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2014 AGFA & 16th GCA

There are just Eight weeks to go until the 16th Global Conference of Actuaries, which will be held in Mumbai from February 17 – 18, 2014.

For more details, visit: http://gca.actuariesindia.org/

This year's theme **"Evolving Frontiers, Exciting Prospects "** summarizes a whole gamut of topics which would be discussed and debated by eminent global personalities from the world of insurance, education and consulting – actuarial and others.

The 2014 AGFA on 17th Feb showcases Indian culture and Diversity.

The Inaugural Keynote Address on 17th February would be given by **Mr. T. S. Vijayan,** Chairperson – IRDA.

We will host the Global Round Table, where the best minds from the industry and the profession from India and outside will deliberate together on Hot Topics and exchange ideas on Actuarial and Industry related issues.

The concurrent sessions on key practice areas of Life Insurance, General Insurance, Pensions, ERM, Micro Insurance, Offshore and Health & Care Insurance would be held along with plenary sessions.

CPD – As per APS 9 you can claim CPD credit of 6 hrs for 2 days attendance.

- Register at http://gca.actuariesindia.org/registration/
- The Last Date for Early Bird Registration - 15th January, 2014.
- The Last Date for Registration - 10th February, 2014. Kindly note there will not be any extenstion.
- Hotel accommodation at subsidized rates : http://gca.actuariesindia.org/accommodation/

Why Attend 16th GCA?

Enhance the profile and influence of profession.

Network with your Peers to help each other solve problems, share best practice and stay connected all year round. Such connections can help you uncover ideas and spark inspiration.

Continued Professional Development (CPD).

Contributing to solutions of Contemporary Issues affecting our Profession and Industries; identify cutting-edge solutions that have significant value to participants.

Learn about new technologies and advances; Acquire firsthand, intimate knowledge of what's going on in a specific subject, functional specialty or industry.

Discover innovative products and services for your business.

Add a layer of enjoyment to managing your career growth by mixing a social aspect into your learning and industry branding efforts.

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C O N T E N T S

EDUCATION LEADERSHIP AWARD

Institute of Actuaries of India was honoured with **EDUCATION LEADERSHIP AWARD** by Dewang Mehta Foundation Trust at a function held on 23rd October, 2013 at Taj Lands End, Mumbai. **President, M Karunanidhi,** accepted the award.

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FROM THE EDITOR'S DESK

SUNIL SHARMA

sunil.sharma@kotak.com

Last two decades have brought significant changes in the way the Insurance business is done. From manual proposal deposit receipt to front-end implementation in LIC branches to the full computerisation of the new business management has really changed the way of doing the business. My generation of actuaries have seen these phenomenal changes from manual simplified use of commutation function to cash flow method. The computing speed with the latest processor has made it easy to run many thousands of scenarios for the whole portfolio in few hours.

These innovations have also lead to corresponding increased expectations from the Insurance customers and regulators. I must say with pleasure that Indian Industry has responded very well to such expectations by investing in technology. The pace at which the technology is evolving, in particular information technology, it is becoming extremely difficult to keep the pace with Technology. If the innovation in technology continues at such pace, next decade would see insurance Industry on a completely different horizon. Therefore, it's worth mention that insurers who invest in the technology now would be much ahead of the others who do not.

Can we imagine people buying insurance while watching TV using their smart TV using the motion control or voice control feature? One could expect a significant reduction in the transaction cost, processing cost and no or minimal paper documentation requirement. The eventual beneficiary of this innovation shall be the policyholders in the form of convenience and low cost.

While this evolution has speed up the processing speed and set up higher service standards, it will pose many challenges for the insurers in terms of risk management.

In one of the reports from McKinsey Global Institute identifies 12 technologies that could drive truly massive transformations and disruptions in the coming years. The report estimates a potential economic impact to the tune of $14-33 trillion by 2025. The top five of these include, Mobile internet, automation of knowledge of work, internet of things, cloud and advance robotics.

Being an inexpensive and capable mobile computing device with internet connectivity, the Mobile internet is expected to have significant economic impact over the next decade. Automation of knowledge work is likely to make the execution of knowledge work task faster and simpler.

Once the Broadband speed is improved, "Cloud" will completely virtualise the offices, by offering significant productivity gain across IT, Infrastructure, software/application development

As per the report, the advance Robotics offers a potential to improve the lives of about 50 million amputees and people with impaired mobility. Isn't it amazing?

So how does it impact the Life of an Actuary? Well, as the environment around us changes, so will the actuarial involvement and the strategies under the new environment. Therefore, I believe that it's extremely critical for the actuaries to keep themselves updated on the new development in the technology.

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

E-mail: library@actuariesindia.org

9TH SEMINAR ON CURRENT ISSUES IN LIFE ASSURANCE

• Organized by: Life Insurance Advisory Group, (IAI) •Venue: Hotel Orchid, Mumbai • Date: 29th November 2013

M. Karunanidhi

M. Karunanidhi (President, IAI) welcomed everyone appreciating the increasing number of participants every year and reached out to the audience to have an open discussion. He mentioned that there was a lot of activity on the regulatory front and that in the recent past we have been in a reactive mode. He called upon the corporate governance to stay focused on the 4th pillar i.e. the society at large. He concluded by thanking LIAG and the speakers for organizing the CILA.

Avijit Chatterjee welcomed everyone to the 9th Current Issues in Life Insurance (CILA) seminar on behalf of Life Insurance Advisory Group (LIAG). He highlighted the good coverage of speakers and topics.

Avijit Chatterjee

Session 1 - Taxation of Life Offices

Chairperson – Avijit Chatterjee

Speaker - Radhakishan Rawal - Director with PwC India's Tax and Regulatory Practice

Radhakishan spoke on taxation regime applicable to life insurance companies and briefly covered policyholder taxation. He covered the following topics -

Governing tax provision (1976 Amendment to Income Tax Act) - The section 44 introduced in the 1976 amendment to the Income Tax Act incorporated the following changes

- A separate code of taxation for life insurance companies
- Actuarial surplus (as in Form I) to be used as a basis of income
- Disallowance of deduction of expenditure

Section 115B introduced a special rate of 12.5% for profit from life insurance business and normal tax rate for income from other than life insurance business.

Changes in Insurance Law in Year 2000

Radhakishan Rawal

by IRDA__- IRDA introduced new accounting format with a separate policyholder's account (PHA) and shareholder's account (SHA). It further revised the format of Valuation Balance Sheet (Form I).

Approaches adopted by Life Insurer's - The companies due to lack of clarity in Rule 2 and subsequent reporting changes brought by IRDA have been following one of the three approaches to compute taxable profit:

- Aggregate Approach: based on financial statements and included surplus arising from both the PHA and SHA
- Segregate Approach: based on financial statements but treated surplus arising from PHA and SHA independently, with SHA as other income
- Form I based Approach: based on actuarial surplus in the actuarial valuation report and then add the surplus from SHA.

