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"A noble man's thoughts will never go in vain. –Mahatma Gandhi."

"I hold every person a debtor to his profession, from the which as men of course do seek to receive countenance and profit, so ought they of duty to endeavour themselves by way of amends to help and ornament thereunto – Francis Bacon"

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Message From the President



December brings in winter across all states in India and start counting days for Christmas and New Year. By the time I connect with you in January 2018 issue of the magazine, we all must have breathed the New Year. I take this opportunity to wish you all a Merry Christmas and greetings for a very happy and prosperous new year 2018.

The results of the September 2017 exams have been declared. Congratulations to all the students who cleared their exams. Good luck for next exams to those who missed the pass marks. It's all part of your journey to actuarial qualification but the most important take away is that we learn from our mistakes and come back strongly in next attempt.

In this column I would like to touch upon an important development - IFRS 17, the upcoming international accounting standard for the Insurance sector. The Government of India has adopted it and it's highly likely that the new accounting

standard will be implemented in Indian Insurance industry from 1st April 2020. There would be huge requirements and business & operational implications and a lot of preparations are needed by the Insurers to get it implemented. The implementation and ongoing compliance of this accounting standard requires a lot of work for actuaries too; rather actuaries will have to lead many initiatives.

To meet this challenge rather the opportunity, the actuarial professionals have to gear up to understand the requirements first and to make action plan so as to support our clients and employers. The Institute is committed to play its role. In most of the future seminars including the 19th GCA, we will have topics discussing on the IFRS17. We will also have some capacity building technical programs for our fellows, associates and students.

The month of December is going to witness a stream of training programs for the members of the profession being conducted by our Institute, the first one is a two day training program on learning of the 'R' language which is used in modelling work. There has been an enthusiastic response for this program and exceeded our capacity, hence a second batch is also scheduled for 15th-16th December to accommodate all. With encouraging response, we had to close down the registrations early for the 2nd batch. We are planning to continue this initiative with another couple of sessions at other locations so as to help our students in developing the new skills. Thanks to our fellow members, Mr. Vamsidhar Ambattipudi and Mr. Suresh Sindhi for leading the program from the front.

Other two training programs in the pipeline include "The Art of Product design & Pricing of Life insurance products" and the second one on "Reserving in Life Insurance business", both for duration of 5 days each.

On the front of the seminars, we had two seminars in December - the first one on 4th Dec 2017 on Capacity building seminar focussed on pricing of Health Insurance Products and another program on 5th Dec in Gurugram on the current issues in Health Insurance. More than 150 members attended these programs. I witnessed lot of knowledge sharing among participants in health insurance area during these two days.

We have our flagship annual event "19th Global Conference of Actuaries" on 30th and 31st January 2018 in Mumbai. The preparations are in full swing and looking forward to meet many of you and to witness the discussions on great business issues by the participants from various countries.

I always mention through these columns that these activities are only possible through the support from volunteers and the IAI office. I thank for the support extended to me through by all the volunteers and look forward to support from many more.

Have a happy and prosperous new year 2018!

Message From the Chief Editor



While responding to the biggest organizational challenges in next 2 years, 65% of the respondent believed regulations to be one of the biggest challenges, followed by 45% feel that higher cost and margin erosion is one of the biggest challenges. Other challenges which emerge are business complexity, increased competition, develop new products and services and inability to innovate.

Emerging Technology is leading to a new world for the stakeholders in Insurance sector, be it policy holders, investors or management. Investors and policy holders of current generation are demanding innovations from the insurance management. Competition from new emerging insurers and existing agile insurers is being seen as a key challenge by many insurers. Recently, I came across an interesting paper on Insurance Innovation Imperative by KPMG International. The paper reports the outcome of survey conducted. The respondent of the survey were the sr. executives in the insurance and reinsurance companies.

While responding to survey, over 60% of the respondents believe that improving operational processes and use of technology are the biggest opportunities in the next 2 years. Further, 52% of the respondent believes that digital technology and the integration into business objectives as major opportunities. Other critical opportunities that emerged are customer data analytics to improve underwriting, pricing and marketing, strengthening customer loyalty, cost management initiatives and better use of capital and management of risk.

When asked about what is primary focus of their innovation strategy, 46% believes that developing products and services that appeal to new customer will be their primary focus. About 21% believes that better operational processes and finding new ways of retaining customer will be their primary focus.

It is interesting to see what organizations have done to improve innovation in Insurance over the last 5 years. Over 50% of the organizations have invested in the culture change programs, about 43% have done partnership with academics and other third parties, about 36% have been developing innovation hubs or labs, 36% have been giving trainings focused on innovation Idea generation/process skills and about 27% have people dedicated 100% to innovation.

The survey clearly shows that board of directors has started showing interest in the innovations. 44% of the respondents say that every time board meets they discuss innovation. Further, 47% say that at least once a year, board asks to discuss innovation.

It is interesting to see how various organizations measure the return on

investment on innovations. 16% measure profitability impact, others measure improved reputation, consumer engagement, revenue from new products services, improved efficiency and lower costs. Around 21% of the respondent says that they do not formally measure Return on investment of innovation. Finally, the paper suggests 10 management actions which can help:

- ♦ Apply agile and dedicated leadership
- ♦ Encourage change through cultural transformation
- ♦ Cultivate high performing human talent
- ♦ Understand why you are investing
- ♦ Decide how your organization will thrive as the insurance industry transforms
- ♦ Learn from others
- ♦ Develop your own view of when and how advances in technology will impact your organization
- ♦ Leverage new technologies into your current business
- ♦ Mitigate risk by investing and experimenting
- ♦ Be willing to disrupt existing business models

The paper can be accessed at <https://assets.kpmg.com/content/dam/kpmg/pdf/2016/01/the-insurance-innovation-imperative.pdf>

There is a lot to learn from the innovation culture across insurers globally and decide what make sense at the current juncture in Indian Market. There is no doubt about potential disruption in the Insurance market; it's just a question of time.

5th Young Actuaries Connect

Organized by: Advisory Group on Examination and Education, IAI

Venue: The Pllazio Hotel, Gurgaon

Date: 28th October, 2017

Session: Welcome Address & Introduction to IAI

Speaker: Mr. Sanjeeb Kumar, President, Institute of Actuaries of India



The session was opened by **Mr. Sanjeeb Kumar**. He presented a brief overview of the history and development of the actuarial profession with special focus on India. He outlined the evolution of Institute of Actuaries of India to its present form and explained the hierarchy within the institute and scope of work of the various people and departments. Throughout his talk, he emphasized how students are the prime focus of the institute and how the institute is working towards ensuring the best facilities for them. He discussed the various initiatives taken by the institute in the recent past and shed some light on a few which are still in the pipeline. He finished his address by encouraging the students to write to the institute with the problems that they face and any feedback/suggestions they might have to improve its functioning.

