual General Meeting held on 23rd February 2012 at Equatorial KL.

During the presentation, Mr. Yoon first went through how Malaysia aims to position itself in order to serve the domestic, regional and international needs accordingly. He then went through the focus areas under the BluePrint and how it relates to the insurance & takaful industries, including operation, investment, channels, products and education area.

After listening to Mr. Yoon's talk and cross checking against the BluePrint, the following are some of the directions in term of products & services to be provided by insurance/takaful companies under the BluePrint:

- Develop micro insurance/takaful plan that can provide coverage or develop savings habit for lower income group
- Develop higher-end and more sophisticated health products such as long term care plans
- Develop private pension funds and raise public awareness on retirement savings
- Develop new channels such as e-channel to reach different target markets and provide more alternatives to consumers

Therefore, it would be good for insurance & takaful companies to start looking into similar products being offered in the region/international scene and leverage the experience and expertise from their international offices and/or from reinsurers.

Interested ASM members can download Mr. Yoon's presentation from ASM website for details information. The full Financial Sector Blueprint 2011 – 2020 can also be downloaded from the BNM website.

ASM Talk: Life Insurance and the Actuarial Profession in Malaysia: What Keeps Me Awake (23rd February 2012)

Written by Carrie Khoo

ASM was honoured to have Mr. Ravinder Singh share with us his true life experience which changed his thoughts and view on life. Despite managing a tight working schedule which requires him to travel overseas frequently, Mr. Ravinder greatly cherishes and values any remaining time he has for his beloved family members.

Mr. Ravinder met with two accident events on the same highway and felt blessed that today, he was still given the opportunity to share on his experience with all of the present ASM members. The second accident, which occurred about 6 months after the first one and happened to coincide with his birthday, made him realize what he wanted in life and if he had sufficient future planning for his family. It was really a blessing from God – if the car had crashed just a second earlier, he would have been the unfortunate victim of a fatal accident.

During his recovery period, he thought a lot about the meaning of life as well as how he can live better and without guilt. He realized that the most valuable asset he had was both his children and his parents, and he needed to plan and prepare financially for their future, as life is so unpredictable that we wouldn't know if we would still be alive the next minute. Other thoughts that went through his mind – he wished to live a life of his own and not a life what others expected him to be, and he wished he had more time to stay in touch with friends and live a happier life.

While we are given the chance to change what we are doing, we have to think of what can be done better if we were to be taken away to another world. Have we prepared a healthy financial checklist for our loved ones? Will they be aided with sufficient coverage to be able to be free from the financial commitments we put ourselves into? What are the possible regrets which can be fixed and improved? Some final thoughts of the day: Find what you love, do what you love and keep searching till you find it. Find our true selves and live the way we want to be.

The 2nd General Insurance & Takaful Actuarial Seminar (4th April 2012)

Written by Lee Poh Kheng

The second edition of the General Insurance & Takaful Actuarial Seminar organized by the Actuarial Society of Malaysia (ASM) was back with overwhelming response from the insurance industry. Most participants have attended its first edition and were eager to know what the second edition has to offer. I must say, we were certainly not disappointed!

The seminar started at 9.00 a.m. sharp with the opening speech by Mr Liew Pek Hin, the President of ASM. Mr Liew thanked the participants for supporting this event, and ended his speech by emphasizing the need of actuarial resources in general insurance industry to continue to grow.

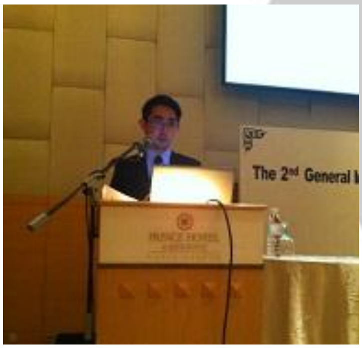
The first speaker of the day was Mr Scott Yen, who represents Casualty Actuarial Society. Mr Scott highlighted the importance possessing the actuarial skills, particularly in 5 areas – technical, communications, business savvy, actuarial knowledge and computer literacy. All these aspects are particularly important to grow as a better and an all-rounder actuary.

The next speaker of the day was Mr Jim Qin from Towers Watson, who gave us a very insightful overview on the motor insurance industry in Malaysia, as well as cross-country comparisons on the their respective motor industry. The main highlight of his presentation is the evolution of Motor industry with the introduction of Usage-Based Insurance (UBI), in which he stressed that we can expect actuaries to play various major roles in this aspect in the near future.

