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THE MAGAZINE OF THE INSTITUTE OF ACTUARIES OF INDIA

VOL. VI • ISSUE 7 | JULY 2014 ISSUE | Pages 28• ₹ 20

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CONTENTS

Printed and Published monthly by Gururaj Nayak, Head - Operations, Institute of Actuaries of India at ACME PACKS AND PRINTS(INDIA) PRIVATE LIMITED, A Wing, Gala No. 55, Ground Floor, Virwani Industrial Estate, Vishweshwar Nagar Road, Goregaon (E), Mumbai-63. for Institute of Actuaries of India : 302, Indian Globe Chambers, 142, Fort Street, Off D N Road, Near CST (VT) Station, Mumbai 400 001. • Tel +91 22 6784 3325 / 6784 3333 Fax +91 22 6784 3330 • Email : library@actuariesindia.org • Webside : www.actuariesindia.org

FROM THE EDITOR'S DESK

K SUBRAHMANYAM

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Greetings

We are planning for the 17th GCA in Feb 2015. Details will be announced shortly. Authors are requested to be ready for good articles/ papers at the GCA. If you wish to give something new/ new ideas and useful to our members, please do the same at the earliest.

I am sure our members might have felt some relief in respect of income tax in the FM's budget on 10th July, 2014. Important development is FDI in insurance from existing level of 26% to 49% with some restrictions. Hope this will encourage new comers, and provide good opportunities to all our actuarial brethren. I am sure consulting firms will be busy.

We are expecting opinions on articles and papers submitted by authors. You are encouraged to send your views/ opinions to the Editor (at the IAI address).

Appointed Actuaries must be busy with valuation jobs (some of them might have completed and holidaying too!). All consulting actuaries should be very busy in their consultancy work; and of course counting!

In the recent Capacity Building Seminar held on 20th June, 2014, I find a very few students. Students are advised to attend such seminars to improve their actuarial skills. Many senior actuaries were present and willing to learn new things. This is a good omen. We are very happy with such encouragement from our senior actuaries. Kudos to paper presenters at the seminar!

Readers are encouraged to give their ideas for improving the look and content of this magazine.

Best wishes, my dear readers.

We invite opinion and comments on the articles published in the magazine.

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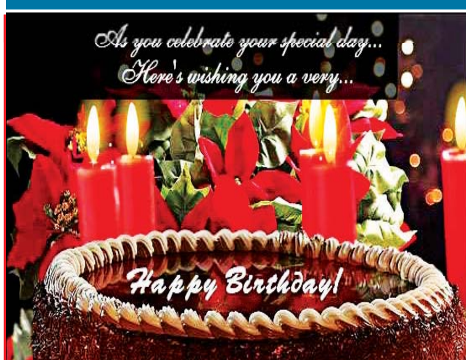

MANY HAPPY RETURNS OF THE DAY

the Actuary India wishes many more years of healthy life to the fellow members whose Birthday fall in

JUNE & JULY 2014

JUNE BIRTHDAY

P. A. Balasubramanian	Richard Walter Leiser-Banks
Dionys Emil Boeke	K. Subrahmanyam
Liyaquat Khan	

JULY BIRTHDAY

A. V. Ganapathy	K. N. Vishwanathan
A. K. Garg	K. K. Wadhwa
A. D. Gupta	Michael Joseph L. Wood
H. L. Jain	K. V. Y. Sastry
Jagadish S. Salunkhe	P. C. Mohanty
R. Srinivasan	

(Birthday greetings to fellow members who have attained 60 years of age)

REPORTAGE

COMPREHENSIVE ACTUARIAL RISK EVALUATION

- **Organized by** : Education Committee, IAI
- **Venue** : The Chancery, Bangalore
- **Date** : 3rd May 2014

This workshop was based on the paper "Comprehensive Actuarial Risk Evaluation (CARE)" released by International Actuarial Association in May 2010. The primary aim of this paper was to provide a starting point for a comprehensive evaluation of risk to be performed by actuaries and to germinate the best practices within the risk evaluation sub-section of ERM.

This workshop was in similar vein to this aim, with it providing a starting point for attendees towards risk evaluation and involving discussions on the global best practices on risk evaluation.

Session highlights

Dr.Ashe spent some time setting the context for the workshop, which went a long way for the attendees to be able to appreciate it later during the day. Some of the highlights in this context setting are given below.

Enterprise Risk Management (ERM) – Dr.Ashe started with textbook definition of ERM, branching out into more practical and detailed nuances of ERM. An interesting nugget he spoke of which remained with the audience was to rethink ERM as not just as Enterprise Risk Management but Enterprise Risk and Return Management.

Comprehensive – Dr. Ashe explained the importance of "Comprehensive" in Comprehensive Actuarial Risk Evaluation. He explained, among other things, how different stakeholders can have different views of risk and need for firms to fully understand individual risks, their correlations, their impact on balance sheet and their economic impact.

With the context being set, the session progressed to detailed discussion on various aspects of CARE. The workshop was conducted in a very professional manner by Dr.Ashe and was peppered with interesting anecdotes from his vast experience. The workshop was divided in two main parts, addressing quantitative and qualitative sessions of CARE. Some of the key highlights have been covered below.

Quantitative Aspects:

Model Validation – Dr.Ashe gave some practical examples how models can go wrong, reminded the group of common fallacy of treating models as exact replica of reality and talked about some useful techniques which can be used to validate models.

Errors in prediction – This part of the session covered various types of errors in predictions and more importantly the need for users to be cognizant of prediction errors.

Statistical Distribution – The practical importance of Central Limit Theorem and Extreme Value Theory was covered under this sub-section.

Copulas – As with statistical distribution above, the practical importance of copulas was discussed. Dr.Ashe also gave a brief about the mathematics behind copulas.

Risk Neutral Valuation – An overview of risk neutral valuation, the mathematics supporting it and it's use in financial modeling was discussed in this part of the session.

Risk Categorization – Various categories of risk and importance to categorize risk appropriately was discussed. The risk categories which were covered include systemic v/s non-systemic, internal v/s external, known v/s emerging risks, model risks and time horizons of risk.

Qualitative Aspects:

Overconfidence and Risk Culture – Very interesting anecdotes on how overconfidence at individual level can creep in at a firm level and it's impact on risks faced by the firm were given by Dr.Ashe here. Apart from this, aversion of individuals to ambiguity, importance of attitudes towards risk and risk culture of the organization were discussed.

Communication – The final leg of the workshop dealt with communication and importance of effective communication in CARE report.

Summary of session

This was a very educational workshop for all attendees who would benefit by implementing the things learned in the session to their day-to-day work.

About the Author

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Hardik Thakkar is a student member of IAI . He is currently working with ICICI PRULIFE.

21ST INDIA FELLOWSHIP SEMINAR

- **Organized by** : Advisory Group on Professionalism, Ethics & Conduct, IAI
- **Venue** : Hotel Sea Princess, Mumbai
- **Date** : 12 – 13 June 2014

The seminar began on 12th June 2014 with a welcome note by Sanjeeb Kumar, Chairperson of Advisory Group on Professionalism, Ethics and Conduct, in which he laid out the theme of the seminar. This was followed by a speech by M Karunanidhi, President of Institute of Actuaries, India. He mentioned that the aim of the seminar was to give the participants a sense of issues and challenges faced by the Profession, as a majority of the participants were newly or nearly qualified actuaries. He encouraged all attendees to actively participate in discussions, share their experiences and learn from each other's experiences. Chandan Khasnobis, in his speech, reaffirmed that a key objective of the seminar was to discuss professional issues and emphasized on the importance of the Profession working in public interest and members behaving professionally and ethically. The sessions that followed over the course of two days, included several case studies, topical presentations and sessions by guest speakers.

Sanjeeb Kumar

M Karunanidhi

Chandan Khasnobis

The first case study was presented by Jyoti A Vaidya and Raj Kishor Chaurasia guided by Samreen Asif and explored the challenges met by a product developing actuary faced with the task of introducing a product which is new to the actuary, the company or the market. The presenters talked about the importance of research that must be carried out to understand the market and the riskiness of a product. Importance of understanding the needs and size of the target market, ensuring customers are treated fairly, profitability and competitiveness of the product and understanding the views of different stakeholders were also discussed. They spoke about the pricing and valuation approach where lack of historic data was identified as one of the key issues. The need to document processes and train sales-staff to avoid mis-selling was also highlighted.