Session: Opportunity in Insurance areas (Life, General, Health)

Speaker: Mr. Jose John, Appointed Actuary, Max Life Insurance Co. Ltd



Mr. Jose John took to the stage to talk about the opportunities for actuaries in the life, general and health insurance industry. He started off on a light note by presenting a joke on what people think actuaries do and then went on to explain what they actually do. He simplified the role of an actuary to two statements: 'evaluating likelihood of future risk events' and 'designing solutions to mitigate risk/ evaluating effectiveness of these solutions'. He explained how the role of an actuary fits to these two statements across all the industries i.e. life, health and general insurance. He then shed some light on various tasks that actuaries usually do like product pricing, risk management, reserve calculation, profitability assessment, etc. Mr. Jose then shared his views on how actuaries still tend to be bad communicators and hide behind the veil of 'too complex to explain' while presenting what they do to non-actuaries which in turn is harmful to our profession. He

emphasised the need for actuaries to be more risk takers and more proactively explore the non-conventional areas where our skill sets may prove to be of value.

Session: Opportunities in Other areas (Pension, Risks & Investment)

Speaker: Mr. Abhishek Chadha, Senior Consultant, Willis Towers Watson



The next speaker in the line was **Mr. Abhishek Chadha** who talked about opportunities in non-traditional areas. He started off by presenting some numbers on the membership of IAI and how there is a huge opportunity in looking beyond the traditional areas of work for an actuary. He defined the various skills that an actuary possesses and enlisted the various areas where these skills could prove to be of value like data analytics, finance & investments, etc. He then went on to explain each of the areas individually, outlining their scope and what all tasks can actuaries be involved in within a particular area. He also talked about the non-traditional work that actuaries can perform in traditional employers. Participants seemed very keen in exploring the

wider fields and asked many questions centred especially on the finance and investments area. Mr. Abhishek made his final remarks by discussing how IAI is making efforts towards promoting employment of actuaries in wider fields and how he sees future actuaries increasingly looking beyond insurance.

Session: Moving between markets (India and abroad) - opportunities and challenges

Speaker: Mr. Akshay Dhand, Appointed Actuary, Canara HSBC Oriental Bank of Commerce, Life Insurance Co. Ltd. & Chair Education Advisory Group



The next speaker in the series was **Mr. Akshay Dhand** who talked about the mobility between the markets for actuaries, which garnered special interest of the participants as majority of them desired to work abroad. Mr. Akshay focussed more on presenting the direct accounts of people who have had international stints in their career, through recorded videos. The people in the videos shared their personal experience of moving overseas as part of their career and discussed what are the things that one needs to consider before making such a move. They talked about the opportunities and challenges that such a career decision entailed and how can one successfully realise their dream of having an international career. **Mr. Akshay** concluded his talk by talking about the role of a mentor in one's career, before he took to the questions from the audience.

Session: Examinations system and process overview, common mistakes that student's make, examination tips

Speaker: Mr. Subhendu Kumar Bal, Appointed Actuary, SBI Life Insurance Co. Ltd. & Ex - Chair Examination Advisory Group



Mr. Subhendu Kumar Bal talked about IAI's examination system. He began by giving a brief history of the actuarial profession and IAI. He then gave an overview of how exam papers are set as well as checked and integrity is maintained throughout the process. Owing to his experience from being the Ex-Chair of Examination Advisory Group of IAI, he detailed the common mistakes made by the students in the exams. He also offered invaluable tips for preparing for an exam and writing it. He highlighted the various initiatives taken by IAI to make the examination system transparent and student friendly. He enlightened the participants on how failure is equally important in life and how one can leverage it to grow in their career, and closed his session through a motivational video that emphasized that nothing is impossible.

Session: Cracking the recruitment & selection process

Speaker: Mr. Parul Murthy, Assistant Vice President-Human Resources, Canara HSBC Oriental Bank of Commerce Life Insurance Co. Ltd.

The final session for the day was by **Ms. Parul Murthy** who talked about recruitment and selection processes. Speaking from her years of experience in the recruitment space,



she offered some useful tips on crafting a good CV and enlisted some common mistakes made by the applicants. She discussed some important points to consider while preparing for and during the interview, and particular skills that interviewers look for while interviewing a candidate. The session was not just useful for the participants looking for jobs but also for the ones already employed as she offered some invaluable insights about working with seniors and career growth. She concluded the session and the seminar by presenting the qualities that her employer's Appointed Actuary seeks in his dream candidate, which gave the participants greater clarity on the direction they have to strive in, in order to be the perfect candidate for an actuarial job.

Session: Vote of thanks & Open discussion

Speaker: Mr. Murshid Kuttihassan

After this session, **Mr. Murshid Kuttihassan** presented a vote of thanks to all the speakers who took out time to enlighten the participants. He also thanked all the volunteers for their tireless efforts in organising the seminar and invited any final questions from the participants, marking an end to the day.



Summary : The seminar was very well organised and received good reception from all the participants. The line of speakers was quite impressive and participants got an opportunity to hear directly from reputed names in the industry. The structure of the seminar was quite comprehensive with sessions ranging from traditional and non-traditional areas of work to cracking the recruitment processes. Further, the participants also got an opportunity to clarify any doubts they had and to network with the speakers and fellow participants, making the seminar all more worthwhile.

About the Author

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“Mr. Anshul Garg is a student member of Institute of Actuaries of India. He is currently working as an Analyst in Insurance Consulting & Technology department of Willis Towers Watson.”



1. Very resourceful and complete learning experience. Please organise a skill development session (for e.g Excel, VBA, R) in Delhi
2. Topics related to future changes in the industry should be included like the rapid increase of artificial intelligence in the industry
3. It was a very informative seminar. I hope such events for students of actuarial science are conducted more often in the area of Delhi NCR
4. Please initiate something like this meet in Kolkata. Lots of students eager to have a meet there or similar to that one.
5. Non-Members should be allowed to attend such events who are planning to enter in this industry
6. Appreciate President's effort for organizing such an awareness seminar
7. Detailed session on cracking recruitment & selection process is required. Some insight into sample CV analysis would be appreciated.
8. For further event we would like to know more about the practical problems faced by actuary while doing the work. Understanding the real world challenges faced during work
9. It would be perfectly convenient if IAI would provide the online library facility because most of the times the reference books are expensive in perspective of students

A photograph of two men in business attire. The man in the foreground is wearing a dark suit, a red tie, and glasses, and is smiling while looking towards the right. The man in the background is wearing a light brown jacket and a white shirt, and is also smiling. They appear to be in a professional setting, possibly a meeting or presentation. A whiteboard or presentation board is visible on the right side of the image.

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28th India Fellowship Seminar

Organized by: Advisory Group on Professionalism Ethics and Conduct, IAI

Venue: Hotel Sea Princess, Mumbai

Date: 9th to 10th November, 2017

Day 1

It was an awesome gathering, the biggest audience I have ever seen in the fellowship seminar - over hundred participants, including around 40 at various stages of qualification. It was heartening to know that there are already 359 fully qualified members.

Session: Introduction

Presenters: Mr. Anil Kumar Singh, Chairperson, Advisory Group on Professionalism, Ethics & Conduct, IAI



To set the tone for the show, **Mr. Anil Kumar Singh**, after welcoming the participants highlighted the importance and timeliness of decision making in our professional day to day life and how these decisions play significant roles.