Litigation Issues - With the income-tax authorities adopting the above approaches differently in different jurisdictions, litigation issues arose related to the treatment of

- the valid approach for computation of taxable profit
- transfer of fund from SHA to PHA being treated as income
- negative reserve
- exempt income – pension and dividend
- disallowance of expenses incurred to earn exempt income

Recent judgment on the litigation issues - In "ICICI Prudential Insurance Co. Ltd. v. ACIT [2013] 140 ITD 41 (Mum)" the following major issues were decided in favor of the assessee

- Method of combining results in PHA and SHA accepted
- As per Rule 2 surplus has to be based on Valuation Balance Sheet
- Transfer of funds from SHA to PHA considered tax neutral

About the Author

aditi.goel@iciciprulife.com

Aditi Goel is an associate with Institute of Actuaries of India and is heading the Modeling Team at ICICI Prudential Life Insurance Company Limited, Mumbai.

- Income in SHA treated as income from life insurance business
- Adjustment to Form I surplus on account of Negative reserves unjustified
- Pension income and dividend income eligible for exemption
- No disallowance attracted under section 14A

However, revenue department has appealed before High Court against this judgment.

In his closing remarks, Radhakishan observed that the companies now have greater clarity after this tribunal order.

Session 2 – With Profits Business Session 1

Heerak Basu

Chairperson – Heerak Basu

Speaker - Nick Dumbreck - Practice Leader of Milliman's UK life consulting practice and member of the IAA Executive Committee.

Nick Dumbreck

Nick explained the background of with profits business in the UK and the events over the last 15 years along with regulation that led to the introduction of a With Profits Committee (WPC) in the UK environment.

Nick stated that the popularity of with-profits business has declined in the UK. The primary reason for this was the reduction in maturity yields over the last 12 years due to low investment return. The negative perception of with-profits business got exacerbated due to a lowering of the equity backing ratios and levy of guarantee charge by companies to manage guarantees.

Most pension policies of Equitable life sold upto 1988 had a guaranteed annuity option. The cost of the guarantee was recovered by declaring a lower terminal bonus. This was a matter of litigation and the High Court ruled in the company's favour. However, House of Lords later ruled against the company and the company ran into financial difficulties. The financial difficulties of Equitable Life led to a number of reviews and regulations. Lord Penrose, attributed the financial difficulties to the actions of senior management of the company.

A PPFM (Principles and Practices of Financial Management) was mandated to give structure to the company's decision making with regards to with-profits business. The role of With-Profits Actuary was introduced and Appointed Actuary system was dismantled. Also, a WPC or some form of governing body was required to be set up to address the various types of conflicts of interests involved in with-profits business.

The ultimate responsibility of managing with-profits business rests with the firm through its governing body (e.g. Board of Directors). The role of WPC is to aid the Board's decision making. It acts as a means by which the interests of with-profits policyholders are appropriately considered. Also, it addresses issues affecting policyholders (or groups) as a whole generally, rather than dealing with individual policyholder complaints. The WPC's job is to advise rather than to decide or manage.

A firm must ensure that its governing body obtains and gives due regard to the inputs or any representations of the WPC. It must provide WPC sufficient resources to perform its role effectively. The FCA must be informed of the governing body's decision to depart from the recommendation of the WPC.

A survey of Chairpersons of WPC Group of 11 companies in the UK was carried out and the results of the survey of WPC are based on the responses of the members of the

- In most cases actuaries dominate the WPC membership and the other members are economists, lawyers, investment specialists, consumer representatives (difficult to find), etc.
- In most cases, WPC members are fully independent. Nick believes that the Non-Executive directors can count as independent, but this could lead to some issues as the role of WPC is often to challenge the workings of the Board and if a member is a part of the groups it could lead to conflict.
- Non Members who attend the proceedings of WPC are WP actuary (both internal and external), representative of management, compliance officer, internal auditor or external advisors.
- The interaction of the WPC with the board can be either by way of a written report, WPC minutes or the Chair of WPC attending the board meetings.
- Generally a low level of interaction between the regulator and the WPCs.
- A vast majority of WPCs do not communicate directly with policyholders.
- Some of the common agenda items of WPCs are matters pertaining to investment management, PPFM, expense allocation.
- The topics which concern most WPCs are Investment strategy and transactions involving WP fund and shareholders.
- Average number of WPCs meetings in a year is about 8 or 9. WPC obliged to meet at least quarterly.

Session 3 – With profits business session 2

Pournima Gupte

Chairperson – Pournima Gupte

Speakers - Richard Holloway- Managing Director South East Asia & India and Sanket Kawatkar - Principal and Consulting Actuary, Milliman

Richard Holloway

Richard spoke about the importance of documentation for governance of participating business. This would prevent operational issues that could arise and improve transparency on how discretion is applied. He talked about the governance structure that is present in Singapore and Malaysia. Singapore Regulator approves the bonuses and requires documentation of governance of participating business. However, this documentation is internal to the company.

He highlighted the case of NTUC Singapore which had to reduce its reversionary bonus rates and attracted a lot of negative publicity. However, by providing adequate justification of its actions the company was able to contain the negative publicity. The case highlighted that policyholders are aware of bonus rates and it is important that policyholders' expectations be articulated internally.

He also highlighted a case of two companies merging where there was no adequate documentation, but documentation had to be created from past records of Board meetings.

Sanket Kawatkar

His presentation was followed by Sanket Kawatkar's who pointed out that unlike in other countries participating business is growing in India. Initiatives like the GN 6, GN 22 and the IRDA regulation requiring the setting up of "With Profits Committee" (WPC) have already been taken for strengthening the governance structure. Companies now have some internal documentation covering aspects of asset shares, smoothing and PRE. The Regulation as it stands today requires the WPC to approve asset shares. However, companies can use this opportunity to entrust the WPC with the management of other aspects of with profits business also. He further said that the Institute is of the opinion that there is a need for bringing out a GN for the independent Actuary. He also highlighted GN22 which would become effective from March 2014 and become important for participating business.

K. S. Gopalakrishnan

Mr. Gopalakrishnan, CEO of Aegon Religare commented that it would be good if the IAI produced some material which would introduce the nuances of participating business to the non executive directors who would constitute the WPC.

Session 4 – IFRS Update

Chairperson - Mr. Gopalakrishnan

Speakers - Satyan Jambunathan - Appointed Actuary ICICI Prudential Life Insurance Company

Satyan Jambunathan

Satyan spoke about the comments provided to IASB by the drafting group of the Institute of Actuaries of India (IAI). Satyan mentioned that the IAI comments were in response to questions posed by IASB in the latest Exposure Draft (ED) of IFRS 4 published in June 2013.