Jyoti A Vaidya

Raj Kishor Chaurasia

Samreen Asif

A presentation on "Application of interest rate swaps in Indian Insurance Industry" by Rohit Ajgaonkar and Amruth Krishnan guided by G.L.N Sarma followed next. The presenters described the structure of interest swaps and how they are priced. They discussed several benefits of these arrangements such as hedging interest rate risk; and the additional risks associated

Rohit Ajgaonkar

Amruth Krishnan

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G.L.N Sarma

such as basis risk and counterparty risk. Alternative arrangements to interest rate swaps were also discussed which may provide similar benefits. To conclude, it was mentioned that interest swaps may be helpful in managing the long term liabilities of insurers, however, the insurance regulations in India at present do not allow for the use of long dated swaps. As a consequence, trade volumes in India for these swaps remain low, while they have been on the rise in several other countries.

Abhishek Chadha

The next case study with the theme "Capital Injection" was presented by Abhishek Chadha, Gaurav Batra and A. V. Ramanan guided by Sunil Sharma. The case study discussed a scenario where the Appointed Actuary (AA) raises the need to inject further capital in the insurer to maintain a competitive free asset position but does not get the desired response from the CEO of the company. The presenters quoted regulations and Actuarial Practice Standards (APSs) which describe the duties and responsibilities of the AA that would be applicable here. Uses of free assets and alternative ways of increasing free assets were also touched upon. They concluded the case study with steps the AA should take to approach the Board of the company to express his concerns.

Gaurav Batra

A.V. Ramanan

Sunil Sharma

Aditya Ajmani

"Professional Conduct Standards (PCS)" was the topic of the next presentation made by Aditya Ajmani and Kavita Singh guided by S Chidambaram. The presenters highlighted the importance of members being aware of PCS as these set out members' duty to the Profession and also as they regulate individual members and not firms. The contents of PCS were discussed. Consequences of not adhering to these standards were discussed and so were some of the issues related to these such as members not being comfortable with making formal complaints on there being a breach of these standards. The presenters concluded with a few suggestions on how the effectiveness of PCS can be further improved such as by upgrading the IAI website to contain more information about PCS and disciplinary processes.

Kavita Singh

S Chidambaram

The next session was a case study by Prashansa Jain, Ramanuj Bansilal Bhangdiya and Keyur Parekh guided by P. K. Dinakar which explored the situation where an actuary is met with a proposal of improving profitability by increasing product charges above the market norms; and the view from the perspective of the Head of the actuarial function. One of the key discussion points of this presentation was meeting policyholders' reasonable expectations and treating them fairly. The presenters also explored other

Prashansa Jain

Ramanuj Bansilal Bhangdiya

ways of increasing profitability of the insurer such as by changing the target product mix or by launching less capital intensive products. The need to adhere to existing regulatory framework and ensure that products remain competitive in the market was highlighted. In the discussions that followed, it was mentioned that the opinion of other key stakeholders such as CEO, CFO, CDO etc. also need to be considered in such a scenario.

Keyur Parekh

P. K. Dinakar

This was followed by a presentation on "FCR in General Insurance – Professional Issues" by Sourav Roy and Gaurav Malhotra guided by Padmaja R. IRDA Circular on FCR and GN31 were discussed as part of this presentation. The presenters spoke about the professional issues surrounding FCR in general insurance which included limitations in the guidance currently available such as correlations between risks being considered not being defined. They concluded by adding that this exercise will result in an increased role for an actuary and provide him with a more holistic view of the risks of a company. They also mentioned that an actuary should avoid creating a "tick-box" compliance culture for this exercise and aim to understand the risks of the business.

Sourav Roy

Gaurav Malhotra

Padmaja R

The next presentation was on the "Conflicts of Interest". The presenters were Sharad Bajla and Yogesh Agarwal guided by K. K. Wadhwa. The study revolved around accepting a new job at a consulting firm which involves working on a project of which the actuary was a part of at his previous employer; the previous employer being the prospective client or a rival consulting firm. The PCS related to conflict of interest were discussed, which include the need to assess nature and extent of the conflict, notify the two parties about the potential conflict and not communicate information which might harm the interest of any client or previous client. It was concluded that the actuary should reject the assignment owing to a conflict of interest. Alternatively, the actuary could agree to offer subject specific advice without passing on confidential information about the client, or accept the project but only after disclosing the conflict of interest to both parties and after gaining their approval.

Sharad Bajla

Yogesh Agarwal

K. K. Wadhwa

"Issues involved in creating Health Insurance products for the elderly" formed the topic of the next presentation made by Jyoti Vaidya and Raj Kishor Chaurasia guided by Samreen Asif. The presenters gave a background of the current scenario of increasing aging population, low penetration of health insurance products and lack of expenditure on health sector in India and then focused on the key needs of senior citizens which need to be addressed through insurance products, desirable features of these products and risk mitigation techniques that need to be considered at various stages of developing suitable health insurance products. Unaffordable premiums for customers, high costs, underwriting and claim settlement issues, lack of credible data and less marketable designs were some of the key issues identified in designing health insurance products. The presentation concluded with suggested next steps such as encouraging early entry into the health insurance system, offering loyalty discounts on renewal of policy and developing medical infrastructure for the elderly.

The next session was a case study on "Whistleblowing" by Sourav Roy and Gaurav Malhotra guided by Padmaja R. The concept of whistleblowing was discussed and the protection provided to whistleblowers was also touched upon. The presenters pointed out that whistleblowing is generally encouraged and a member may whistleblow when he has reasonable suspicion of any potentially unlawful, unethical or improper activity.

Anish Thacker

The last presentation of the day, before dinner, was by Anish Thacker on Ethics. In this interactive session, he gave situations from his personal experiences and encouraged members of the audience to put forth their views on what they considered to be an "ethical" stance under each of these situations. Through the different opinions that were voiced, he highlighted how ethics was an individualistic concept, was about judgment and not rules. Through more lively discussions, he explained the difference between "law" and "ethics". He highlighted the importance of members of the Profession and also the organizations being ethical and the need to raise our voice against unethical acts. In the end, he summed up his session by stating that ethics was all about "compassion".

Day 2 began with a presentation on the topic "Defence of Industry" by Kavita Singh and Aditya Ajmani guided by S Chidambram. This was a case study based on the UK pensions mis-selling scandal and focused on what the Profession could have done differently to avoid this scandal. The presenters spoke about enormity of this issue, the harm it brought to the profession and the importance of accepting criticism by the Profession and taking corrective measures when such situations arose. Causes of mis-selling were discussed and so were the findings of the Morris Review which was carried out after this scandal erupted. The presenters concluded by emphasizing on the importance of actuaries acting in public interest, the Profession as a body providing more guidance to members and the Profession clearly defining its role within the industry.

This session was followed by a presentation on the "Role of With Profits Committee (WPC)" by Abhishek Chadha, Gaurav Batra and A.V. Ramanan guided by Sunil Sharma. The presentation stated the statutory role and structure of WPC in India. Key challenges to WPC were identified as differing opinions between members of WPC when approving the methodology for calculating various components of asset share in the absence of uniform industry practices, resolving differences, and the lack of internal documentation available for the governance of participating funds in India such as the PPFM document in UK. The role of WPC in UK was also discussed. To conclude, the presenters emphasized on the need for participating funds to have stronger governance frameworks and the potential role WPC could play in advising the management on the governance of these funds and therefore, play a larger role than currently defined as per regulations.

"Advising a new client" formed the topic of the next case study by Rohit Ajgaonkar and Amruth Krishnan guided by G.L.N.Sarma. The problem involved advising a client which was unhappy with its previous advisor. The Director of the actuary's firm was also a stakeholder of the client's business which introduced a potential conflict of interest. The presenters discussed several PCS that applied under this situation. The discussion was concluded with possible courses of action which included accepting the assignment but after consulting the previous advisor, notifying the client about the conflict of interest, adhering to guidance notes, APSs and Professional Code of Conduct; and seeking clarifications from senior professionals in the field if needed.