Session: Welcome Address

Presenters: Mr. Sanjeeb Kumar, President, Institute of Actuaries of India (IAI)



The first day's discussions opened with an encouraging address by the President of the Institute. **Mr. Sanjeeb Kumar** shared the membership statistics and the significant steps taken to take the profession to the next level.

It was a two day seminar and was full of lively participation of senior actuaries adding to enlightening presentations on professional, technical and contemporary topics. The proceedings were really refreshing and enriching, spanning over a wide range of topics of current interest to the actuarial profession.

The first day was packed with eight presentations on diverse topics, delivered by 26 speakers, and concluded with a pre-

dinner address by an external consultant on ethics and Professionalism.

Session: Predictive modelling and Artificial intelligence in Insurance - Perspective, areas of uses and emerging risks

Presenters: Mr. Nitin Agarwal, Mr. Pushp Aggarwala and Mr. Ashish Hasija

Guide: Mr. Avdhesh Gupta



The first speaker highlighted the applications of artificial intelligence in some areas of insurance such as tailored products, claims management and fraud detection. An interesting new area is pricing of insurance products for self driven cars based on drivers' behavior. The second speaker brought out the contrast between the traditional and analytics approaches to application of predictive modeling and listed out the pros and cons in its application in a lucid manner. The risks in application of such modeling approaches was an apt conclusion by the third speaker, leaving the audience to ruminate further on privacy concerns, regulatory hurdles, technology issues and considerations like customer emotions.

Session: Group vs Individual Health Insurance - Challenges with Claim Experience and Underwriting

Presenters: Mr. Jinal Shah, Mr. Mohit Sehgal, Mr. Hemant Mundhra

Guide: Mr. Joydeep Saha



The first speaker opened by presenting the features of group and individual health insurance products in detail, interspersed with data on breakup of the products by insurers and line of business and also data on claim ratios. The discussion then centred on the challenges in underwriting such products like rising ages of the insured customers, mix of optional benefits into employee insurance schemes, etc. The discussion on the worsening claims experience in group and health insurance products, with focus on role of medical advancements and medical expenses inflation on claims experience by the third speaker was a fitting conclusion to the presentation.

Session: Cyber Risk Insurance and the Role of Cyber Security: Why is this the need of the hour and challenges faced by insurance companies?

Presenters: Mr. Mark R Shapland

Guide: Mr. Mehul Shah



The experience of the speaker enlightened the audience and his experience in the more matured markets added further value to the points of discussion.

The session opened with an introduction to the topic by the guide, supported by appropriate statistics. The speaker then focused on cyber risk insurance and the role of cyber security with emphasis on the challenges the insurance industry currently faces in these areas like data breaches by criminal/non-criminal activities, terrorism, hacking, etc. Though the market for these insurance products is currently low, it can be expected to grow exponentially in the coming years driven by rising probability of dangers posed by cyber risks. An apt point that was covered in the presentation was vulnerability of the insurers themselves to cyber attacks and breaches.

The speaker also highlighted the control issues in insuring such risks, pointing out that risks that are in control of the insured should not be insured by insurers and the insured should be motivated to do what is in their control to prevent such risks.

The finer points of these policies like difficulty of pricing due to lack of experience and the data and rarity of big numbers of claims from a single event were also elucidated.

Session: Commercial Lines Insurance - The nature, cyclicity and road ahead

Presenters: Mr. Rahul Khetan, Mr. Amit Gupta, Ms. Anupama Kataria and Mr. Prateek Kathuria

Guide: Mr. Adarsh Agarwal



The first speaker brought out the uniqueness of the commercial lines business such as infrequent and large losses, non-standard terms caused by diverse business needs of insured customers, difficulties in availability of data for modeling prices of such risks and dependence on reinsurance. The discussion then proceeded, with the second speaker focusing on the underwriting cycle vs the reserving cycle for this business, in the context of varying business demand conditions for different products that place difficulties in modelling and the complexities of incorporating qualitative factors into models. The last speaker concluded by elaborating the role of expert judgment in pricing, issues in resolving conflicts between pricing based on expert judgement and actuarial pricing, etc. essentially highlighting the thin line that separates between subjectivity and objectivity.

Session: Risk Based Capital (RBC) Approach - Need, Roadmap & Challenges

Presenters: Mr. Chetan Goswami, Mr. Vinit Agarwal, Ms. Harshada Shringarpure, Mr. Shivanjali Mittal

Guide: Mr. Srinivasa Kumar Chiruvolu



The discussion was based in the context of life insurance industry. Implementation of risk based capital, defined broadly as the minimum capital required to support operations and commensurate with its size and risk, differs from the current factor based solvency regime, according to the first speaker. RBC is necessitated by volatile market conditions that require deeper evaluation of market risks, need to address the concerns of policyholders and promotion of efficient risk management practices.

Methodologies for adoption of RBC currently in vogue are VAR based and formula based. VAR based approaches are data intensive and difficult to calibrate while formula based models use accounting aggregates and do not recognize interactions between assets and liabilities. While RBC found global acceptance, India continues to be an outlier in this aspect; however, implementation was contemplated, with IRDAI's Steering Committee submitting a report on this issue a few years ago.

Session: Low Interest Rates & Volatile Equity markets - Impact on Product Management and Investment strategies for various Life Insurance products

Presenters: Mr. Ritesh Choudhary, Ms. Renu Agnihotri, Mr. Anuj Budhia

Presenters: Mr. Sunil Sharma



Following a refreshing tea break, the discussions continued with a much volatile and the hot topic of the economy - falling interest rates. The presentation opened with a historical account of the declining trend of interest rates in India and its impact on participating and non-participating businesses of Life insurance. Participating LOB is likely to face reduction in bonus rates that may in turn lead to increase in surrenders. In addition, the value of guarantees rising above asset shares is also a consequence of declining interest rates. Non-participating business is likely to face increased capital requirements, reinvestment risk on income generated from assets and uncertainties relating to investment income on future premium inflows. Impact on

unit linked products depends on the mix of their investments while annuities LOB will encounter reinvestment risk, lack of long duration assets to match liabilities, and high hedging costs. The presentation focused further on product management strategies and investment strategies that suit a falling interest rate scenario.

Session: Value added benefits in health insurance - an actuarial perspective to the viability and are they worth for the customers

Presenters: Ms. Swati Orme, Ms. Mansi Kukreja, and Mr. Safder Jaffer

Guide: Mr. A V Karthikeyan



As we drew close to the end of an enriching day, the discussion started with an overview of health insurance industry in India in terms of its strong fundamentals, growth prospects and contribution to economy and progressed on to its classification by segments, channels, products and players.

The presentation contained an interesting KANO analysis of health insurance customer needs, identifying minimum (baseline) expectations, satisfiers and delighters. The speakers identified factors such as wellness coach, gym membership, health checkups and air ambulance as possible delighters for customers of health insurance products.

The session then covered approaches to price health insurance products, like buildup, density and tabular (basic approaches) and stochastic and linear (advanced approaches) - all the approaches follow the same methodological sequence of measuring the past, evaluation and normalization of baseline and projection to future expectations.

The presentation concluded with a comprehensive coverage of actuarial pricing challenges as well as challenges that underwriters face.