After a short morning break, Dr Shaun Flay from Aon Benfield introduced us to Catastrophe Modelling. Flood still remains as the biggest threat that causes lots of damage every year in Malaysia. We can learn a lot from the recent massive Thai flood, which caused damage of more than USD 10 billion. None of the CAT Modeling software in the market has the capability of modeling flood claims, but we should expect this gap to be addressed soon.

Ms Nurul Syuhada from Actuarial Partners then continued with her entertaining presentation on Role of Actuaries in General Insurance, in which she emphasized that most of the work of general actuaries is still very much bounded by regulatory compliance, although we do see growing importance of the actuaries in this field. She added that the actuaries should be prepared to face the challenges ahead, particularly on the soon-to-be implemented RBC Framework for Takaful operators, the ICAAP and the upcoming Motor Detariff, scheduled to take place in 2016.

After four very informative presentations, we then head for a delicious buffet lunch, in which everyone managed to catch up with their peers and to share our thoughts on the various issues discussed during the earlier presentations. The lunch ended at about 2.00 pm, when we head back to the seminar room, feeling full, happy and all geared-up for the remaining four presentations!

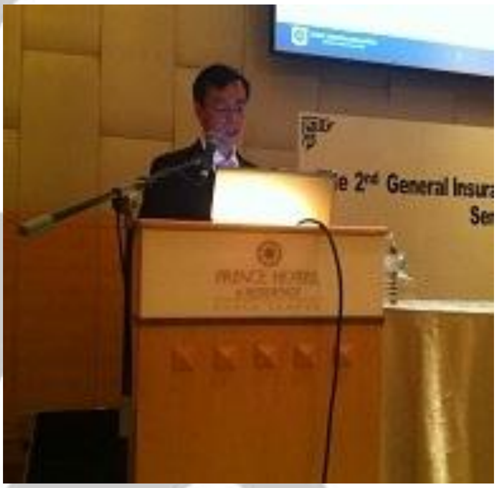


Mr Kelvin Hii from NMG braced through what he called the 'difficult-after-lunch' session with his topic on Enterprise Risk Management (ERM) and the importance for. general insurers need to start heading towards it. He then continued his presentation on how actuaries can assist in this by citing the implementation of Financial Condition Reporting (FCR) in Australia, in which general insurers in Malaysia should start expecting the compliance from BNM soon.

The next session by Mr Gary Hoo from JPWALL focused on building an actuarial dream team in 10 steps. Being an ardent Arsenal fan himself, he has used the structure and management of the Arsenal football team as an analogy and how the general insurers can learn from all these. He has also stressed that the general insurers must realize the importance of having their own actuarial team in the company, as the team will be capable to assist the company in many areas in the long run.

Mr Nicholas Yeo, representing ASM, then continued with his session on Communicating Takaful. This paper, which was written in collaboration with Mr Loke Chang Yueh, has won the ASM Sponsorship to IAA Mini-Congress 2012 in Hong Kong. In this topic, Mr Nicholas discussed about the common perceptions of takaful and the key differences of takaful from conventional insurance. He stressed the point that takaful is not a perfect substitute of insurance and neither product is better than another.

The final session of the seminar is Mr Yoon Yew Khuen from BNM, who gave us very insightful outlines on the various major industry highlights. He continued to stress the importance of better use of data for more in-depth analyses, and encouraged the cooperation from the industry to use ISM as the platform. He then discussed further on the Risk Governance Concept Paper as well as the impact from the Thai floods on reinsurers in Malaysia. He ended his presentation with some comments pertaining to ICAAP and again, to emphasize the importance of good management of actuarial talent in Malaysia.



The ending speech by Mr Liew Pek Hin concluded the second edition of the General Insurance & Takaful Actuarial Seminar. He has again thanked everyone, particularly the speakers, for their continuing support in helping the growth of the actuarial profession in the general industry, and to look forward for more of these seminars to continue in the future.

I am already excited about the unannounced 3rd edition of the seminar....any idea when? ☺

ASM Talk – Focus on Takaful (6th April 2012)

Written by Ching Ing Chian

On April 6th, 2012, ASM organized a talk on "Focus on Takaful" held at the auditorium of Menara MAA. Two presentations, with a total of two CPD hours were offered during this talk. The presentations were:

1) Communicating Takaful by Nicholas Yeo and Loke Chang Yueh
2) Gross Premium Valuation for Takaful by Hassan Scott Odierno

Nicholas and Chang Yueh recently won the sponsorship from ASM and would be representing ASM to the International Actuarial Association Colloquium in Hong Kong. It was a pleasure to have them share their winning paper to ASM members. While takaful is not something new to most ASM members, the presentation was a timely topic to address the common misconception about takaful. While takaful is developed in accordance to Islamic principles and practices, it is even important to appreciate takaful as a socially responsible risk management solution to consumers. The presentation is different in its own way where the presenters solicited responses from the audience on their perception of takaful. Several lucky audiences walked away with souvenirs from the presenters. Throughout the session, the presenters highlighted several popular misconceptions such as risk transfer vs risk sharing and takaful vs charitable donation.