The next presentation was by Prashansa Jain, Ramanuj Bansilal Bhangdiya and Keyur K Parekh guided by P.K.Dinakar on "Issues Involved in the Peer Review of Appointed Actuary Work". This presentation discussed the objective and scope of Peer Review as stated in APS4. Gaining awareness about best practices in the industry and instilling confidence in the work of AA were identified among the benefits of Peer Review work. Issues with setting the detailed scope of the peer review, satisfying the eligibility criteria for a peer reviewer and the timelines for conducting the peer review were discussed. The presenters stated the importance of Peer Review being completed in time for it to affect the returns that are filed with the IRDA. A suggestion regarding having a standardized format for Peer Review reports was also put forward. The forum also discussed the need to differentiate between a "Peer Review" and an "Actuarial Audit".

The penultimate session of the day was a presentation on the "Appointed Actuary System" in India by Sharad Bajla and Yogesh Agarwal guided by K.K. Wadhwa. The presenters discussed the process of appointment of AA in India, powers and responsibilities of AA in India and also drew comparisons with the system in UK, Australia and US. They stated the traditional roles of AA such as ensuring the insurer remains solvent at all times. The presentation also suggested other less conventional areas where an AA could play a larger role, such as designing the Enterprise Risk Management (ERM) framework of the insurer, curbing mis-selling and improving the fraud monitoring and control systems. The discussions that followed brought forth the view that AA can potentially play a larger role in these areas as well, but it was also argued that ensuring business soundness of an insurer cannot entirely be the responsibility of AA. Examples of Morris Review and Penrose Report were cited according to which too much reliance on AA in UK was not considered to be an ideal scenario.

Rama Devi

The last session of the day was on the IAI Disciplinary Processes and was conducted by Rama Devi, Prosecution Director. This session covered the structure of the Disciplinary Committee; explained the function and powers of the Prosecution Director. She also educated the audience about the step-by-step process of filing a complaint against another member and the procedures that follow.

Sanjeeb Kumar concluded the seminar with a thank you note for all panelists, speakers, guides, organisers and participants.

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LEADERSHIP DEVELOPMENT PROGRAM

- **Organized by** : Advisory Group on Professionalism, Ethics & Conduct, IAI
- **Venue** : Hotel Sea Princess, Mumbai
- **Date** : 14th June 2014

The Leadership Development Program is held on the third and final day of the India Fellowship Seminar for the participating Students, Affiliates and Associates. The purpose of the program is to introduce to the aspiring Fellows the art of managing communications at all levels. Specifically, it involved a deeper insight into:

- Influencing your Team
- Managing Expectations as a leader
- Negotiating as a Leader

The structure of the program was very interactive and most of the concepts were delivered through audience participation in various activities. Real life experiences of the participants were drawn on for better reflection of the ideas being learnt.

About the Author

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Keyur Parekh is a Qualified Actuary and a Chartered Accountant. He has three years of work experience in Life Insurance. He is currently working in the Reporting team of Reliance Life Insurance in areas of Data and Reserve movements, ALM and Asset Shares.

Session Highlights:

The session started with a quick introduction of the Speaker Nimesh Rathod. Nimesh asked the participants to give a brief introduction of them and also

Nimesh Rathod

to mention how and where they think they have used negotiation in the past. As was seen from the introductions, it was a healthy mix of some very experienced participants, having about two decades of work experience, during which time a few of the other participants would have just started attending school! The examples given by the participants regarding their use of negotiation ranged from negotiating with their managers and subordinates at work, to negotiating with their children and better halves at home. This very aptly impressed upon the audience the fact that negotiation is omni present and cannot be escaped.

The session then moved onto an activity which involved "extracting information" from another person. The participants were divided into groups of two each. What followed was an intense round of questioning and cross questioning by the participants in order to extract the information. Very few succeeded in getting answers to all the three questions. Nimesh then gave the learning from the activity. The key was mainly to:

- **Ask open ended questions** – These are the questions that solicit a detailed reply rather than a Yes or No reply question. So rather than asking "Do you like going to Italian restaurants?" one should ask "Which type of restaurants do you like going to?" This enhances the chances of getting the relevant information from the other party.
- **Balance between listening and talking** – A good leader listens. This also applies while trying to get information. The more you listen, the more there are chances of you finding the information you need. The talking listening ratio should not be more than 30:70. In fact Nimesh went on to conclude that you can get information even through very good body language and gestures which can induce the other party to keep talking. He mentioned that as per a study, 93% of the communication happens through non-verbal means. The use of Pauses at appropriate places is the key in this context.
- **Concluding "offline"** – What this means is that while negotiating, one should not listen and conclude at the same time. The focus should be only on listening to all the information that is being provided by the other party. When you listen to conclude or to respond, there are chances that you miss out on vital information.

Nimesh with participants during the session

After extracting these learning, new groups were created and the activity repeated keeping the above points in mind. The performance was noticeably better in the second round. Points well taken!

The next activity involved a questionnaire

participants were enjoying the session

on negotiation. The audience were shared a set of 10 statements regarding negotiations.. This highlighted many key aspects of Negotiations, for e.g. that it is not about winning more points than the other but about working towards achieving your goal from the negotiation and that it is not dangerous to let other party know of what you actually expect out of a negotiation but that infact helps in the negotiation if both parties are clear of each other's objectives.

Post lunch, the session moved on to a very important topic of negotiating as a leader with teammates. The case study provided for this role play involved sensitive issues like how to communicate "bad news" to your vintage employee. The role play gave the audience a live example on traits like accountability, assertiveness, clarity of a good negotiator. Nimesh highlighted the difference between being aggressive v/s being submissive as well as being friendly v/s being assertive with the subordinates. He highlighted the principle of 'They win you gain'. He also stressed that as a leader one should own up responsibility for the decision and be honest about the implications of the decision and not give false promises.

The final activity involved the most important concept about negotiation: Position v/s Interest. Nimesh highlighted that the position of a party in a negotiation is different from his underlying interest. Position is the stand that a party takes in a negotiation. Interest is the underlying desires or concerns that make him take a particular stand in the first place. If you cater to the Interest, then the Position becomes irrelevant.

The thought that the key to a negotiation is to know the underlying interest

excited the audience.In a real life Casestudy, the participants identified the different parties to this negotiation and their respective positions. They also analysed their underlying interest and then derived a solution that catered to each one of their interest. This led them to diluting their positions, and a successful negotiation!

The audience was then given some positions that they encounter from various people like boss, subordinates, colleagues etc at work place and they were told to identify the underlying interests in each of those positions. They were very simple but powerful examples which are encountered in day to day work, examples being: "I want the report tomorrow anyhow…", "This is not my job…" These indeed helped the audience understand about how to effectively deal with these common issues at a workplace.

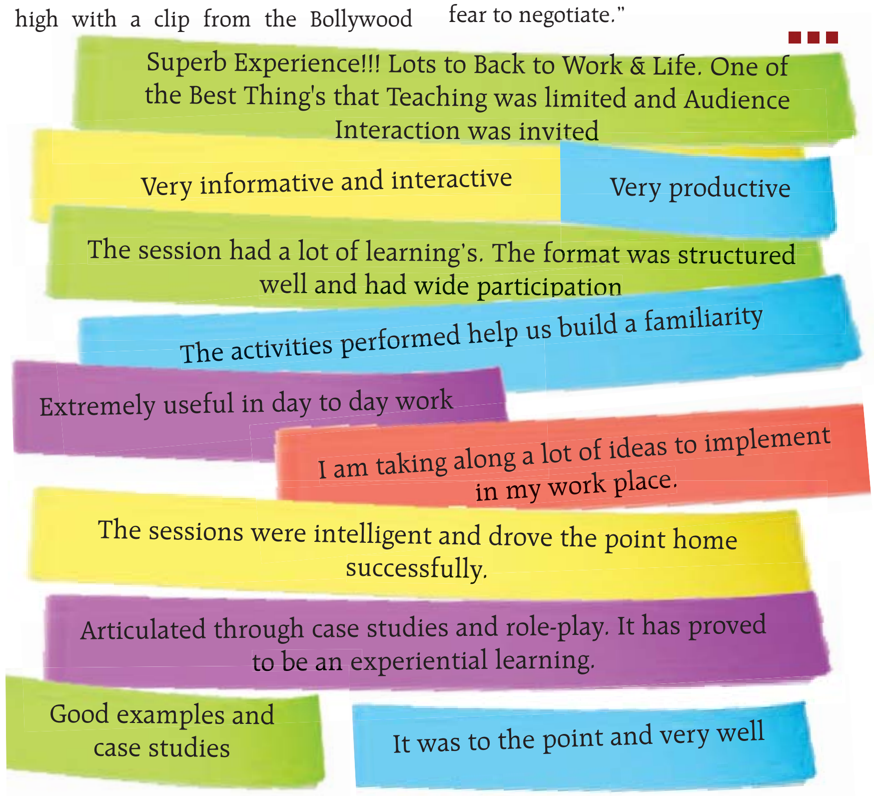
At about 6 pm, the day ended on a high with a clip from the Bollywood movie, wherein the protagonist uses his negotiation skills to very good effect. By knowing the underlying interest of the client, he exploits that interest to sell diamonds to the client at a very high rate. Point well taken by the participants!