Session: MCEV VS EEV Approach - discussion on approach adopted by companies before public listing

Presenters: Ms. Krithika Verma, Mr. Aditya Shah, and Mr. Mithil Sejpal

Presenters: Ms. Asha Murali



The initial discussion of the session was around the embedded value (EV), a technique known from the 1980s and its evolution over time into market consistent embedded value (MCEV). While profit and loss is a historical account, EV is both a retrospective and prospective representation of consolidated value of shareholder's interests in a business.

The speakers have lucidly portrayed the additional elements in MCEV that make it superior to EV, namely risk neutral valuation, cost of non-hedgeable risk, frictional cost of capital and time value of options and guarantees.

On the flip side, MCEV suffers from challenges in implementing risk neutral valuation, ambiguity in methodology to be followed for calculation of cost of non-hedgeable risk, and modeling complexities related to policyholder options and behavior.

After a short break, we gathered for the pre-dinner talk on Ethics and Professionalism by **Mr. Bobby Parikh**.

It was an enlightening talk on ethics, morality, professionalism and professional ethics. He shared his versatile experience spanning over three decades which provided a good number of take away or the growing profession like ours.

Day 2

Session: Participating products - contribution to premium growth, risk management and shareholders value in long term vis. a vis. non-participating products

Presenters: Mr. Aditya Mall, Ms. Ritu Dabral, and Ms. Aditi Goel

Guide: Mr. Sachin Saxena



Matching our excitement of another day of enriching discussions, the first presentation on the second day traced the historical evolution of participating products, which were dominant before privatisation, turning away of private players from them during 2004-2010 and the decline of the products during 2010-2013 due to regulatory changes, leading to higher focus on conventional business. The speakers provided a comprehensive account of participating and non-participating products, spanning over their implications for shareholder value, risk management, and capital.

Session: Long Term Care - An emerging need, learning from international markets and product road map

Presenters: Mr. Nikhil Kamdar, Mr. Joanne Buckle, Ms. Ritu Kotnala

Guide: Mr. G R Surya Kumar



The presentation opened with some statistics - Indian population is ageing, with the percentage of those over 60 set to increase from 4% to 18% by 2050 - increasing life expectancy is leading to the need for long term care of aged people. The speakers then explained how insurance products aimed at long term care in the UK were not successful, due to issues involving high pricing of the products and availability of government funding for poor sections (so there is disincentive to take such policies). The products that were sold at that time called for a lump sum payment. There was little data available to ensure fair pricing; in regard to customers who eventually did not need any care, the pricing sounded very unfair.

Experience in the US was not good either - according an SOA survey of companies that exited this business, 72% said that they exited because they were unable to meet profit targets from selling those products. The session gave a good coverage of the Government of India's initiatives in this area; issues and concerns of the actuarial profession on product design, distribution & sales and monitoring & product governance were highlighted in conclusion.

Session: Economic Capital Pricing: A concept, need and the way it differs from conventional pricing

Presenters: Ms. Charul Kumar, Ms. Radhika Sen, Ms. Saigeeta Bhargava

Presenters: Mr. Udbhav Gupta



The first speaker provided a clear cut definition of economic capital - it is the capital required to ensure that the balance sheet stays solvent in a given time period and probability. The speakers have applied this definition to pricing - it involves making a best estimate of cash flows, calculating economic capital requirement at each duration, calculating cost of capital for holding capital at each duration and finally risk margin as present value of cost of capital at risk free rate. Market value of the liability is then derived as the sum of the BEL and the risk margin.

As the speakers rightly explained, there are several challenges and considerations involved in application of this methodology. Major among them are complexities in calculation of cost of capital, estimation of cash flows and risk free rate.

Session: Expense Management - Life Post Regulations challenges for various category of players

Presenters: Mr. Devinder Kumar, Mr. Lasil Dias, Mr. Prathamesh Ghanekar

Guide: Mr. Shivank Chandra



The focus of this session was on (Expense of management of Insurers) Regulations, 2016 of IRDAI that came into effect in May 2016. The regulation places a cap on allocation of the expenses of management to different business segments. The speakers have initiated the discussion by giving a good overview of various aspects of the regulation like maintenance of well documented policy for allocation of management expenses and restrictions on some actions that get into force if stipulated allocation percentages are violated.

The discussion then moved on to misallocation of charges by leading insurers and concluded with a detailed coverage of challenges faced by insurers in allocation of expenses.

Group Discussion on Video Case Studies

After a two day long sessions on the current topics in the Insurance industry, the focus was shifted to address the professionalism and ethics part. A couple of video case studies were presented by **Ms. Asha**. These case studies depicted typical real life scenarios and the dilemmas faced by the professionals like us in the day to day work. At the end of each case study, some questions were raised and the participants were expected to analyze the situation based on professionalism, integrity and due diligence and give their views. It was very insightful to know the different perspectives of the same problem by different individuals.

Session: IFRS 17- Introduction, History, Features and Implications on Insurers

Presenters: Mr. Jimmy Jacob, Mr. Rohit Mall, Ms. Subhasree Nigamma, Mr. Nandan Nadkarni

Guide: Mr. Kamlesh Gupta



The final session of the day - was again on a very happening topic adoption of which poses a lot of implementation challenges all over the world. This session provided a comprehensive overview of IFRS 17 starting with summarised view of its coverage, features and implications, followed by timelines for implementation. The provisions of the standard were detailed through an illustration on the general measurement model (building block approach) and variable fee approach. The illustration was on a very simple product and tried to cover all the disclosure requirements of IFRS 17. It was an informative session and the audience was still active and participated in the discussion with queries in this complex topic.

The session concluded with a discussion on the future steps that are in store for its proposed final implementation in 2021.





Session: IAI Disciplinary Process

Presenters: Mr. Anil Kumar Singh, Chairperson, Advisory Group on Professionalism, Ethics & Conduct, IAI

Mr. Anil Kumar Singh guided us through the different stages of the process from initial application stage through hearing stage. He highlighted the events that would trigger disciplinary action. He urged each member to be acquainted with Actuaries Act which specifies the dos and don'ts and follow professional ethics and conduct to stay away from unwarranted disputes. It is imperative for all of us to be alert on issues related to professionalism and maintain the esteem of our profession while keeping ourselves updated on the current issues on an ongoing basis.



About the Author

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What should be continued ?

1. The current format were a wide range of topics across different business - life, non- life & health get discussed should be continued. Push the Young actuaries to work hard on sourcing, understanding & preparing PPP with relevant material with guidance from the guide
2. More of coverage on Analytics and data science as this is an emerging area. More on professionalism & ethics & Guidance notes, law etc. is worthy as they are not covered in Exam
3. The content in the slides could be linked to professional issues rather than technical because for actuaries it becomes difficult to interrupt in life ppts in technical ground
4. We need more focus on professional aspects rather than conceptual aspects. It could be structured in such a way that how professionalism poses challenges in meeting the technical steps
5. As Mentioned earlier, for professional CPD, Professional content in the seminar should be increased
6. I think the topics were widely covered. Research oriented topics like study cancer (CI) incidence in India & other countries
7. I had a good experience & learnt about issues outside my work

Actuaries & Conduct

A profession gets public recognition, if members of the profession exhibit highest order of good conduct. Without conduct, there is no life. Conduct means the manner in which a person behaves in a particular place or situation.