The presentation successfully meets its objective – to explain and communicate takaful on a purely conceptual level to actuaries who are not experts in the subject matter. ASM wishes them best of luck for their presentation in Hong Kong.

Up next, Hassan presented on Gross Premium Valuation (GPV) for Takaful. One reason Malaysia has moved to GPV method is to be consistent with the requirements of IFRS 4. Similar to the practice on conventional insurance, the objective of GPV is to estimate each cash flow in respect of a policy on a best estimate plus padding basis to 75% confidence interval and take its present value to obtain the GPV reserve. Hassan noted that there is very little research worldwide as to the appropriate distributions to use for most of the assumptions needed in a GPV calculation. Experience analyses are thus handy for all major assumptions. The presenter, widely known as a takaful expert in Malaysia, shared his real-life experience on some of the valuation and financial reporting issues he has encountered from his years in practice.

To conclude, GPV in Takaful follows the same processes and general methodology as conventional insurance, but the actuary must keep in mind both the detailed issues specific to Takaful as well as how and where reserves should be held.

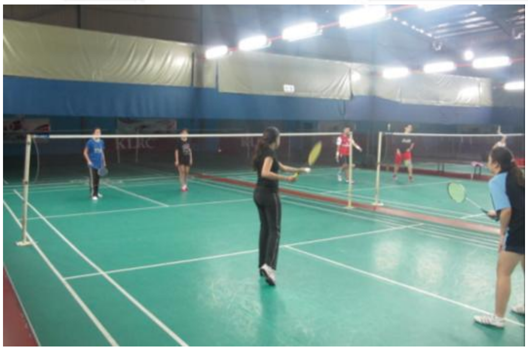
To close the event, Kelvin Hii, of the ASM Professional Development Committee graciously presented tokens of appreciation to Nicholas, Chang Yueh and Hassan.

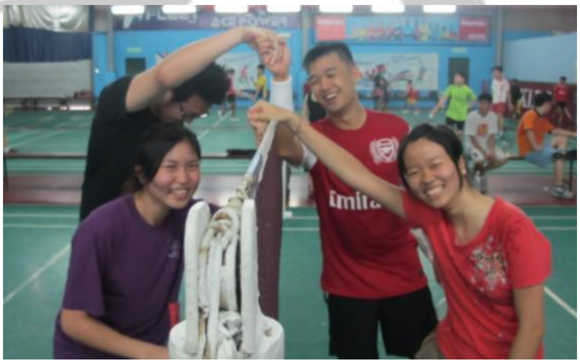
ASM Badminton Tournament 2012 (7th April 2012)

Written by Yin Kin Ian

The level of enthusiasm and excitement was high for our badminton players on 7 April 2012. The tournament was scheduled to begin at 9:00AM but by 8:30AM, you could already start seeing people strolling into the New Vision Badminton Academy at Seksyen 13 PJ. The tournament that was fully sponsored by MLRe had attracted 48 players and some families even tagged along to cheer for their loved ones.

Warm up began promptly at 9AM. The rules and regulations were circulated to the players two days prior to the tournament, hence the briefing that morning was a quick one. The tournament started at 9:15AM and ended around 12:45PM. It was an enjoyable sight at every court as the players always had a smile on their faces and congratulating one another at the end of each match. Winners walked away with medals and cash prizes which were sponsored by MLRe.





Thank you to all the participants and supporters for your involvement in this year's tournament. This event was a success only because of all of you who participated. The event committee hopes that everyone had a wonderful day and enjoyed the games with other fellow members of ASM.

Congratulations to the Winners!