Summary of the Session:

Overall it was a very engaging session for the participants who learnt the intricacies of negotiation. The key take-a-ways from the session were Asking open ended questions, balancing between talking and listening, developing

Nimesh was discussing with participants during the session

assertiveness as a leader and catering to Interest rather than Position in a negotiation. It would be apt to conclude by quoting the words of John F. Kennedy, the famous US President, "Let us never negotiate out of fear. But let us never fear to negotiate."



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IRDA Reg. No. 137

FEATURES

The IFOA's new Certified Actuarial Analyst professional qualification – how do I know if it is right for me?

The Institute and Faculty of Actuaries (IFoA), working in partnership with stakeholders, including many Indian employers and the Institute of Actuaries of India, has developed a new, globally recognised, professional qualification and associated membership category using actuarial science to recognise the expertise of those working in analytical roles in the financial services sector – the Certified Actuarial Analyst (CAA).

Interest in the CAA has been strong around the world, particularly in India, and candidates are already signing up to sit Module 0, the entry test, in August 2014. Senior representatives of the IFoA (including the President and Chief Executive) attended the Global Conference of Actuaries in Mumbai in February, and were overwhelmed by the positive response to the CAA, which underlines the desire of employers of CAA professionals, and of candidates, to advance their careers.

The information in this article will help you to decide if the CAA is the right actuarial qualification for you.

Why has the IFoA developed the CAA?

In recent years there has been substantial growth in the number of professionals working in technical financial roles, but there has been no qualification that globally recognises their unique skills and abilities. Increasing demand from employers for these roles means that not only are they increasing in number, but there is also an increasing requirement to identify the professionalism of the staff undertaking them.

Many students undertake the Fellowship examinations, and find that either the time taken to complete them or the level that the exams are pitched at is different to the requirements for the roles that they are actually undertaking. The CAA addresses this gap.

What are the benefits of the CAA?

The qualification provides you with membership of a prestigious, globally recognised, Royal Chartered, independent professional body and the associated benefits of being part of the worldwide IFoA community, including support from the IFoA throughout your career. The generic nature of the CAA means that the skills you gain will open the door to a wide range of career options such as management, technical analysis, data processing, or perhaps even moving to a different area such as marketing or consultancy. The CAA provides a breadth of knowledge, giving CAAs the flexibility and opportunity to excel across the wider corporate world.

For employers of CAAs, the qualification will provide the assurance that you, and your clients, need that those undertaking analytical work are qualified to a high standard. Employers will also find that in offering the CAA, employees are motivated, talent is attracted and indeed can be more easily identified and retained.

Combine a high quality credential with membership of an international professional body, and the community, professionalism and regulation which this represents, and it can be seen that the CAA is a very attractive proposition for employers and employees alike.

What does the course consist of?

The CAA consists of six exams – an entry test, four modules providing the technical knowledge that underpins actuarial calculations, and a final, practical module that assesses understanding of actuarial models and audit trails. As well as the exams, students are required to sit a professionalism test to show understanding of ethics and the Actuaries' Code, and to demonstrate one year of relevant work-based skills - which includes communication skills. At completion, CAA members of the IFoA will have annual CPD requirements to fulfil, will be regulated, and will have the full support of their professional body.

The first five exams are offered via computer based assessment, meaning that they can be sat at exam centres in hundreds of locations around the world, including many cities in India. As these tests are taken online, they will feel closer to the work you actually do in your day to day role than paper based assessments.

The CAA takes two to three years of part time study, so it is possible to study for and sit the exams while working full time. However, the CAA exams are not an 'easy pass'. The technical and analytical requirements demanded of students is high. Module 0 is open to everyone and will help candidates to decide if they have the skills to progress with the CAA. Just like the full Fellowship, our CAA students will have to work hard to pass their examinations.

What should I do if I want to complete the CAA?

Registration for the first exam session in August closes on the 18th July 2014, but if you miss out this time you can apply later this year to sit exams in January 2015. As with Fellowship, there will be two CAA exam sessions every year. To prepare for the exam, all the information you need - including key dates, syllabuses, study materials, and sample exam papers – are available on the IFoA website.

If you are in employment it may be a good idea to discuss your training needs

About the Author

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Anna Clarke works directly for the Chief Executive as Corporate Projects Leader at the IFoA and is currently managing the Certified Actuarial Analyst project. A qualified project manager, she has worked at the IFoA for four years, leading on a number of initiatives.

and career options with your manager. Many employers (including those in India) have indicated to us that they may be willing to support employees through the qualification in various ways.

What if I have already started studying for Fellowship and I don't think it's right for me?

Because the CAA syllabus is based on aspects of the Fellowship syllabuses, we are offering candidates on the Fellowship pathway the opportunity to gain exemptions from CAA modules and transfer across to the CAA qualification route. This is in recognition of the fact that some Fellowship candidates would have chosen the CAA instead had it been available. This option is available from 3 November 2014 for a period of 15 months. Further details are available on the IFoA website.

If you are a Fellowship student who has completed subjects CT1, CT3 to CT6 and CA2, you will be able to transfer to the membership grade of Certified Actuarial Analyst at any time. This is subject to meeting the work-based skills and professionalism requirements.

In time the IFoA will provide a bridge between the CAA and the actuarial Fellowship pathway, subject to demand, providing ambitious and talented analysts with the opportunity to progress further and gain another prestigious professional qualification.

Whether you want to become a specialist and establish a successful career as an actuary, or whether you'd rather diversify and use your actuarial analyst qualification as a springboard to a more wide-ranging career, you will be provided with world class support throughout your studies and your career. By providing an alternative qualification, the IFoA is catering for the needs of its members and potential members not only in India, but around the world.

More details about the CAA – including study materials, information about pricing, information about the different actuarial qualifications on offer, and the career opportunities the CAA presents - are available on the IFoA website: http://www.actuaries.org.uk/becoming-actuary/caa

If you have any further queries, you can get in touch with us at CAA@actuaries.org.uk.

CASE STUDIES

Praveen Godbole is a Regional Manager at the New India Assurance Co. Ltd. in Bombay, India.

I have always been interested in maths. I graduated in maths in 1975 and am always exploring areas where the application of knowledge of maths could be applied in real life. Unfortunately, I was not aware of the role of actuary when I graduated. In fact, I was not aware of the profession until I joined my current employer (who I have been with for over 30 years).

Because of full time employment, career progression and having a family, I could not succeed in pursuing the Associate or Fellowship course as it demanded more time and effort than I could possibly spare. However, my interest in the profession continued and I kept myself abreast of developments in the field by reading journals and following news on the internet.

It was by doing this that I came to learn about the CAA on the IFoA's website. I saw in it a chance to acquire an actuarial qualification that I could use in my professional as well as post-retirement life.

I wish to pursue the course for my own love of the subject. It will certainly add to my knowledge. I feel I will be among the very few Indians who hold a qualification from the IFoA, which is very rewarding as the profession is highly respected in India.'

Mehak Nagpal is an actuarial student in Chandigarh, India.

'I am concentrating all my efforts on taking actuarial exams. I left my previous job as a Reporting Analyst so that I could devote time to my actuarial studies, as this is my passion.

I visit the IFoA website regularly so that I can keep in touch with updates. I saw the CAA advertised and it made me smile because I know it will give me opportunity for growth whilst pursuing my goal of working in the actuarial industry.

I decided to take the CAA because it is a globally recognised qualification which will give me a lot of opportunity within my career. The course has a perfect blend of mathematics and statistics, which I am passionate about. I think having CAA on your CV adds weight to it as it is very appealing.

Actuaries deal with risk and uncertainty but I do not believe that an actuarial career is at all risky or uncertain. No doubt it will require hard work, dedication and persistence, but at the same time it gives a global and professional approach and I know that my effort will be well rewarded. I believe that the CAA will open doors throughout my career.'