Assignments which are carried out by actuaries can be done by non-actuaries too. For instance, investment opinions; equity pricing; analytics; academics [actuarial statistics subject can be taught by non-actuaries too.]. We need to be unique and different from others.

I am writing this article, because it is important to every member. Many members think and act different from the established practices. Many are not aware of the law that governs the professional and other misconduct. Many might have not seen or read or understood the Schedule in the Actuaries Act, 2006, and the Professional Conduct Standard and other Actuarial Practice Standards issued by the Institute. Longtime back, Member(Actuary) of IRDA stated in one of the Actuary India magazines that general insurance appointed actuaries were not even aware of APS 21. In the same issue, the then President of IAI stated that so far IAI was not monitoring the conduct of members and would soon start monitoring. We are yet to see.

A member means both fellows and associates of IAI as per sections 6 and 7 of the Actuaries Act, 2006.

The law applies to every member. This means that every member shall observe conduct not only for his benefit but also for the elevation of the profession. If you are driving a motor vehicle in India, you are expected to follow the rules of the road, otherwise you would be causing inconvenience to other users of the

road [others may not complain, but you have to change your behavior]. And if you are caught by the police, you know the consequences. Suppose you (for instance, as fellow member) stopped paying subscription to the Institute, then you could not use the title 'FIAI' after your name, because your name did not exist in the Register of members maintained by the IAI. If you use the title 'FIAI' after your name, then it is a punishable offence [see Section 37 of the Actuaries Act, 2006]. Many members (including senior members) commit such mistakes without paying attention to the law.

Certain standards are also applicable to student members [see Section 19(2)(i) of the Act].

PCS (Professional conduct standard)

Major issue among members is: absence of communication from the actuary who accepted the assignment from previous actuary. The Act [clause 5 of Part I of the schedule] states: *A member is deemed to be guilty if he accepts an assignment as Actuary previously held by another Actuary without first communicating with him in writing.*

For instance, you have recently accepted the position of appointed actuary of an insurer. If you have not informed your predecessor in writing, before you take up assignment, then you are deemed to be guilty [Your predecessor or any third party can complain to the Institute.].

Many members ignore this. Some members [or even any third party] could take it seriously and complain to the disciplinary committee -- which inquires to find whether the

defendant member is guilty or not; and the Council, based on the report of the disciplinary committee, can award punishment based on the breach of the conduct. It looks 'not material' to some, but it is material in view of the force of law.

In simple language:

Let's suppose Mr X and Mr Y are actuaries.

Client A engaged Mr X to get his statutory job (assignment) done [e.g. Assignment could be providing Reports under Accounting Standards, or reports under Insurance legislation].

Mr X did the job for client A with or without consideration, earlier.

After some time, Client A wanted to change the actuary, due to any reason. Client A was in the process of engaging Mr Y; and Mr Y was about to accept the assignment.

Action expected from Mr Y:

It was Mr Y's duty to find whether any actuary had done the assignment earlier [he has to find the name of Mr X], and had to take the following actions:

(1) Mr Y shall inform Mr X in writing by a letter to him [e-mail is the acceptable communication; as per the requirement of clause 5 of Part 1 of the Schedule of the Actuaries Act, 2006]

(2) Mr Y shall also write in his communication to Mr X, to check whether there were professional concerns before acceptance of the assignment from Client A. [This is PCS requirement—as per Section 19(2)(i) of the Actuaries Act, 2006].

Suppose Mr X wrote that his fee was

not settled, then Mr Y should not accept the assignment until the Client A settled the bill of Mr X. If Mr Y had taken the assignment without considering this, then Mr X may complain to the Institute to charge Mr Y guilty of professional misconduct.

Suppose Mr X wrote that Mr Y's fee was lower (when compared with Mr X's fee), then Mr Y should not accept the job until and unless the Client A agreed to pay at least an amount of fee which was not lower than that of Mr X [this amounts to 'undercutting' and counts as 'professional misconduct']. If Mr Y had taken the assignment without considering this, then Mr X may complain to the Institute to charge Mr Y guilty of professional misconduct.

Suppose Mr X expressed some other professional concerns, then Mr Y shall consider this and act accordingly.

The real issues for Mr Y when Mr X was an employee:

(1) Suppose Mr X was an employee of a firm of actuaries [including sole proprietorship firm], and signed the report using the letter head of his firm. Suppose Mr P is the partner of Mr X's firm.

Then, Mr Y should write to the firm of actuaries [because the firm must have accepted the Client A's assignment earlier].

Mr P or his representative would respond to Mr Y as per PCS.

Suppose Mr X was not an actuary [or an actuary without holding certificate of practice], but signed the report on behalf of the firm. Then Mr Y (or any third party) could complain to the Council of IAI (or Government of India) to enable the Council to act as per section 42 of the Actuaries Act, 2006.

(2) Suppose Mr X was an employee of a company. Suppose Mr C was an actuary and also the authorized person to accept the assignments

from clients on behalf of the company.

Then Mr Y had to write to the company. Mr C or his representative was expected to respond as per PCS.

Suppose it was found that Mr C was not an actuary or Mr C was not the authorized person to accept the assignments from clients on behalf of the company. Then Mr Y had to complain to the Council of IAI stating the fact that the company was accepting the assignments as an actuary [violation of section 39 of the Actuaries Act, 2006]. Then the Council shall take action against the company, as per Section 42 of the Actuaries Act, 2006. In this case, Mr X also could be punished for his role.

Status of Mr Y:

Mr Y can be—

(a) an independent actuary [sole proprietor]. Onus is on Mr Y to inform Mr X.

(b) an employee of a firm or company where he is authorized to accept assignment [signing report need not be assignment]. Onus is on Mr Y or firm to inform Mr X.

(c) an employee of a firm or company where he is not authorized to accept assignment from Client A [or from any other clients in general]. In this case, onus is on the company's authorized person to inform Mr X. In this case, Mr Y should not sign the report or certificate until the conduct process is completed. Otherwise, Mr Y might be held guilty as he had not taken proper care [neglect of his professional duties] on receipt of complaint from Mr X or any third party.

Cases where Mr Y does not inform Mr X at all.

[this is crux of the problem]

Let's suppose, the Client A changed actuary (Mr X) for any reason, and engaged Mr Y.

And Mr Y did not inform Mr X, at all.

Mr X, after waiting for some time [as he may be not getting the valuation job or work for the next period] may write to the Prosecution Director to find out the name of Mr Y to register a complaint against Mr Y, under Rule 7 of the Enquiry Rules. After knowing the name of Mr Y, Mr X could formally complain. In such case, the suo moto action may also be taken by the Institute.

In many cases, Mr X ignores to take any action, and keeps silent when the client A cancels the assignment allotted to Mr X. As a result, the profession suffers, in view of conduct issues.

In many cases, Mr Y informs Mr X, but in some cases, Mr Y ignores and does not inform Mr X, which is not a good practice.