Satyan briefly introduced the building block approach to measurement of insurance contracts that has been proposed by IASB. The building blocks proposed in the ED are contractual service margin (CSM), risk adjustment, fulfilment cash flows and discount rate. Satyan then went on to elaborate each of the IAI comments:

Adjusting the CSM - IAI agrees with the unlocking mechanism proposed by the IASB. However, IAI has suggested that in the event that CSM is zero, in case of reduction in fulfilment cash flows, past losses should be adjusted first before creating CSM.

Contracts with links - The proposed method of decomposition between fixed and variable cash flows would be arbitrary. Further, the distinction between fixed and variable cash flows may not be clear. The IAI has therefore suggested that where mirroring is significant, all elements should be valued by reference to a valuation rate that reflects the carrying value of the backing assets. This would however still leave a mismatch if assets are categorized as HTM.

Interest expense in profit and loss - The proposed treatment of OCI could lead to potential mismatches given asset classification and would not highlight any asset liability mismatch. The IAI has therefore suggested that changes should be taken to P&L where asset classification is "Fair Value through P&L". Alternatively, there should be an option to take the changes through P&L or OCI. This could also address issues for contracts with links.

Presentation of revenue and expenses - The proposed presentation of revenue is an "unwind of liabilities" approach as opposed to the traditional gross premium approach. The proposed approach is complex. The IAI has therefore commented that the complexity may not be seen to add sufficient value and a gross premium approach may be more useful.

Transition - The ED proposes that the CSM should be calculated at inception on locked-in assumptions. This will pose several challenges like recreating assumptions and discontinuity in profit streams between old and new regimes (since catch-up is reflected directly in shareholders' equity). The IAI has therefore suggested that CSM on date of transition should be set such that no surplus arises on transition

Impact & drafting - There is a significant amount of complexity in the proposed standard that would result in a high cost of implementation. Treatment of participating business and, in particular, the treatment of estate, does not seem to be adequately covered in the ED.

In his closing remarks, Satyan observed that IFRS 4 is likely to be a reality soon and hence there is an urgent need to educate and prepare ourselves given the complexities involved.

Session 5 - The changing distribution landscape

Tushar Chatterjee, David Cook, Rajesh Dalmia

Name of Chairperson – Rajesh Dalmia

Speakers - David Cook Director - Head of Alternative Distribution Asia Swiss Re and Tushar Chatterjee - Vice President, Head of Pricing India Swiss Re


Tushar Chatterjee

Tushar spoke about the challenges faced by the industry. He shared some statistics from the Indian market and stated that over the years business written by agency channel has declined and has been made up by direct selling and banks. He said that getting the right distribution model is a big challenge for the industry and spoke about various challenges faced by different distribution channels - broker business is very price sensitive, low productivity is an issue for agency, etc.

David highlighted that the customer's behavior, preferences, buying habits and expectations are all changing. It is important that companies are aware of this change and are responsive to the needs of the customers. In the current scenario, digitization activities like internet, mobile, social media, etc are very important. The insurer needs to ensure that these tools are easy and convenient for the customer. These tools can be used effectively to understand the needs of the customers, to target a particular segment and to create brand awareness. He concluded by emphasizing the importance of need based selling.


David Cook


Nelius Bezuidenhout

This ended the conference, where Nelius Bezuidenhout thanked the speakers, IAI, LIAG and the audience for making the 9th CILA a success.

2ND CAPACITY BUILDING PROGRAM ON NEW MATHEMATICS FOR STOCHASTIC & RISK MANAGEMENT

• Organized by: Advisory Group on Research & Publication, IAI • Venue: Hotel Sea Princess, Mumbai • Date: 30th November 2013

The 2nd capacity building program on new developments in mathematical and statistical techniques used in risk management was organized recently by IAI. It was attended by both students and qualified actuaries. The participants were not only from life insurance, general insurance, and reinsurance companies but also from consultancies, and the regulator, IRDA. Though the content was highly technical in nature, the lucid style of presentation by the speaker, Dr Frank Ashe, and active participation by the delegates made the seminar very engaging. Overall, the seminar was a rewarding experience.

The seminar started with a brief introduction of the speaker, Dr. Frank Ashe, who has 30+ years of practical experience predominantly in the measurement and management of financial risk and return - with an emphasis on asset-liability management and on developing risk measurement and management tools.

Dr. Ashe has worked in consultancies, insurers, investment management firms, bond dealers and financial software houses in Australia and Canada. He was a full time Associate Professor at Macquarie University Applied Finance Centre from 2002 to 2006 and still maintains a part-time Associate Professorship. He has been presenting the 2-day course required for CERA qualification – by the Institute of Actuaries of Australia - since 2010.

Session -1: Extreme Value Theory

As the name suggests, the idea of the session was to give an overview of the extreme values in distributions. For example: insurers are interested in correctly modeling the very high claims or the upper tails of the distribution whereas asset managers are interested in modeling extremely negative returns or the lower tails of the distribution.

Dr. Ashe

Dr. Ashe started the session by comparing Central Limit Theorem (CLT) with Extreme Value Theory (EVT). Central limit theorem is all about the centre of the distribution whereas extreme value theory gives on idea on the extremes of the distribution. Pricing actuaries have been using CLT to calculate pure premiums whereas EVT is of more use to reserving actuaries for capital calculations.

Then Dr. Ashe described the Generalized Pareto Distribution (GPD) which is used to model extreme values of a single sample. He discussed in detail the probability density and cumulative distribution function of the GPD. He went on to discuss the mean excess and threshold for the distribution and how the mean excess value is independent of the threshold at the tails of the distribution. The shape and scale parameters of this distribution were also discussed. Then he spoke about the usefulness of Value at Risk (VaR) and expected shortfall, and their limitations in practical application. All these measurement tools such as VaR, shape parameters etc were explained thoroughly with detailed description of the associated mathematical formulae. Finally, the session was concluded with a practical example on how to model a distribution with fat tails.

Session-2: Modeling Volatility

This session started with an overview of volatility. Dr. Ashe presented some graphs on log returns of MSCI India data. The monthly MSCI log returns data ranged from December 1992 to February 2012. From the graphs, it was clear that the volatility of the returns was not constant and the volatility varied greatly during the financial crisis of 2008.

Then Dr. Ashe spoke on the three methods to calculate volatility: fixed window, experimental window and GARCH method. All these methods were explained with the help of spreadsheet models.

In order to forecast volatility for the future, the model of volatility should adhere to the past data. When analyzing the fit of the historical data, it is very important to check the goodness of fit of data. However, statistical tests have their limitations. Therefore, common sense should always be used in determining goodness of fit. Dr. Frank discussed the limitations of statistical tests. He also discussed some checks to ensure that statistical tests produce results that are sensible. This was followed by discussion on volatility for overlapping and non-overlapping period.