FEATURES

LESSONS FROM GLOBAL FINANCIAL CRISIS ON FAILURE OF RISK MANAGEMENT

The world witnessed a number of financial crisis starting with "The Great Depression" in late 1920s; failure of banks in 1980s in Europe, Japan and US; Asian banking crisis in 1990s; Scandinavian banking crisis in Norway, Sweden and Finland in 1990s and finally, the Global Financial Crisis ("GFC") in 2008-09. A distinctive feature of GFC was that, the crisis happened during the Basel-II regime where financial security of banking system was placed on three pillars (Quantitative, Qualitative and Disclosure requirement) which supposed to have worked. The cause of concern could be for solvency-II which is also based on similar three pillar approach. Banking industry must have invested vast sum of money to comply with these requirements and yet the results are poor.

Though the front end cause of GFC was collapse of housing bubble and sub-prime lending; the back end causes of GFC was failure of risk management and corporate governance within the financial institutions in US. Many studies suggest that Board at top of the ladder did not enforce good risk management practices, they were inadequately trained in financial services and their compensation was not aligned to long term interest of the Company.

"One study estimated that at eight US major financial institutions, two-third of directors had not banking experience"

Different methods of Risk management; choose the one that suits you best.

About the Author

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Sonjai Kumar is working in Aviva India Life Insurance as Head- Insurance and Financial risk in a Risk Team

Role of Board

The **Board** failed to oversee the governance and risk management issues; the members of the Board neither devoted sufficient time nor fulfill their duties. Number of members of the risk committees was not coming from technical background. One study estimated that at eight US major financial institutions, two-third of directors had not banking experience. Moody in 2005 wrote that at Lehman Brothers four out of ten members of the Board were over 75 years of age and only one had financial sector knowledge. Another issue identified post crisis was that in many financial institutions, risk committees were not meeting regularly. It is referred that at Lehman Brothers, met only twice both in 2006 and 2007. In some institutions, the risk committees were established shortly before they failed such as Bear Stearns. Boards of directors, in particular the chairman, did not carry out a serious performance appraisal either of their individual members or of the board of directors as a whole.

Some banks report difficulties in recruiting non-executive directors with financial expertise in order to staff their risk and audit committees.

Risk Management Issues

There was a lack of understanding of the risks on the part of those involved in the risk management chain and insufficient training for those employees responsible for distributing risk products. It was also found that risk management information was not always available to the board to take right decision. Apart from this, financial institutions were not always granted their risk management function sufficient powers and authority to be able to curb the activities of risk-takers and traders. At a number of banks, there was lower prestige and status of risk management staff vis-à-vis traders.

"top executive salaries averaged only 4- 6 per cent of total compensation with stock related compensation"

Remuneration

Ideally, Board should align key executive and board remuneration with the longer term interests of the company and its shareholders. The Board should disclose a remuneration policy statement covering board members and key executives. Such policy statements specify the relationship between remuneration and performance, and include measurable standards that emphasize the long run interests of the company. These things did not happen and contributed in the making of GFC.

It is usual in most companies (banks and non-banks) that the equity component in compensation (either in shares or options) increases with seniority. One study for European banks indicated that in 2006, the fixed salary accounted for 24 per cent of CEO remuneration, annual cash bonuses for 36 per cent and long term incentive awards for 40 per cent. By contrast, one study of six US financial institutions found that top executive salaries averaged only 4- 6 per cent of total compensation with stock related compensation.

Role of CRO

Risk Management has been successfully where the CRO reports directly to the CEO or where the CRO has a seat on the board or management committee. Some banks make it a practice for the CRO to report regularly to the full board to review risk issues and exposures, as well as more frequently to the risk committee.

Ignoring Liquidity Warning

The turmoil was played by liquidity risk which led to the collapse of both Bear Stearns and Northern Rock. Both felt that the risk of liquidity drying up was not foreseen and moreover that they had adequate capital. However, the warning signs were clear during the first quarter of 2007: the directors of Northern Rock acknowledged that they had read the Bank of England's Financial Stability Report and a FSA's report which both drew explicit attention to liquidity risks yet no adequate emergency lending lines were put in place. Countrywide of the US had a similar business model but had put in place emergency credit lines at some cost to them. The Institute of International Finance (2007), representing the world's major banks, already drew attention to the need to improve liquidity risk management in March 2007, with their group of senior staff from banks already at work since 2005, i.e. well before the turmoil of August 2007.

The other factor contributing to the GFC was over reliance on credit rating agencies whose rating at times gets influenced by revenue. Senior Supervisor group noted that some banks entirely relied on the rating and did not establish their own risk analysis of the instruments.

"the directors of Northern Rock acknowledged that they had read the Bank of England's Financial Stability Report and a FSA's report which both drew explicit attention to liquidity risks yet no adequate emergency lending lines were put in place"

Risk to Solvency-II

One of the criticisms of GFC was that it was not clear whether the technical modeling was inherently faulty or whether the failure existed due to overall governance and management of risk management practices and processes. It was widespread reported that there were over reliance on models and complex products without fully understanding the modeling. It was also not clear whether the senior management understood the results of the model. While implementing Solvency-II where internal models will be the central to capital calculation and risk management, it remain to be seen how does modeling, implementing and understanding challenges are sustained in the backdrop of experience of GFC. Though the models will undergo approval process by the regulator, the challenge remains in handling operational risk posed by models.

Indian Context

One of the main reasons of moving from solvency-I regime to solvency-II was to pass the benefits of risk management to the financial institution through the way capital was calculated using risk based capital approach. In solvency-I, it was possible to pass some benefits of good risk management of risks such as interest rate, lapse, mortality and expense through its good experience letting into reserve calculation which goes into capital along with sum at risk, however many of other risks such as credit, liquidity, operational and others cannot be linked to capital calculation in Solvency-I regime. In this regard in the Indian context, risk management in the insurance sector is picking up (CRO position etc), the real benefits will only come when full risk based capital come into force. Whenever that happens, the Indian market must use the best of experiences from GFC and the experience that will emerge from Solvency-II.

■■■

IT IS VERY EASY TO DEFEAT SOMEONE, BUT IT IS VERY HARD TO WIN SOMEONE

Dr. Abdul Kalam


WE BELIEVE IN
SUSTAINABLE GROWTH.
FOR BUSINESS AND FOR YOU.
At EY, we combine the best of global insights and local reach. We attract and develop diverse talent, and our inclusive values-based culture brings our employees together as part of high-performance teams to deliver exceptional client service, thereby helping in building a better working world.
Opportunities in Actuarial Services
Our Actuarial services assist our financial services and insurance clients in developing strategies that deliver success for their enterprise.
We are looking for General Insurance professionals with a truly global mindset, who combine the right mix of technical and interpersonal skills.
Opportunities exist in Mumbai at Senior Consultant and Manager Level.
You will be tackling a variety of challenges on consulting projects such as Mergers & Acquisitions, Reserving, Regulatory Reporting and Compliance, Business Planning, Product Pricing and more.
Eligibility:
4 to 8 years of experience in the general insurance industry or consulting
Minimum of 6 Actuarial papers to recently qualified
Apply today by sending your resume to careers.ey@in.ey.com mentioning <Actuarial Services>in the subject.
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EY
Building a better working world

BAILOUT ECONOMICS

It is often said that one of the reasons for the rise of Hitler in the 1930's was that the Western countries wanted to use him as a shield between themselves and Communist Russia.

After the Second World War, the economies of most of the European countries were shattered. Taking advantage of this situation, the Soviet Union of Russia started influencing them. To prevent this spread of communism, the US came up with the Marshall Plan. In accordance with this plan, the US started doling out funds to the weak European countries to help them out of their precarious economic condition and away from the grasp of Russia. Behind this apparent altruism lay the objective of obstructing the growing power and strength of Russia. During the four years that the plan was in operation, the US spent more than $15 billion helping countries like Greece, Turkey and others.

Now, in the 21st century, the greatest threat a country faces is the threat of terrorism. It has almost become imperative for every country to allocate a fraction of funds from its budget to counter this menace. While countries like the US, England and even India can afford to spend large amounts to combat terrorism, smaller countries like Pakistan, Bangladesh and others just cannot do so. It is in these economically weak countries that the threat of terrorism is even higher.