Cases where Mr Y is not required to inform Mr X

Mr Y need not inform Mr X, if -

(a) Mr X was dead at or before the time of acceptance of assignment;

(b) Mr X was not an actuary [in these case, Mr Y is obliged to inform the Council for action under Section 42 of the Act];

(c) Mr X was an actuary but not an actuary in practice [in this case, Mr Y is obliged to inform the Council for action under Section 42 of the Act];

(d) the report is not required at all for any statutory purposes [it is just required for other purposes of the Client, where such reports (addressed to the client) can be given and signed by any person who need not be an actuary].

Certain situations can be different. For instance, Government of India recruits a new Member(Actuary); the Council elects new President, new Vice-President, new Hon Secretary, new Presiding Officer and new members of the Disciplinary Committee or Section 21 Committee replacing the earlier members, etc.

Compliance with Practice Standards and Code of Elections.

The practice standards are also applicable to student members. These are not applicable to affiliate members and honorary members. Certain practice standards are applicable to specific group of members.

A member has to study carefully the practice standards, and comply with the same not only in his interest but also in the interest of profession. Soon the IAI will start monitoring this. Self-help is the best help.

It is observed that many appointed actuaries (as per Member (Actuary)) do not comply with APS 21. Insurance

Regulator [or even the client] or every any third party can take any type of action.

In case of elections, every contesting member shall comply with election code [that is complying with expenditure limit, and submission of reports to the Returning officer]. If the contesting member does not comply, then any person can

complain after getting information from the Institute. Returning Officer shall have to take action, of course, as per law.

It is hoped that the above is useful to members.

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“Mr. K. Subrahmanyam is a fellow member of Institute of Actuaries of India.”



**The Actuary India wishes many more years
of healthy life to the fellow members whose
Birthday fall in December 2017**

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

**HAPPY
BIRTHDAY**

The Impact of Risk measures on Long term investment

(The 'Actuary India' magazine gratefully acknowledges the permission of the Institute and Faculty of Actuaries to reproduce the article produced by the Risk Measures Working Party of the Institute and Faculty of Actuaries in July 2017.)

Executive Summary

A risk measure is defined over a specified period over which risk arises. In the case of a regulatory risk measure, this period usually coincides with the annual performance reporting cycle for a company. For a company with longer term liabilities, risk emerges over a longer period, thus an annual risk measure focusing on short term risk measurement and management does not aid longer term decision making. Constraining companies to invest over shorter time horizons, creating an assetliability mismatch, can lead to a shortfall in investment performance. During economic crises, companies also tend to disinvest in the same way leading to fire sales of assets (also known as procyclicality). This further depresses asset prices and destabilizes the market, creating systemic risk. This article looks at how regulatory risk measures impact risk management and is based on the experience to date of the UK insurance industry in the context of the recently introduced Solvency II regulations. Some alternative ideas for risk measures are also suggested.

Background

The Risk Measures Working Party of the Institute & Faculty of Actuaries is researching the impact of risk measurement approaches on long term investment in insurance. This theme was inspired by a paper by the Bank of England in 2014 titled *"Procyclicality and Structural Trends in Investment Allocation by Insurance Companies and Pension Funds"*.

This topic is also of relevance to the Indian insurance market, as the regulator in India (the IRDA) contemplates a move to risk-based regulation.

Before moving on to the main discussion, some themes which are referred to later in the article are discussed briefly here.

Short term volatility vs long term horizon trend

Short term swings in share price can be large but this does not necessarily mean that volatility over longer periods has increased. A long term investor, such as an insurance company, would need to keep this in mind as its investment mandate would seek to align its investment horizon with the long term exposure to insurance risk. While life insurers can take a long term view to match long term liabilities, general insurers might have additional shorter term considerations leading them to avoid short term volatility. Short term volatility is also relevant to liquidity needs for both.

To illustrate this, we examine the volatility (or standard deviation) of returns on the S&P500 index from 1968-2016.¹

S&P 500 annualized 5-year volatility of daily returns,¹ %



¹Volatility for each month is calculated based on standard deviation of last 60 monthly returns.

Monthly prices are annualized for 12 months; returns are calculated by taking price as on 30th of each month - eg. For Apr, returns are calculated as price on (Apr 30/Mar 30) - 1.

Source: Analysis of data provided by McKinsey Corporate Performance Analytics, a McKinsey Solution

As seen from the above figure, volatility over longer periods hovers around a more stable value. This helps investors, especially those with long term liabilities, to take long term investment decisions without being distracted by short term volatility.

Source: The Long & Short of Stock market volatility by Goedhart and Mehta, 2016

VaR as a Risk Measure

Value-at-Risk (VaR) is defined as the maximum loss which is not exceeded with a given high probability over a given period of time.

Some shortcomings of VaR of relevance to this discussion are:

- Regulatory use of VaR may encourage 'herding', whereby investors tend to invest in a similar manner leading to an increase of systemic risk. Herding may increase in response to a need to adhere to regulatory VaR requirements based on a defined time horizon and confidence level, whilst exposure and short term volatility could lead to losses greater than the VaR. This is discussed further later.
- A backward-looking VaR based on past data would be sensitive to this data, for example, calibrations of VaR based on data from the 2008 financial crisis.

Solvency II

Solvency II rules which came into force from 2016 require insurers across the EU to make economic risk-based solvency assessments. There is a requirement to hold capital against market risk (including equity risk), credit risk, operational risk and underwriting (life, non-life and health) risk.

The broader stated goals of Solvency II include protection of policyholders and financial stability. One of the ways of achieving financial stability is by promoting long term investment by insurance companies and pension funds.

Solvency II has been derived from Basel II regulations for banking which are based on the use of VaR as a risk measure. Under Solvency II, VaR is based on a short (one-year) time horizon which is appropriate for projected solvency assessments when liabilities involved are short term, as for banks. It does not capture the emergence of risk for liabilities of longer duration.

Design of Solvency II equity risk module and mitigants for procyclicality

Under Solvency II rules, the factor-based (or standard formula) stress to equities may be penal to long term investors in terms of capital required in a bear market phase, depending upon the nature and duration of liabilities. The reason behind this is that the equity stress has been calibrated using historical data including the 2008 financial crisis resulting in a high capital charge for equity. Furthermore, as financial correlations typically increase in a crisis, high correlations have been used and this has possibly increased the capital charge.

The applicable capital charge has reduced the popularity of equities as an asset class and narrowed investors' asset choices.

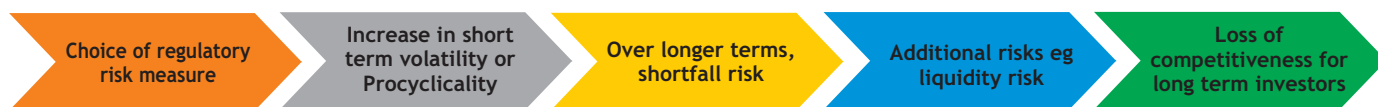
However, Solvency II also has some existing mitigants for procyclicality which tend to be operationally complex and expensive to ultimate customers. Examples are:

- Symmetric adjustment mechanism which determines capital requirements according to the market environment. It reduces procyclicality by adjusting the standard equity capital charge to increase when equity markets rise, and decrease when markets have dropped in the previous months.
- Special treatment of duration-based equity risk applies to insurers providing occupational or other retirement benefits where the typical holding period of equity investments is long term (around twelve years) and therefore a lower capital charge may apply. The rationale for this is that short term volatility should not be considered for long term equity investment, and therefore lead to a lower capital requirement.