Session -3: Correlations and Copulas

The third session was all about correlations between different data sets and measuring that correlation. Dr. Ashe stared the session with theoretical background on covariance, correlation

About the Author

DurgaPrasad.PS@genre.com

PS Durga Prasad is a student member of IAI. He is currently working with Gen Re in Mumbai. He has nearly 5 years of experience in the UK pensions and reinsurance.

etc. This was followed by a detailed discussion on multivariate distributions. He explained multivariate distribution with a mathematical example. Then he spoke on various correlations namely Pearson , Spearman and Kendall. As an example of the correlation, he presented a graph of the past 5 year's stock market returns of China and India. This was an interesting graph on correlation as the shape of returns from India and China was very similar suggesting a high degree of correlation. He explained the different types of correlations in detail with the help of easy to follow mathematical examples and graphs. He also discussed the strengths and weaknesses of various correlations.

Then Dr. Ashe discussed how to measure correlations via copulas. He started the discussion with Sklar's theorem which gives the definition of copula. This was followed by description of various types of copulas such as Gaussian copula , t-copula, Archimedean copula etc. Each type of copula was explained with the help scatter plots.

The third session was ended with a discussion on how correlation varies with longer time periods. The analysis of stock market returns in Japan and Germany over a period of five years showed that correlation is directly proportional to the time period (period of measurement).This phenomenon was explained with suitable scatter plots.

The session 3 was the longest session . However, all the participants were actively engaged in the session by asking many interesting questions.

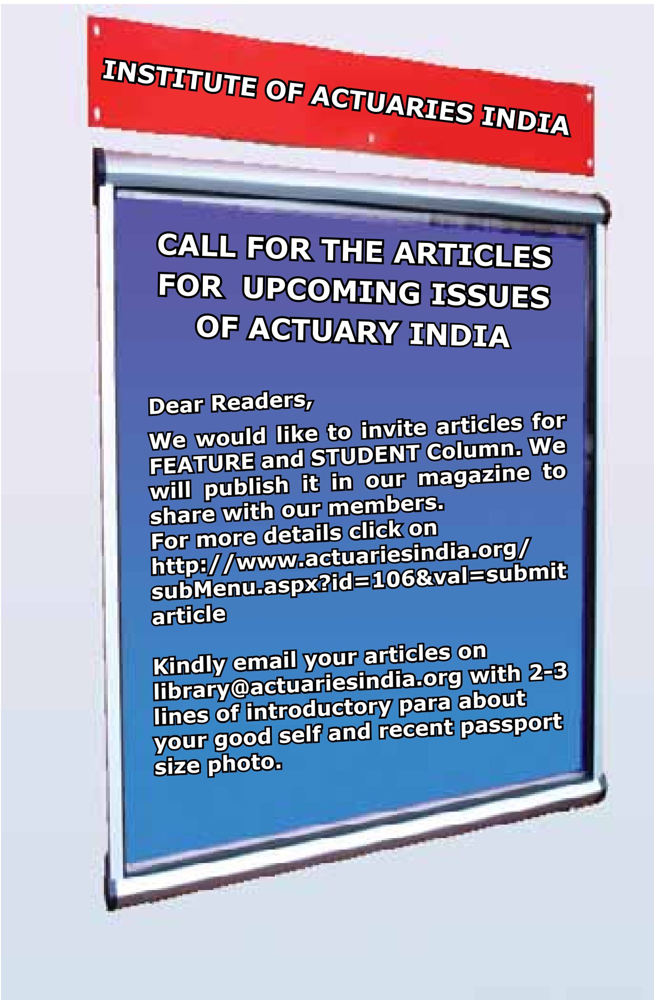
Session-4: Worked Examples for Economic Capital and Other Uses

Dr. Frank Ashe & Avijit Chatterjee

In the last session, Dr. Ashe worked thorough an example on economic capital demonstrating the use of extreme value theory, volatility, correlations and copulas. He explained the calculations in a lucid manner with the help of spread sheets. The session ended at 6 pm as per schedule.

The content of the seminar and spreadsheets with worked examples were distributed to the participants. These spreadsheets allow the users to have an insight into how the techniques are implemented, and the strengths and weaknesses of the processes.

At the end, Avijit Chatterjee felicitated Dr. Ashe and thanked him for an extremely enriching as well as enjoyable session. We all look forward to Dr. Ashe's next session.



EXPAND THE HORIZON

European Insurance and Occupational Pension Authority (EIOPA) published its final guidelines on 27th September, 2013 for preparation of Solvency - II implementation covering, System of Governance, Forward Looking Assessment of the Organisation's (Firm) Own Risk (FLAOR) (Based on ORSA principles), Submission of information to National Competent Authorities (NCAs), Pre Application for Internal Models (IM), etc. These guidelines have been drafted with the view that Sol-II shall be made applicable from 01st January, 2016. The final decision to this effect would be made clear based on final stand of European Plenary Session slated on 03rd February, 2014. The delay in Sol-II implementation has not been appreciated much by part of actuarial community especially associated with Sol-II implementation across globe. This comes to fore in discussion with young actuarial students who had gone to overseas countries with regard to Sol-II job. How ever there is optimism in this delay as young actuarial students and young actuaries may prepare themselves to expand their horizon to achieve the ultimate intent of Sol-II. The Actuaries of older generation who may not be currently associated with Sol-II implementation may also utilise this delay in implementation period to acquaint themselves with proposed guidelines. This would also give leeway to IRDA to get themseves prepared for implementation of Sol-II or similar regime in future. Sol II regime would be principle based and proportionate to 'nature, scale and complexity inherent in insurance undertaking and reinsurance undertaking.

In following months EIOPA would be busy in preparing technical specifications including valuation of technical provisions, valuation of assets and liabilities other than technical provisions, the calculation of Solvency Capital Requirement (SCR) and preparing guidance on the assumptions underlying the standard formula calculation.

The title – Expand your horizon- came to my mind from two angles: one from actuarial personnel angle and another from insurance companies' point of view.

First from Actuarial Personnel angle. NCAs are required to ensure that **AMSB** (The Administration, Management and Supervisory Body) would be responsible for effectiveness of risk management system, setting risk appetite, risk tolerance limits and approving the risk management strategies and policies. Insurance Companies would require to take AMSB sign off for most material assumptions, document the materiality of each assumption and also rational of expert judgement behind each assumption. EIOPA has further stressed that- ' It is not acceptable that AMSB delegates the full responsibilities. Further, it is proposed that risk management function would report information to AMSB, both on risks that have been identified as potentially material and on other specific areas of risk either on its own initiative or as required by AMSB e.g underwriting and reserving risk, operation risk, asset liability mismatch risk, investment risk, liquidity risk, strategic and reputation risk, etc.