Since 9/11, American policymakers have significantly increased military and nonmilitary assistance to Pakistan in an attempt to address their strategic concerns as well as to support Pakistani democracy. U.S. annual bilateral aid in total went from $5.3 million in 2000 to $798 million in 2002 to more than $4.4 billion in 2010. More than two-thirds (68 percent) of the $20.73 billion in total appropriated assistance over the past eight fiscal years has gone to security-related aid.

The above cited examples clearly point at the fact **that there exists a symbiotic relationship between a superior economy (in this case US) and the inferior economies. While the inferior economies need considerable aid for reviving themselves from a possible breakdown, the superior economy comes to their rescue, but for its own strategic motives.**

The natural questions that come to our mind at this instant are-1) How much aid will the supreme country provide? 2) Will the inferior economy be able to improve its situation?

If not, then what happens to that economy? To answer these questions from an economic perspective a simple model is constructed to capture the behavior of both economies.

It is assumed that the economic conditions in the superior country are more or less stable, instability in the inferior country has a considerable impact on the superior country and that the funds are efficiently used by the inferior economy for the assigned purpose. Consider the following diagram:-

Let X be the superior country and Y be the inferior country. On the vertical axis we plot the vulnerability of Y. Vulnerability implies the instability or disturbance caused by a crisis situation in the inferior economy. It is measured by the loss in GDP of that country due to such disturbance. On the horizontal axis we plot the demand

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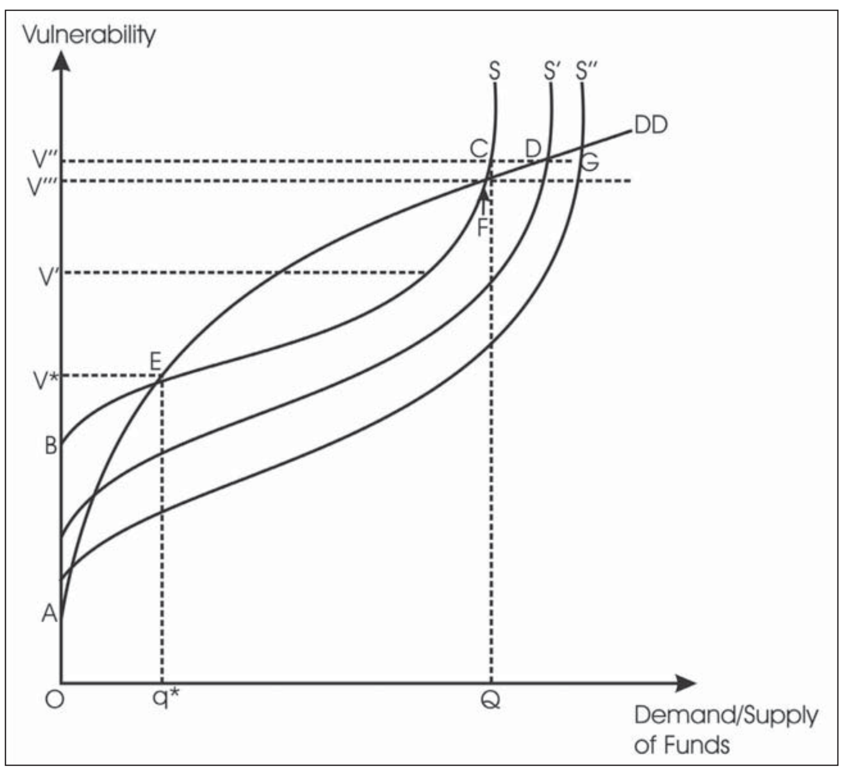


of funds by Y and the supply of funds by X.

Up to point A, Y can handle any disturbance on its own after which it will have to rely on external aid. The demand for funds is positively dependent on the level of vulnerability in Y. Moreover, as vulnerability rises, the demand for external aid rises at an increasing rate. The inverse demand function plotted is thus concave.

X, being a powerful country, would not be affected much by an initial increase in vulnerability in Y. But after a critical level B, it will be induced to tackle the problem and hence the supply of funds is dependent on the level of vulnerability in Y. Also, as vulnerability rises supply initially rises at an increasing rate (X will try to urgently fix the crisis), after a point it starts rising at a decreasing rate, till it becomes vertical or inelastic at Q (the exogenous upper limit to the aid given by X). Again, by plotting the inverse supply function; the supply curve will first be concave, then convex and finally vertical.

Equilibrium, in this model, would imply a match between the demand and supply of funds such that vulnerability remains stable. That is, the situation does not worsen even if it does not improve. We have two equilibrium points-E and F. Note that E is a stable equilibrium because any divergence from E will lead to a movement towards E. For instance, at any vulnerability level slightly greater than E, the external assistance to mitigate the instability is greater than what is demanded by Y. Hence, with time, Y will recover and its vulnerability would come down. On the other hand, by the same logic, F is an unstable equilibrium. E is also a 'good' equilibrium because with a relatively low aid (q*), X has succeeded in stabilizing vulnerability at a lower level (V*).

Starting from V*, if there is a shock in Y (a sudden crisis), then vulnerability abruptly rises to a level, say V'. Since at this higher level, the supply of funds exceeds the demand, therefore, over time Y will be bailed out of its crisis solely by X's aid. But, if it so happens that a massive crisis hits Y then vulnerability will suddenly shoot up to a very high level, say V". At this level, Y is demanding more funds to deal with the crisis than the maximum that X can provide, i.e. Q. Due to the paucity of funds, the situation aggravates further as vulnerability keeps on increasing. Thus, unless X increases the exogenously determined maximum aid, Q, the future of Y is at stake.

It is at this critical juncture that the role of international bodies like UN, IMF and World Bank has to be appreciated. These organizations can come "to the rescue" of Y by providing a grant equal to the differential, CD, between the demand and supply of funds at V". As a consequence, the combined supply curve of external aid (that provided by X plus that provided by IMF) shifts rightwards by CD (new supply curve is S') and vulnerability will be stabilized at V". Thus, an imminent danger of the collapse of Y will be mitigated.

Moreover, if these organizations grant an aid, which is slightly greater than CD, say CG, then the combined supply curve of external aid shifts further towards the right (say S"). With the new supply curve (S") and the existing demand curve (DD), at V" the supply of external aid now exceeds the demand resulting in a fall in vulnerability over time. Thus, in the long run, Y's situation will significantly improve.

How long should the IMF continue providing aid to Y? Once vulnerability falls below V"' (the level corresponding to the earlier unstable equilibrium, F), the IMF can start phasing out its aid. This is because once the level of vulnerability is pushed below the unstable equilibrium level, it will automatically come down to the good equilibrium. In this manner, these **international organizations play a crucial role in "bailing-out" inferior economies from their crises.**

The above model, with certain modifications with regard to the definition of vulnerability, can also be applied to the problem of "credit crunch" in commercial banks. Banks make profits by lending at a higher rate of interest than that paid to depositors. Thus, it is beneficial for the banks to "borrow short-term" at a low rate of interest and "lend long-term" at a higher rate of interest. However, banks have to be able to meet their customers' demands for cash. Here, we invoke the concept of liquidity ratio which is the proportion of a bank's assets held in liquid form (cash, balances at the central bank, short-term loans and government bonds with a year to maturity). Banks therefore have a difficult choice to make between the desire for profitability (which necessitates a low liquidity ratio) and the need to be prudent to avoid a financial panic (which demands a high liquidity ratio). Unless a balance is attained, the banks are ought to be deemed "shaky".

Northern Rock was the UK's fifth largest mortgage lender. It became very susceptible to the "credit crunch" as it had grown by raising increasing amounts of finance from the short-term money market and lending for long-term mortgages. During the American subprime mortgage crisis, banks became very reluctant to lend to other banks because borrowers were more likely to default on their loans. In September 2007, Northern Rock obtained emergency financial support from the Bank of England. Thus, it became the first bank in over 150 years to suffer a bank run and was ultimately nationalised in February 2008. Hence, the role of the central bank of a country as the "lender of the last resort" is a kin to the role played by IMF in the context of the earlier model.

The US deferred nearly $800 million in counter terrorism funding to Pakistan in July 2011. This followed the US raid on Osama bin Laden's hideout in Abbottabad. However, this is not an isolated incident, arrest of a CIA contractor in Lahore and assassination of a Pakistani journalist (allegedly involving the ISI) further fuelled tension in an already sour relationship. The United States allege that Pakistan is unable or rather unwilling to take decisive actions against militant groups attacking its troops in and around Afghanistan. Thus, withholding aid was the only logical step available to them.