Risk measures and risk

Regulatory risk measurement approaches such as VaR as defined under Solvency II rules may exacerbate short or mediumterm volatility in markets leading to procyclicality/asset price contagion risk, a systemic risk. Over the long term, other secondary risks such as liquidity risk and investment shortfall risk may arise.

This is broadly represented by the diagram below:



What is Procyclicality?

The BoE Procyclicality Working Group published research in the paper *“Procyclicality and Structural Trends in Investment Allocation by Insurance Companies and Pension Funds”* in which procyclicality is defined as:

investing in the short term in a way that could exacerbate market movements and contribute to asset price volatility, or
investing in the medium term in a way that might exaggerate the peaks and troughs of asset price or economic cycles.

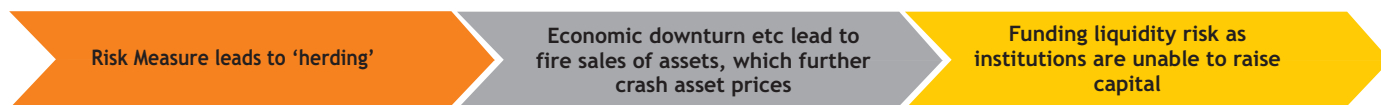
Cause of procyclicality

Some reasons for procyclicality have been identified as:

- under Solvency II, the use of Value-at-Risk (VaR) resulting in investment 'herding'.
- another example of procyclical behaviour is the build up in high sales of products that expose the entity to significant risks in a downturn or fire sales of assets during a crisis.

In this article, we focus on the first cause above.

Anatomy of a procyclical event



Investment 'herding' or the correlation of investment activities across insurers may arise due to reasons such as:

- regulatory risk measures defined for a particular class of investors are applied to other classes that have different investment horizons. For example, a one-year risk measure suitable for a bank which has short term deposits would not reflect the long term risks of an insurer
- capital charges imposed on different asset classes by regulation; if these are viewed as being penal, insurers would move away from investing in these assets
- assets viewed as a good match for liabilities e.g. corporate bonds for annuity books
- regulatory requirements involving huge and expensive data collection e.g. Solvency II 'look-through' to underlying assets for certain asset classes such as collectives, would lead insurers to rethink their investment strategy

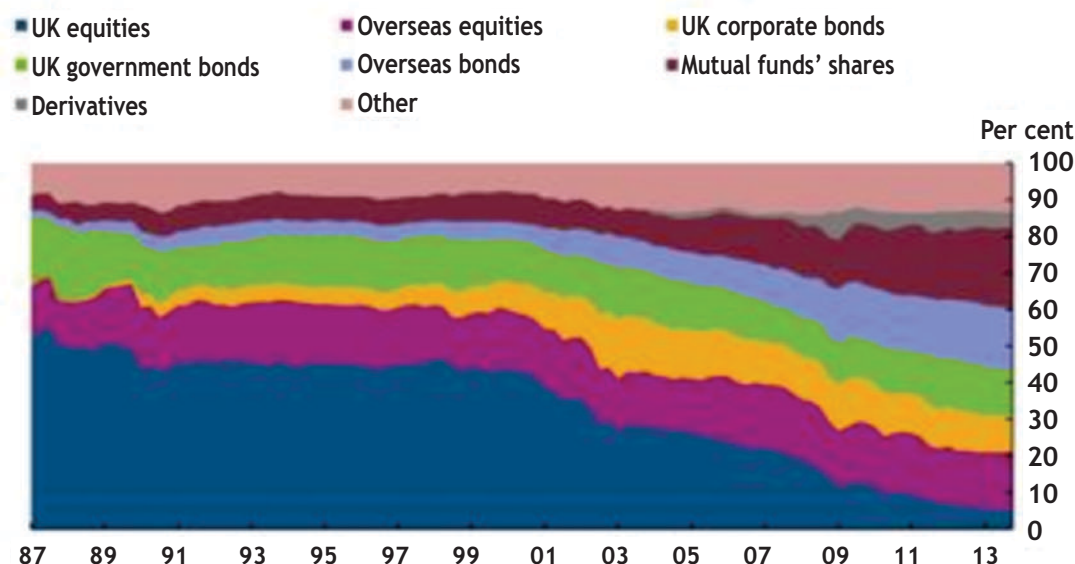
When regulatory constraints force simultaneous behaviour, insurers could become a source of systemic risk due to the investment of large funds at their disposal. In the event of an economic downturn, insurers tend to disinvest in the same manner, thereby further depressing asset prices. Due to this, the insurer may need to raise additional capital in order to avoid funding liquidity risk (risk of not meeting current liabilities).

Potential impacts of procyclicality

These are:

- How insurance companies and pension funds bear risk across the cycle and thereby contribute to financial stability and long term economic growth: There has been a marked decline in the willingness of these companies to take on investment risk, with much lower equity holdings in recent years. (refer to figure)

Allocation of UK ICPF assets to different asset classes (nominal)



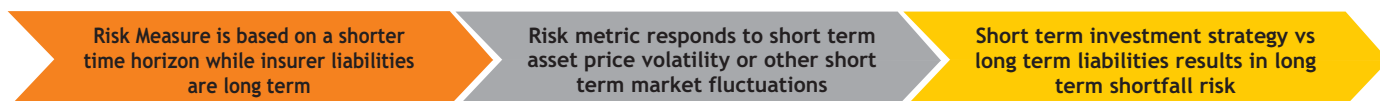
Source: ONS and Bank calculations

- (a) Bonds includes money market instruments, medium-and long-term bonds. The split of overseas bonds by issuer is not available.
- (b) Other includes currency, deposits, loans, other accounts receivable and insurance technical reserves.
- (c) Derivatives data are shown separately from 2004, but prior to this are included in corporate bonds.

Source: Bank of England *"Procyclicality and Structural Trends in Investment Allocation by Insurance Companies and Pension Funds"* (2014)

- Asset price volatility (resulting in fire sales of assets when prices fall) can decrease the resilience of the financial system, and thereby
- Lead to systemic asset contagion risk and funding liquidity risk and require the insurer to raise additional capital

Shortfall risk



When the chosen risk measure assesses risk over a time horizon (typically a year) that is shorter than the period over which risk is held, it addresses short term volatility and encourages the choice of risk management options that are suitable over a shorter time horizon. However, it does not help in long term decision-making for long term investments. As risk metrics are related to performance metrics over the annual performance cycle, longer term investment performance goals are not addressed and may result in investment shortfall risk.

Alternative ideas for risk measures

Solvency II is an extensive and complex piece of legislation covering numerous aspects of risk controls. The overall Solvency II framework does contain some mitigating adjustments such as volatility adjustment, symmetric adjustment, duration-based equity risk and so on but space does not permit a full discussion of all of these aspects here.

Alternative calibration approaches such as non-market methods

The market consistent approach adopted under Solvency II rules makes the balance sheet volatile due to short term volatility and can increase procyclical tendencies. It is possible to introduce counter-cyclical buffers that are top-down assessments of risk applied to asset, liability or capital components of the balance sheet.