	Winner Group A	**Runner-up A**	**Winner Group B**	**Runner-up B**
Mens Doubles	**Wagyu no Kaminari** Teo Kuok Shin Ang Chong Wen	**N/A** Bernard Kwan Yeow Tow Leong	**Pattern Men 2** Teoh Pei Khoon Ng Eng Wee	**AIA BC** Cheah Lai Chin Kang Fook Choon
Womens Doubles	**Angry Birds** Wong Khai Shin Jasveen Marne	**Mighty** Merissa Chong Nyu Li Yin	**Limitless** Carrie Khoo Lim Siew Teng	**G2** Esther Lee Winnie Chua
Mixed Doubles	**ABC Mixed** Wong Kar Hin Ho Lai Ying	**Eternity** Teo Kok Leong Merissa Chong	**Raikiri** Teo Kuok Shin Joanne Chin	**AP Champ Champ** Lim Khey Junn Caryn Chuah
Cash prizes	**RM 200**	**RM 100**	**RM 100**	**RM 50**

Job Opportunities

Recent job opportunities in the market:

Position	Location	Company	Requirements	Date Posted
Marketing Actuary/ Client Manager – Life Reinsurance	Kuala Lumpur, Malaysia	Munich Re Retakaful	• Associate / Fellow • 4 years' experience • Communication, presentation, soft skills	12 Mar 2012
Actuarial Assistant Manager (Financial Reporting)	Kuala Lumpur, Malaysia	CIMB Aviva	• Actuarial Degree • Passed preliminary papers • 4-5 years' experience, preferably statutory reporting • Spreadsheet, data extraction/ programming, Prophet, Excel VBA	22 Mar 2012
Qualified Actuary (AVP / VP)	Singapore	Tokio Marine Life Insurance Singapore	• Refer to company website	2 Apr 2012
Actuarial Professional (Manager / AVP)	Singapore	Tokio Marine Life Insurance Singapore	• Refer to company website	2 Apr 2012
Investment & Risk Management Professional (Manager / AVP)	Singapore	Tokio Marine Life Insurance Singapore	• Refer to company website	2 Apr 2012
Executive and Senior Executive, Life/Family Valuation	Kuala Lumpur, Malaysia	Etiqa Insurance and Takaful	• Actuarial degree, good progress in professional examinations • Prophet, MS Excel, other programming languages • 1 year's experience • Analytical skills, communication skills, positive working attitude • Good knowledge of life insurance regulatory & industry guidelines	11 May 2012

Position	Location	Company	Requirements	Date Posted
Senior Executive and Assistant Vice President, Life/Family Product Pricing	Kuala Lumpur, Malaysia	Etiqa Insurance and Takaful	• Actuarial degree, good progress in professional examinations • Prophet, MS Excel, other programming languages • 3 years' experience for Senior Exec, 5 years' experience for AVP • Analytical skills, communication skills, positive working attitude • Good knowledge of life insurance regulatory & industry guidelines	11 May 2012
Senior Executive/ Assistant Vice President, General Insurance and Takaful Reserving	Kuala Lumpur, Malaysia	Etiqa Insurance and Takaful	• Actuarial degree, good progress in professional examinations • Prophet, MS Excel, other programming languages • 3 years' experience for Senior Exec, 5 years' experience for AVP • Analytical skills, communication skills, positive working attitude • Good knowledge of takaful regulatory & industry guidelines	11 May 2012
General Manager and Chief Pricing Actuary, Life	Beijing, China	Munich Re China	• Qualified actuary • 10 years' experience, including 5 years' post-qualification experience • Knowledge of living benefits, embedded value, economic capital • Analytical, modelling, management and leadership skills • Fluent in spoken and written English and Chinese	14 May 2012

Full details of the above positions can be accessed from the ASM website.

Just for Fun!

This issue's fun focus is on **Rebus Puzzles**. Rebus puzzles are defined as word puzzles that use pictures/symbols to represent words or common phrases. An example is shown below:

```
    R
    O
R O A D S
    D
    S
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Answer: Crossroads

Have a go at the following rebus puzzles!

1)

M1Y L1I1F1E

2)

JOB IN JOB

3)

VA DERS

4)

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   L
  I L
 B   Y
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5)

6397 SAFETY 2398

6)

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C
d
e
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Answers will be given in the next issue of the Malaysian Actuary. But perhaps you would have gotten them all figured out by then!

Have Your Say...

May 2012 Issue

How interesting did you find each section of this newsletter?

Section	Not at all		OK		Very Interesting
President's Address	1	2	3	4	5
Out and About...	1	2	3	4	5
Approximating Case Reserves from an Incomplete Period's Claims Data	1	2	3	4	5
Education Special – Changes in SOA and IFA Routes to Qualification	1	2	3	4	5
Up Close and Personal...	1	2	3	4	5
Recent and Upcoming Events	1	2	3	4	5
Job Opportunities	1	2	3	4	5
Just for Fun!	1	2	3	4	5

How did you find the layout of the newsletter?

1	2	3	4	5
Terrible		OK		Awesome

What would you like to see in future newsletters?

Who would you like to nominate to be the interviewee for "Up Close and Personal", and why?

Any other comments on the newsletter?

Please submit your completed form to *editor@actuaries.org.my*. Thank you for your feedback!