Actuarial Personnel especially younger generation may utilise this period in addition to pricing, reserving, reporting and modelling skills to acquire necessary knowledge so that they may become part of proposed AMSB in future. The list of jobs where additional knowledge would be required is;

- Learn tricks of documenting the process(es) of one's area of expertise/ working. The documentation demand longer time to get expertise and those in initial phase of their career generally do not appreciate it immediately. They prefer to be working on models. However truth is that documentation helps in better understanding of models. Documentation helps gathering more knowledge of working of an individual's own area of expertise and help in managing transition smoothly. This may be understood by an example. If one is reporting solvency and in the process, he/she is using the model to calculate required solvency margin. The indidividual would be using model to calculate say K1 and K2 factors. Suppose there is no minimum floor condition of 0.85 and o.5 respectively in model for some product lines. This may not immediately come to the notice but on documenting the process this error shall immediately come to the surface.
- The understanding of questions put in tender/proposal form would fairly give understanding of assessing the extra risk on life of proposer. Pondering over questions asked in proposal form e.g. related to address, family history, health related, life style etc. help to assess the extra mortality associated with the proposer. The knowledge of underwriting, risk classification, non medical limits, medical terminology associated,etc would help an individual better eqipped to be part of AMSB.
- The reinsurance matters including interaction with reinsurers, management of reinsurance treaties, understanding of terminologies e.g. 'corridor', the reinsurance regulations, etc would help expanding one's horizon.
- Understanding of Group Business. Very few in Life Insurance Companies have experise in this area but the job is very demanding. The interaction with sales personnel, understanding their skills, group quotes in term business, understanding that Group business management gives an opportunity to

About the Author

dinesh.khansili@avivaindia.com

Dinesh Chandra Khansili is Vice President (Actuarial) at Aviva Life Insurance Company India Ltd.

serve poor, e.g. serving the members of micro finance instituitions, government schemes e.g. Aam Admi Bima Yojana. Understanding of various group schemes e.g. Group Gratuity plans, Group Superannuation, Group Insurance in lieu of Employees Deposit Linked Scheme, would help increase in reputation beyond actuarial department,

- The understanding of data. The output received from Models may be erroneous and may lead to wrong decision at Company level in absence of good understanding of data. Hence advance preparation of complete understanding of data, its completeness, knowledge of various status and sub-status of policies, ways to identifying errors in data, etc would help an individual to better interprete the results in future. E.g. one is reporting sum assured and sum ceded for a business unit but the group business related sum assured or sum ceded is not included, then gravity of risk under taken by the entity may be understated. What is the use of VaR calculation in such circumstances.
- Interaction and regular meeting with IT and OPS. This is not wastage of time. To have understanding of various policy administration system in place, acquiring knowledge that some additional piece of data maintained in excel sheet and a small server, would help you gather the data from all the sources and report correctly. This becomes imperative when company faces large turnover of IT and OPS personnel.
- Interaction and regular meeting with Finance, Treasury and Investment team help tracking various funds being maintained by the Company, any new fund being introduced, the understanding of financials, etc. Interaction would help one's better understanding. E.g any asset being recognised in financials which you should not recognise as an asset for solvency purpose,
- The interaction with sales personnel always give insight of business. It would help devise good products as per the requirement of insurance market. The incentive calculation of sales personnel or payment made by the companies in wrong selling of policies by sales personnel/channel would help an individual to understand the business further. Your input, say inclusion of persistency as one factor while calculating incentive amount for sales personnel may help conserve the business.
- The understanding of not only new products but old products as well would help in correct reporting and help replying querries raised by other departments. The guaranee register maintenance would help managing the guarantees undertaken by business in better way.
- The knowledge of 'what is happening around' is always appreciated in various walks of life. The day to day new developments in insurance or general market would help adapting to new changes and help staying in competition. This would help recognising the risks to the Company. The mention of such risks would make Company's financial condition report or own risk self assessment report more valuable,
- Insurance regulations have flooded the insurance market. The knowledge would help one becoming effective AMSB member.
- The bonus declaration, quantum of bonus declared in various period, interest rate declared and their methodology of declation would give an edge when you discuss such item in a meeting,
- The knowledge of public disclosure norms would give various information about own company e.g. solvency ratio, persistency, claim position etc,
- Experience analysis carried out and its flow in valuation assumptions. Knowledge of this would help understanding reasons for change in valuation assumptions and explaining the change in valuation results.
- The awareness of policy Terms and Condition (T&C), terms with reinsurance arrangement framed may prove to be good companion during the journey. An insurance company could avoid insolvency because of use of a particular word in T&C while others in similar market could not. Sep-11 event in US had trigerred debate defining it as a single event or two event for payment of claim.
- Knowledge of how peer review is carried out for valuation process. The interaction with outside actuaries would add value to one's knowledge,
- The list may go long and hence expected from individual to be associated with most of insurance companies' working, so that jouney to AMSB is smooth.

Insurance Companies may also utilise this period to implement or strengthen some items as per proposed Sol-II guidelines. E.g:

- An effective risk management system with strategies, process and reporting procedures necessary to IMMMR (Identify, Measure, Monitor, Manage and Report). This concept is near to various stages of Actuarial Control Cycle (General Business environment, Identify the problem, Developing the solution, monitor the experience and professionalism)
- NCAs are also required to ensure that insurance organisations would develop capital management policy which includes procedures to ensure the own funds item satisfy (at issue and subsequently) the applicable capital regime.
- The another important item in said guidelines may be useful for Insurance Companies in India to implement in advance. The NCAs requirement to ensure that firms are promoting internal controls by making all personnel aware of their roles in internal control system and ensure that there is appropriate reporting process within this sytem to support decision making.

To sum up, this waiting time for the implementation of risk based supervisory system could be used for consistent and schematized preparation by actuaries as well by the insurance companies resulting in envisioned longer term benefits for internal market, industry and consumers.

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LIFE INSURANCE INDUSTRY UPDATE

About the Author

vivek.jalan@towerswatson.com

Director – Risk Consulting, Tower Watson, India

The life insurance industry in India continues to show resilience despite significant external pressures on performance. Although, the cumulative losses of the private life insurers in India stood at INR 70.6 billion as at 30 September 2013, most first generation entrants have either broken even or are starting to report profits. In the first half of FY2013-14, of the 23 private players, 14 reported profits and the private insurers together saw a 44.5% year-on-year growth in their total profits after tax.

Despite a combination of macro-economic and industry specific pressures, the private life insurers registered an overall year-on-year growth of 1.6% in its weighted new business premium collections for the period April to September, according to the statistics released by the Insurance Regulatory and Development Authority (IRDA). This represents a return to positive growth for the industry after a period of a relative slow-down in new business collections. However, the growth observed was in pockets as only 10 of the total 23 private players registered positive year-on-year growth while the remaining negative growth in new business volumes.