The over simplifying assumption of the efficient utilizatio of funds by the crises ridden economy was the driving force of the above model. Unfortunately, its validity seems to be highly questionable in reality. As they say, 'Beggars can't be choosers'. **Hence, it is in the interest of the inferior country to ensure that there are hardly any lapses and certainly, no mismanagement of funds.** ■■■

UPCOMING SEMINARS OF IAI

5th Capacity Building seminar on Introduction to R & Modeling Skills

August 8th, 2014
at Hotel Sea Princess | Mumbai

The Seminar will cover the following:-

- Commercial Pricing & Rate Adequacy
- Introduction to R - Case Studies
- Building Robust Excel Models

1st Capacity Building Seminar on Life Insurance

August 9th, 2014
at The Club | Mumbai

The Seminar will cover the following:-

- Economic Scenario Generator and its role in Actuarial Modelling
- Reinsurance Optimization - The Theoretical and Practical aspects

General Matters:

- **Participation Fees:** 7500/- (+12.36% Service Tax)
- **CPD Credit for IAI members:** 4 hours, as per APS 9
- **Registration: Start Date:**10th July, 2014 **& Close Date:** 4th August, 2014
- Capacity: **Limited to 30**, admission will be on **first-come-first served** basis.

3RD IAI CONNECT, 2014 August 20th, 2014 at Hotel Avion| Mumbai

Background: The Institute of Actuaries of India has felt the need of a medium which establishes a direct interaction between student members and the Institute. The **SC&YA Group** has created a forum, **'IAI Connect'** to serve this purpose.

Seminar will cover the following:-

- Indian Insurance Industry – Life, General and Beyond
- Careers in Actuarial Profession
- Actuarial Examinations – What is Expected with particular reference to financial economics?
- Actuarial Examinations – How to tackle Actuarial Exams
- Round Table – Open Q&A
- **General matters:**

Participation Fees & Registration Start & End Date: **TBA**

LEADERSHIP DEVELOPMENT PROGRAM (LDP 4)

August 22nd & 23rd, 2014 at Hotel Avion| Mumbai

Topic: Developing Executive Leadership – Power to Lead

Actuaries have all demonstrated excellent Intellectual, Mathematical and Problem Solving skills; however there has been criticism 2from quarters of the society that actuaries are not good communicators. The ability to communicate effectively will differentiate you from others and also help you win business.

Who should attend?

Only members of the Institute of Actuaries of India, in particular;
1) Members less than 45 years of age, and
2) Should have completed at the least 4 CT series of papers.

General matters:

- **Participation Fees: 5500/- (+12.36% Service Tax)**
- **Registration : Start Date:** 15th July, 2014 **& Close Date:**10th August, 2014
- **Capacity: Limited to 20,** admission will be on **first-come-first served** basis

Register at : http://www.actuariesindia.org/seminar.aspx?val=pocmember
Contact : Quintus Mendonca at quintus@actuariesindia.org for any assistance.

SUCCESS STORY

VANDANA BALUNI

vandana.baluni@birlasunlife.com

Personal

Congratulations! Ms. Vandana Baluni for being Topper in CA2 Exam. Tell us about yourself, your educational background and your hobbies

I am born and brought up in Delhi. After completing B.Sc from University of Delhi, I did Masters in Actuarial Science. I am quite a fun loving person and like to spend time with family and friends. Being an avid movie viewer, I tend not to miss most of the new bollywood movies. Also I am a connoisseur of good food - like to try out different cuisine apart from trying my hands on cooking.

How did your parents, family and friends contribute to your success?

I come from a family that has high regards for education. It is imperative that I recongnise their continuous support towards my education and professional growth. As far as CA2 success is concerned, my office colleagues and friends, have also been very supportive in my preparation – from marking sample assignments to make me aware of useful exam tips – they helped a lot.

How many hours of study on average per day did you put in to top the CA2 result where in only 24 candidates passed out?

Well, I don't think there is a direct positive correlation between number of hours studied per day on average and successful completion of CA2 exam. This is probably the only exam, where you can even think of making a genuine attempt without a lot of preparation unlike other theoretical papers.

How much time do you think one requires for serious preparation for this examination?

All is within the word "seriousness". While my last answer may lead another student to think CA2 being relatively easy to pass (that was my thought also before writing it!), to me, it is one of the toughest practical exams to steer through. I think a more regular preparation in terms of practicing sample assignments in exams condition is more important. One month of structured preparation should be enough to be well prepared for CA2, if at all we get one month of time to prepare.

Did you face any difficulty while studying this subject?

No not at all, except my weekend plans got messed up pretty badly... On a rather more serious note, the format of the CA2 exam is the most difficult part in studying for the subject. Almost entire weight of the marks is on audit trail and summary, but unless your model is reasonably correct and worth documenting, you don't know what to write. But at the same time, there is no need to build sophisticated model to clear the exam - hence it's the right balance between reasonable modelling and detailed documentation, which would bring smile to one's face post the result.

CA2 is a 7.5 hour long exam which examines documentation, analysis and reporting skills of the candidates within the given timeframe. What was your strategy to cover all these aspects while preparing for exam?

Like all the other actuarial exams, the key to success in CA2 also lies in effective time management at the exam centre. While preparing for it, I attempted all the sample papers in exam condition in order to come up with the best strategy that will work for me. I tried to ensure completing the first cut model in initial couple of hours with a shot at the audit trail. Post lunch, I finished the modification to the model and audit trail quickly to give almost 1.5 or more hours to write summary. Fortunately this strategy worked and I am through, but I would really suggest others preparing for this exam, to make one's own strategy. Another important thing not to miss out is asking right questions to the exam invigilators whenever stuck so that precious time is not lost – so never feel shy of asking questions!

How this exam has helped you at professional level?

To be very honest, even after scoring highest marks, my nervousness before remaining exams has not reduced at all; while I take time to tackle that, I can surely vouch for the importance of CA2 in our day-to-day work. This exam has helped me to understand the critical aspect of making a structured documentation of actuarial models and also to understand the tacit difference between communicating our work to our Supervisors and to non-actuarial Senior Management. Understanding part is over - now it's time to implement.

How do you think you can add value to the Actuarial Profession?

In my actuarial career so far, I have worked for both Indian insurer and also foreign insurers in the UK and Asia Pacific. Many a times I hear that our profession in India is not very developed. With so many qualified actuarial professionals in India, I always felt this statement as underestimation of our competencies. I would really like to contribute towards more advanced actuarial work within this ever changing risk landscape in our Country.

Apart from contributing through the Organisation where I am working, I would definitely like to utilize various platforms given by Institute of Actuaries of India by taking part in conference and seminars and also through various committees promoting the actuarial profession within and outside India.

As part of the actuarial exam curriculum in India, we are still completely dependent on the materials published specifically for UK profession. Given the opportunity, I would certainly like to contribute in developing study materials relevant to Indian industry for SA series exams.

What was your purpose while selecting this course - Core Application Model Documentation, Analysis and Reporting?

On a lighter note, IAI did not allow me to skip this subject, hence I selected it I picked this exam as per my plan towards exam progress where I wanted to take up practical exams after the completion of major theoretical papers.

17th GCA THEME CONTEST !

It's that time of the year again!! The time to mark your calendars for the 17th Global Conference of Actuaries - 2nd & 3rd February, 2015 !!

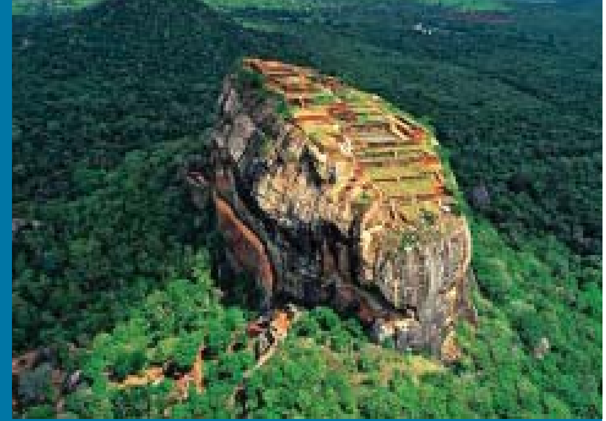
The driving theme for the 16th GCA – Evolving Frontiers, Exciting Prospects was the central thought, around which the entire event was planned. The topics of discussion were chosen and eminent speakers were invited, keeping in mind the theme. So needless to say, it was the most important building block in the event we know as the 16th GCA.