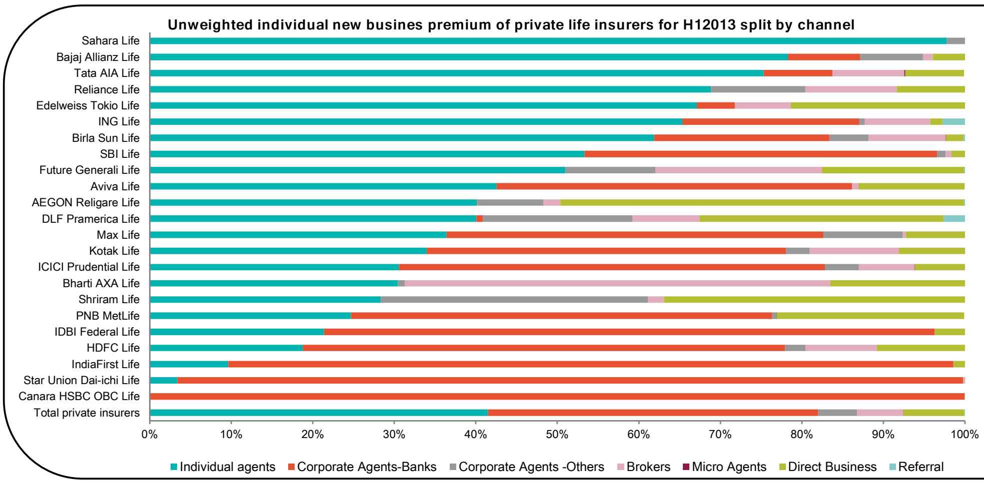
The uptick in the new business performance has been duly acknowledged in growth forecasts of made by various industry bodies: in a report published by the Federation of Indian Chambers of Commerce and Industry (FICCI), the life insurance industry in India is expected to grow at an annual rate of 10% to 14%, becoming twice its current size by 2020. Based on its own projections, the Life Insurance Council also expects the industry to record an annual growth rate of 12% to 15% over the next five years.

Following representations from the Life Insurance Council, the IRDA extended the deadline for the withdrawal of individual products not conforming to the new individual product regulations, to 1 January 2014 from 1 October 2013. Consequently, the key focuses are this quarter – both, for the regulator as well the industry - has been to ensure timely compliance with the new guidelines. As the industry copes with new product approvals and launches, there have been relatively few regulatory developments recently.

There have been at least 46 new products launched by private life insurers between September to November 2013 with more new expected over the next few months. Many of these new products are traditional non-participating plans, typically offering guaranteed payouts to the policyholder, demonstrating a visible shift in focus away from unit-linked products to traditional non-linked portfolios.

Apart from generating new business the industry also appears to be focusing on maintaining renewal premium volumes and boosting persistency rates, which is a positive trend as high lapse rates have been a long standing problem. Many insurers are seen to be offering incentives like persistency-linked commissions to its agents to facilitate this. Companies are reportedly also offering incentives for revival of lapsed policies including lower penalties and medical/revival fees and interest waivers.

Although there has been a relative quiet on the regulatory front, the IRDA has issued draft guidelines proposing life cover for people living with HIV/AIDS (PLHA), that were previously considered among common exclusions by life insurers. A number of insurers have raised concerns regarding the implementation of the proposed guidelines and may consider offering such cover only if the applicant is covered by health insurance. Alternatively, the market could see cover for PLHA



Channel mix of private life insurers in India: most companies that are in the top five in terms of weighted new business collections appear to operate a relatively balanced distribution model with focus on sales through multiple lines rather than focusing on any single sales channel.

being offered through critical illness riders or dual life and health products in the future. A similar development occurred in the UK in 2005 when the Association of British Insurers (ABI) set up the ABI Expert Working Group on HIV and Insurance to address limited availability of insurance cover for PLHA: Indian insurers may well learn global from the experience and best practicess.

The follwing illustration provides an overview of current distribution of practices and mix for private life insurers in India. Noteworthy being the trend of using technology and mobile-based applications to make the sales process more efficient as well as the channel mix for some of the top players: most companies that are in the top five in terms of weighted new business collections operate a relatively balanced distribution model with focus on sales through multiple lines rather than focusing on any single sales channel.

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Institute of Actuaries of India

Announcement for members of IAI

The Actuary India Scheme of Awards for Best Article & Reportage for the Calendar year 2012 and thereafter till amended

The objectives: recognition of the efforts put in and encourages members to write for the Actuary India magazine either in the form of Articles and/or reportage for various IAI events.

Process of selection: Three member Selection Group will be appointed by the President in Dec. 2012 and every December thereafter to set parameters for selection and recommend best two Articles and best two Reportages in order of merit.

The Awards and recognition: Based on the Selection Group's recommendations, the following rules shall apply;

a) The awards will be given by the Chief Editor during the AGFA held immediately after the end of the calendar year 2012. The awards will be in the form of cash prize and recognition plaque.

b) The three member selection Group will send its recommendation by January each year based on editions published in a calendar year 2012 and each Calendar year thereafter.. Every member of the selection Committee will come out with his/her own list of best five articles/reportages. Thereafter, the Group will meet in the second week of January and come out with a commonly agreed upon best two. In the event there is no unanimity the Selection Group will decide on how to select the best two (e.g. going by majority view, draw of lots from the five best drawn by each or any other). This list, along with justifications, will be sent to the President well in time for him/her to announce.

c) The Author/s of first best Article and Reportage will receive a prize of ₹ 10,000/- for the Article and the Reportage and the next best will receive ₹ 5,000/- accordingly. In case there are more than one Authors, the amount will be allocated equally, however the recognitions plaques will be given to each.

d) In order to qualify each article/reportage should meet the following minimum criteria;

   I. at least about 500 words.

   II. should not be reproduced from articles elsewhere (while sending the article the author should give a declaration to this effect.

   III. Should be written by a member of the IAI (in the case of joint authors, all should be members of the IAI) at the time the article is published.

   IV. Reportage should be based on event organized by IAI only.

e) The award winning authors along with the Selections Groups key points on selection will be published in the March issue of the Actuary India each year.

LIFE INSURANCE ADVISORY GROUP (LIAG) ACTIVITES

LIAG's activities in the months since my last update have focused on three areas:

1. LIAG worked with the Advisory Group on Accounting and Solvency on drafting a response to the Exposure Draft issued by IASB on Phase 2 of IFRS 4. All the responses received by IASB can be seen at http://www.ifrs.org/Current-Projects/IASB-Projects/Insurance-Contracts/Exposure-Draft-June-2013/Pages/Comment-letters.aspx

   The subject is complex, but I would recommend that actuaries (and accountants) involved in the production of financial statements study the draft and the responses, not just from Indian bodies such as IoAI and IRDA, but also from international bodies such as IAIS and IAA.

2. On professional guidance, LIAG is working on one new GN, designed to give guidance to the independent actuary on a With Profit Committee, and revisions to two existing APSs, all of which are going through due process and have now been referred to the AGPEC.

3. LIAG held its annual CILA Seminar at the end of November. The following day there was a seminar on certain aspects of mathematics that are particularly important in then assessment of risk-based capital: extreme value theory, GARCH processes and copulas. Both seminars were well-attended.

If you are interested in participating in LIAG's activities, please get in touch, as there is more than enough work to go round.

I look forward to hearing from you,

Avijit Chatterjee

Chairperson, LIAG

News Release

FROM THE PRESS

IAA FUND MEETING HOSTED BY SINGAPORE ACTUARIAL SOCIETY

December 4, 2013

Following the Council and Committee meetings of the International Actuarial Association (IAA) in Singapore, the IAA Fund and Asia subcommittees of the Advice and Assistance Committee organized a meeting to support the development of actuarial education and the profession in Asia.

Darryl Wagner, Chairperson of the Asia Subcommittee, welcomed participants during a cocktail reception held on October 13 on the grounds of the Equarius Hotel on Sentosa Island.

The seminar, which took place on October 14, was attended by 49 people from 13 Asian countries (Bhutan, China, Chinese Taipei, Hong Kong, India, Japan, Malaysia, Philippines, Singapore, South Korea, Sri Lanka, Thailand, and Vietnam), Australia, the UK, and the USA. The IAA Fund provided bursaries for three participants.

IAA President Kurt Wolfsdorf opened the seminar with an introductory presentation. Other presentations included:

- Professionalism: Chris Daykin, Chief Executive of the IAA Fund;
- Update on Actuaries Without Borders (AWB) activities: Renata De Leers, Vice-chair of AWB;
- Certified Actuarial Analyst qualification: Derek Cribb, Chief Executive, Institute and Faculty of Actuaries;
- Actuarial capacity building: Ruth Chu, Chinese Taipei, and Karunanidhi Muthuswamy, India;
- Actuarial Profession in Sri Lanka: Thanuja Krishnaratna, Sri Lanka; and
- Actuarial Education in the Philippines: Prof. Rachel Arada, Philippines.

Estella Chiu, Vice-Chairperson of the Asia Subcommittee, chaired a panel discussion on updates within the industry and on the development of risk-based capital in Asia. This session featured country reports by representatives of IAA Full Member associations:

- China, Sharon Huang;
- Singapore, Raymond Cheung and Questor Ng;
- Malaysia, Teh Loo Hai; and
- Thailand, Suchin Pongpuengpitack.

This activity contributes towards achieving the IAA's strategic objective to support the development, organization and promotion of the actuarial profession in areas of the world in which it is not present or is not fully developed.

To learn more about the work of the IAA Fund, contact its Chief Executive, care of the Secretariat.

SUCCESS STORY

Heartiest CONGRATULATIONS! from IAI

CA3 – COMMUNICATION AUGUST 2013 TOPPER

Ramnath Shenoy

ramnath.shenoy@gmail.com

Tell us about yourself, your educational background and your hobbies

I am, what they call, a 'career changer'. I am in my late 30's and started actuarial studies in my mid-30's. I have no actuarial work experience yet. I am otherwise an engineer and an MBA by qualification, and have extensive experience in retail lending analytics. I am an avid reader and am into cryptic crosswords.

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

My wife has had to put up with lost weekends and holidays for the last 4 years that I have been pursuing the actuarial qualification. She has been extremely supportive and understanding all throughout. I am also grateful to my family and friends who have always kept my spirits up. A special mention has to be made of my boss, who has been extremely supportive of my actuarial pursuit.

How many hours of study on average per day did you put in to top the CA3 result where in only 8 candidates passed out?

A part of my present job role involves preparing and making presentations and otherwise regularly communicating with various stakeholders. In the absence of this, one would require extensive preparation over a couple of months leading up to the exam. The workbook is also a key study aid that should be fully utilized.

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

Communication of the kind the course covers is a regular part of my present job; so I had an advantage going in. If one has no experience making presentations, then I suppose extensive preparation would be required. It is probably best to start volunteering to make presentations in one's workplace in the run up to the CA3 course. Written communication is something learnt and picked up over a longer course of time. I have often seen that reading, irrespective of the subject matter, strongly improves one's communication skills.

Did you face any difficulty while studying this subject?

Not really. I found the course material to be sufficient and the instructors were very good. I am certain my batch will agree that the three-day course was exceptionally well conducted and a lot of gratitude is due and credit has to be given to Divya Bavishi who coordinated the course.

CA3 is a three day exam where first two days are dedicated to workshop based training sessions taken by communication experts. What all exercises were included in the exam workshop? How they helped you prepare for the exam?

There were helpful sessions on slide making tips, posture & gestures, use of numbers and jargon etc. The key was communicating complex concepts to a lay audience. I worked in the tips that I had picked up during the three-day sessions into my final presentation.

This communication based exam tests an individual's presentation and written skills. How this exam has professionally helped you in your day to day communication at work?

It has helped me when I, in-turn, train my team on good communication, especially presentations.

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

By being a committed professional and otherwise extending my support and time to the profession if they need it of me.

What was your purpose while selecting this course – Communications?

Besides, being a required course on the way to fellowship, I was looking to interact with other actuarial students and also to learn about communication of complex actuarial concepts.

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> Difficulties in your life do not come to destroy you, but to help you realise your hidden potential and power, let difficulties know that you too are difficult.
>
> ~ Dr. APJ Abdul Kalam

USA - THE CHARTERED ENTERPRISE RISK ANALYST (CERA), A NEW CREDENTIAL OFFERED BY THE SOCIETY OF ACTUARIES; FACT SHEET - THE FUTURE OF RISK MANAGEMENT

Since the announcement to offer a new designation of Chartered Enterprise Risk Analyst (CERA) went into effect soon after the turn of 21st century, the first batch of 96 CERA's were awarded in 2007. Through the end of November 2013 a total of 1,293 CERA's have been given, averaging about 190 awards per year. Some facts about this new credential offered by the Society of Actuaries (SOA) and the requirements to qualify for this designation may be of interest to the members of the Institute of Actuaries of India.

Around the globe, the topic of risk is driving the conversation of business. No matter the industry, organizations are coming to understand the critical role Enterprise Risk Management (ERM) must play as they look to the future. ERM is the process of coordinated risk management that places a greater emphasis on cooperation among departments to manage an organization's full range of risks. ERM offers a framework for effectively managing uncertainty, responding to risk and harnessing opportunities as they arise. Unlike other risk management practices, the concept of ERM embodies the perspective that risk analysis cuts across the entire organization.