For 2015 we are looking for a new & inspiring theme! Betting that you have challenging ideas for us, help us in creating a conference.

Why don't you try it, like Ajai Kumar Tripathi & Prasanjit Roy, who won previously, and reserve yourself a seat! Mail your entry to Quintus Mendonca at Quintus@actuariesindia.org along with your name, membership id and complete address, latest by 4th August, 2014 and win a free Conference Entrance Ticket.

Note:

1. Only individual entries from active IAI members would be accepted.
2. The 17th GCA Organizing Group, the President and the IAI Staff are not expected to contest.
3. The contest result would be announced on 14th August, 2014.

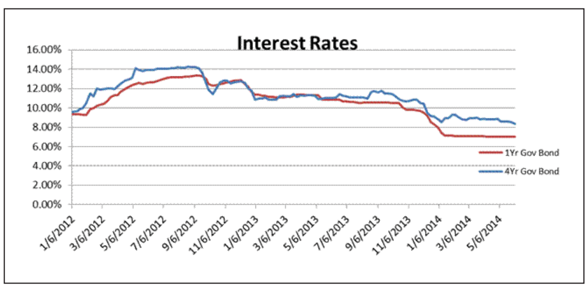


COUNTRY REPORT

SRI LANKAN INTEREST RATES AND IMPLICATIONS

In the past six months or so interest rates in Sri Lanka have dropped sharply as the central bank attempts to stimulate economic growth. This article examines the implications of this policy for pensions in Sri Lanka as well as for the risk-based capital (RBC) framework which will become mandatory for all insurers in the first quarter of 2016.

Yield Curve:



Source: NDB bank and NDB Wealth Management

There was a sharp drop in rates in early 2014 with the 365-day Treasury bill yielding 7.02% on the 30th of May 2014. This same bill yielded 13.36% on the 7th of September 2012.

The chart further illustrates that interest rates are volatile and somewhat difficult to predict into the future. For example, although the central bank has brought down rates, private sector borrowing has not increased to expected levels and it remains uncertain as to whether rates can be sustained at the current lower levels.

Pensions Implications:

In Sri Lanka the fixed deposit rates offered by banks were typically relatively high (above 12%). This meant that the post-retirement strategy of choice for many pensioners (who would not have a defined pension unless they had worked for the government) was to invest their lump sum into fixed deposits and utilize the interest to fund their living costs. If interest rates remain low, this strategy may become unviable and there is therefore an important role for the insurance industry to play via the provision of suitable products such as annuities and draw-down schemes. Further, the increasing uncertainty over longevity may combine with lower interest rates to give insurers a competitive advantage in the pension space in the coming years.

RBC Implications:

Under the RBC framework the standard discount rate is defined as follows:

40. A risk-free interest rate curve shall be used for discounting liability cash flows which are guaranteed and defined. Sri Lankan government bond rates shall be the basis for risk free rates.

41. IBSL will produce and publish a standard quarterly risk-free interest rate curve for solvency calculations.

In formulating the yield curve, there as a number of methods the IBSL could use such as (but not limited to):

1 - **Spot Rate Extrapolation**

Assume the long-term spot rate beyond the observable range is equal to the last observable spot rate.

2 - **Forward Rate Extrapolation**

Assume the long-term forward rate beyond the observable range is equal to the last observable forward rate.

3 - **Long-term Mean Reversion**

Assume the long-term rate beyond the observable range reverts to a long-term mean.

Each of the methods would of course produce different results. Methods #1 and #2 would be more volatile with liabilities potentially changing significantly with market interest rates (which we have seen are fairly volatile). Method #3 may result in the least volatile liability results. However, justifying an appropriate long-term mean is far from trivial.

The implications for companies would vary by product group. For example, universal life liabilities would be highly sensitive to movements in the discount rate whereas pure protection liabilities may be less sensitive. Additionally, whilst the in-force solvency volatility may be reduced to a degree due to corresponding movements in asset values, new business valuations may become volatile and dependent on market rates of interest.

In sum, as a result of the uncertainty as to the future evolution of interest rates in the market, and the uncertainty as to how the IBSL will calculate the risk-free curve, Sri Lankan insurers are faced with a number of significant challenges in managing their financial KPIs under the RBC framework.

About the Author

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Frank Munro is the Chief Actuary at AIA Insurance Lanka PLC and is a Fellow of the Institute and Faculty of Actuaries UK.

PUZZLE

Puzzle No 215:

A certain soccer ball comprises a valve, an inner skin, and 32 leather pieces which have been sewn together to make its outside skin. Twenty of these leather pieces are regular hexagons with edges of unit length and the other twelve are regular pentagons, also with edges of unit length.

If the sewing together of two edges of leather of unit length requires 10 cm of thread, how much thread would be needed to sew the outside skin of this particular soccer ball?

Puzzle No 216:

P and Q are five-digit numbers which between them contain all ten digits, as does their product, P × Q. If P = 54,321, what is Q?

SOLUTIONS TO PUZZLES

Puzzle No 209:

The two lists of words, with the reinserted letters shown in bold type, are as follows:

D**a**b, **c**ode, sift, **g**el, **he**ir, **j**oke, **lum**in**o**us, **p**ig, **quarts**, **tur**ves, **wax**y, **z**est

Do**zy**, **s**ix, **t**welve, **r**ut, **s**ore, **q**ui**p**, **on**us, **milk**, **jig**, **hug**, **f**at**e**, re**d**, **sc**a**b**, **c**ast

Minor variations are possible. For example in the first set of words "codes, fit" could replace "code, sift".

Puzzle No 210:

367 * 52 = 19084

Puzzle No 211:

A's number is 64

Puzzle No 212:

k = 2

Correct Solutions were received from

Puzzle No 209:

1. Graham Lyons
2. Narasimha Sai

Puzzle No 210:

1. Vamsidhar
2. Shilpi Jain
3. Abhijit Naik
4. C.N.V.Ramarao
5. Pravendra Singh Rajput
6. Narasimha Sai

Puzzle No 211:

1. Shilpi Jain
2. K. S. Pujari
3. Jai Moondra
4. CA. Pravinkumar A
5. Graham Lyons
6. Punit Parekh
7. Viraj Poojary
8. Shreya Singhania

Puzzle No 212:

1. Shilpi Jain
2. Ambikeshwar Kumar
3. Pankaj Arora
4. Jai Moondra
5. Graham Lyons
6. Mohit Gupta
7. Kailash Mittal
8. Punit Parekh
9. Rakesh K Sharma
10. Rajeshwari Rana
11. Reena Shah
12. Aayush Agarwal

shilpa_vm@hotmail.com

We invite articles from the members and non members with subject area being issues related to actuarial field, developments in the field and other related topics which are beneficial for the students of the institute.
The font size of the article ought to be 9.5. Also request you **to mark one or two sentences that represents gist of the article.** We will place it as **'break-out' box** as it will improve readability. Also it will be great help if you can suggest some **pictures that can be used with the article, just to make it attractive.** Articles should be original and not previously published. All the articles published in the magazine are guided by **EDITORIAL POLICY of the Institute.** The guidelines for submitting the articles are available at http://www.actuariesindia.org/subMenu.aspx?id=106&val=submit_article

SUDOKU

SUDOKU No. 23 for the month of July 2014

SUDOKU HARD

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

HOW TO PLAY

Fill in the grid so that every horizontal row, every vertical column and every 3x3 box contains the digits 1-9, without repeating the numbers in the same row, column or box.

You can't change the digits already given in the grid.

- Sudoku Puzzle by Vinod Kumar

Solution of Sudoku Puzzle No.22 published in the Month of May 2014

SOLUTION

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

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• Complete valuation projects in accordance with government regulations and accounting standards
• Get an opportunity to deliver valuation services to different countries
• Meet or exceed client expectations
• Seek and participate in key learning and development opportunities/maintain steady progress through exams

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• Candidates intending to pursue Actuarial Studies
• Candidates with qualifications having high mathematical content

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RNI NO. - MAHENG/2009/28427
Published on 16th of every month

Postal Registration No. - MH/MR/South/297/2012-14
Posted between 17th - 23rd of every month