In the 20th century, risk managers were primarily responsible for managing "pure" risks through the purchase of insurance, though the concept of risk management soon became associated with financial risk management with the use of derivative financial products. There has been a growing need from organization to permanently link their risks across their business units and adopt a more comprehensive framework. Full linkage – the integration of risk, capital and financial management – allows for a continuous recognition of the array of risks facing an organization, their individual and collective impact on shareholder value, leading to well-defined strategic actions.

The Credential Developed by the Society of Actuaries (SOA), the CERA credential encompasses the most comprehensive and rigorous demonstration of ERM expertise available.

- Combines actuarial discipline and rigor with critical and creative thinking
- Applies both qualitative and quantitative insight to ERM
- Instills the highest professional standards, with an impeccable code of ethics and unparalleled educational requirements
- Best equips risk management professionals to empower better business decisions

The Opportunity Global demand for skilled enterprise risk management professionals is growing in nearly every industry. CERAs are currently working in:

• Insurance • Reinsurance • Consulting
• Financial services • Transportation
• Technology • Manufacturing
• Healthcare • Media • Energy

The roles that CERAs are able to play are changing as well. CERAs can be found at all levels of an organization, including:

• Risk Manager • Chief Financial Officer • Consulting Actuary • Chief Actuary. • Operational Risk Manager • Modeling & Analytics Director • Risk Strategy Director • Chief Risk Officer • Quantitative Solutions Analyst

Skills needed to be a CERA

- Specialized math knowledge in calculus, statistics and probability
- Keen analytical, project management and problem-solving skills
- Good business sense in finance, accounting and economics
- Solid oral and written communication skills
- Strong computer skills in spreadsheets, statistical analysis programs, database manipulation, programming languages and word processing programs.

The CERA Curriculum

The CERA credential encompasses a world-class curriculum that combines actuarial science with the theoretical, practical and professional principles of ERM. Professionals must take five exams, two online courses and one in-person course on professionalism, as well as fulfill an educational experience requirement. Traditionally it takes three to four years to complete.

- Exam P (Probability)
- Exam FM (Financial Mathematics)
- Validation by Educational Experience (VEE) Economics and Corporate Finance
- Exam MFE (Models for Financial Economics)
- Exam C (Construction and Evaluation of Actuarial Models)
- Fundamentals of Actuarial Practice Course
- Enterprise Risk Management Module
- Enterprise Risk Management Exam

About the Author

rpsharma0617@yahoo.com

- Associateship Professionalism Course

The Network

All CERAs credentialed by the Society of Actuaries are eligible to become members of the SOA—an educational, research and professional organization that represents a strong, global network of more than 23,000 risk management professionals. As members of the SOA, CERAs are able to draw on its vast network and enjoy exclusive benefits, including access to:

- Advanced actuarial and risk management education and knowledge-sharing opportunities
- A variety of publications on an array of risk management topics
- Members-only social and professional networking communities
- Members-only pricing on professional development opportunities

Members also enjoy rich leadership and volunteer experiences, impacting the actuarial and business community (and the world at large by helping to shape curriculum) perform candidate outreach, enhance media visibility, and contribute to the development of thought leadership and research.

How does the CERA credential differ from the FSA or ASA credential?

For Fellows of the Society of Actuaries (FSA) and Associates of the Society of Actuaries (ASA), the CERA credential offers another avenue of opportunity, added competitive edge and professional growth. As new roles in ERM continue to develop, actuaries are becoming leaders in the practice, by providing a 360-degree view of an organization's risk profile.

For those currently on the FSA pathway, what additional requirements are needed to achieve the CERA credential ?

The new structure of the fellowship exams (effective July 1, 2013) will provide a means for candidates in all tracks to obtain the CERA credential along with their FSA by completing only two additional exam hours. Candidates seeking this option will choose the four-hour ERM exam in place of the two-hour track exam in their track. They will also need to choose the ERM module as one of their FSA modules. The Corporate Finance and ERM track already requires the ERM exam and ERM module, so candidates completing that track will automatically receive both the CERA and FSA.

The CERA credential benefits risk professionals

- Receive the most comprehensive and rigorous ERM training available
- Enhance your exposure to the C-Suite
- Play more strategic risk management roles
- Differentiate yourself from other risk professionals
- Advance in the field of enterprise risk management
- Expand your network by being a member of the SOA

The CERA credential benefits employers

- Enables a comprehensive approach to enterprise risk management
- Increases value of human capital through enterprise risk management expertise
- Knowledge obtained from the CERA credential strengthens internal ERM programs
- Knowledge obtained from the CERA credential can help in implementing an ERM framework
- Differentiates your firm from others with enterprise risk management expertise
- A CERA demonstrates strong quantitative and financial assessment skills.

The CERA credential benefits the global marketplace

- Enables organizations to be more transparent
- Helps companies adequately meet strict financial reporting and control requirements
- Addresses security and technology issues
- Prepares for disaster and business continuity amid volatility around the globe
- Helps companies remain competitive in a global marketplace
- Impacts the financial strength and stability of companies the world over

The CERA from the Society of Actuaries Chartered Enterprise Risk Analyst and CERA are registered marks of the CERA Global Association. The Society of Actuaries is licensed by the CERA Global Association to award the CERA credential.

To learn more, visit CERAnalyst.org or SOA.org

PUZZLE

Puzzle No 203:

The hole for parcels in the pillar-box at our post office is rectangular. Each side of the hole is an integral number of inches in length, and the area of the hole in square inches is 25% greater than the perimeter in inches. What are the dimensions of the hole?

Puzzle No 204:

Each word in the following list is an anagram of a country, but with one letter changed. For example, 'least' would lead to 'Wales', with 't' replaced by 'w'. What are the countries?

1. grype	5. amenity	9. outglare	13.integrand
2. tiara	6. elegant	10. romances	14.legendary
3.tribal	7. glacier	11. snakepit	15. sarcastic
4.warden	8. senator	12. thousand	16. windlestraw

shilpa_vm@hotmail.com

Never play with the feelings of others. Because you may win the game but the risk is that you will surely loose the person for a lifetime

Shakespeare ....

Many Happy Returns of the DAY

the Actuary India wishes many more years of healthy life to the following fellow members whose Birthday fall in **December 2013**

T. BHARGAVA
N. N. JAMBUSARIA
C. S. MODI
S. P MULGUND
S. V. NARAYANAN
Y. P. SABHARWAL

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

SUDOKU

SUDOKU No. 17 for the month of December 2013

MEDIUM

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

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.16 published in the Month of November 2013

SOLUTION

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

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