Longer projection periods such as runoff approaches

Liability runoff risk measures support long term decision making by measuring risk over the period that it is held. An

assessment is made of the level of total initial assets, less some measure of reserves for liabilities, required to pay all future policyholder benefits at the chosen confidence level. This contrasts with the one-year mark-to-market approach used under Solvency II. A runoff approach results in more stable capital requirements as economic assumptions are not affected by short term volatility.

Other risk measures

Numerous other risk measures exist to deal with other aspects of financial risk, both microprudential and macroprudential. For example, in banking, Basel III has expanded upon Basel II to include, among other things, systemic and liquidity risks. Some of these approaches and metrics might be able to be appropriately adapted for insurers.

The way forward

Solvency II is based on a capital risk measure but not designed to avoid systemic risk. Furthermore, liquidity risk is not treated as a risk to capital and requires separate metrics and management. The Own Risk and Solvency Assessment (or 'ORSA') process under Solvency II addresses liquidity risk from the perspective of the entity.

Overall, a way forward would be to use existing and alternative risk measures to address risks such as asset price contagion, investment shortfall, systemic and liquidity risks.

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The Influence of Logos & their Colors on Branding

Key Issues/ Goals

A logo is an essential component of brand identity. It is an integral element in corporate and brand communications and provides immediate recognition to the brand (Schechter 1993; Henderson and Cote 1998). Logos represent a brand's meaning and play an important role in communicating the characteristics of the brand. The word "logo" refers to the graphical element that a company uses to identify itself or its products. Logos play a crucial role in brand building as they visually represent the brand. (Machado et al, 2013). Logos are visual elements in communication tools ranging from packaging and promotional materials to business cards and letterheads. Marketing managers and brand managers can immensely benefit from understanding the role logos play in branding efforts.

The objective of this case study is to understand the various dimensions of logos that have a significant impact on branding. Colors play an important role in logos and different colors are used for different types of products.

The importance of colours

Colors play an important role in logos. Mc Donalds logo is yellow because yellow is a color that stimulates appetite. IBM's blue logo is representative of authority, success and security. Colors, flowers, fragrances, music - all these have therapeutic powers. Markets have used these attributes to their advantage.

Colors chosen depend on the purpose of the logo and the type of product that is going to be marketed. Youth oriented products have colors that reflect exuberance, enthusiasm, energy and responsible carelessness. Colors like yellow, orange, red and

green represent food brands. Green indicates energy, environment and freshness. So green is a popular color. Logos of feminine products are colored pink. Red represents boldness. Orange is supposed to be appealing to kids - but these kinds of opinions are more subjective and less based on market research. Even market research may not include a truly representative sample and so generalizing based on the opinions of a few respondents is not fair.

Role played by Logos in establishing brand identity

Companies change logos and colors to be in sync with the times. A logo is designed in such a way that it conveys a meaning. The same logo can mean different things to different people. The challenge for advertisers is how to integrate these thought processes to their advantage.

In the era of globalization, multinational corporations will do well to realise that different colors appeal to the sensibilities of different countries. India is a nation of diversities with consumers in urban, semi urban and rural areas. It is virtually impossible to map the color preferences of a consumer population that is as diverse and complex as it can get. Color psychology as a market lever needs a periodic review.

Logos breathe life into a brand. They are the preferred language for most brands. Logos communicate more than words. The Chinese proverb - 'A picture is worth a thousand words' aptly communicates the significance of logos. A brand has truly arrived when the logos are successful.

Design is powerful and can be used to transform brands as well as organisations. Creating a brand

identity is an iterative process integrating art and science, logic and magic. Intuition or gut feel provides the magic behind the logic. Research plays an important role in recreating a brand identity through logos that truly stand the test of time.

A logo is an endorsement of quality. Without a logo, a product is just a commodity. With a logo, a product becomes a brand. Thus, a logo is an important element of product brand architecture. Logo breathes life into a brand. Brand building or revitalizing the brand or any rebranding exercise starts with the logo. Logo represents the visual identity of the brand. In retail marketing, logo is an integral part of store atmospherics.

Over reliance on market research: The perils

Market research throws the safest options and is sometimes considered as the lowest common denominator. Overwhelming reliance on market research can be self-defeating. The experience of Domino's Pizza in Japan and the Persil power fiasco that proved to be a stubborn stain on Unilever's reputation can be considered examples representative of the malaise resulting from over reliance on market research that is ineffective.

Steve Jobs remarked tongue-in-cheek, "If Apple did consumer research, there would be no i-pod". Apple has always relied on "Pull" based approach in innovating new products.

To sum up

More than market share what is important now is mind share. A brand establishes an emotional connect with the customer and logos act as the conduit.

Consumers look up to the logo with

awe and respect and when the company fails to live up to the expectations, the logo and the color are put behind the scanner. UK based energy giant BP (British Petroleum) had a Helios brand colored green and yellow. After a number of environmental disasters involving BP, skeptics portrayed the logo with black fumes coming out of the green logo. BP as an organisation drew lot of flak for its “hire and fire” policy and recurring disasters like the Texas fire tragedy in its plant. Its safety policy - “No accidents, no harm to people and no damage to environment” fell flat on its face after the disasters put a question mark on its so-called green agenda.

India presents unique challenges due to its diversity. Finding common ground across all this diversity and regional disparities is a real challenge. Compared to their western counterparts, Indian businesses are more circumspect about taking risks. Market research cannot elicit inputs from customers about products or services that they have not used before.

A logo is the face of the brand and serves the purpose of emoting the character of the brand. The color, font, symbol and shape helps a consumer identify, disassociate or aspire for the brand. A successful logo is a concoction of creative potential complemented by psychological verve.

A change in logo has to be supported by a change in brand experience to lead to brand-led business growth. Popular brands like Amul, Vijaya Bank, LIC can attribute their popularity to their logos. Designing of logos need global thinking with a local approach. A logo can engender differentiation in an intensively competitive market place creating a unique proposition for the brand.

Logos have to be simple, clever and have their own eureka moment. Logo is not a building block but it is something that helps in creating a brand identity.

The world is becoming flatter now. Products are made around the world. The three D's in the Western world are - Digital, Data and Design. A brand is a sum of consumer's experiences with a product or service. Design of those experiences is paramount. Logos play a crucial role in shaping these experiences.

Emerging economies like China and India are facing the threat of global competition now despite experiencing sporadic growth spurts. New delivery technologies and growth of social media have made all brands available to all consumers. This has made the design of the brand experience even more pertinent. Logos will continue to be an important influence on brand equity.

The 6-point test for a great logo

1. **Relevance:** Does the logo do justice to brand positioning?
2. **Differentiation:** Is the logo sufficiently differentiated from competition?
3. **Memorability:** Does the logo make an impression and prompt recall?
4. **Integration:** Does the logo lend itself to a compelling brand identity?
5. **Endurance:** Will it stand the test of time? Can it be easily implemented?

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3. Schechter, A. H. (1993). Measuring the value of corporate and brand logos. *Design Management Review*, 4(1), 33-39.
4. <http://grantburke.com/6-factors-great-logo-design/>
5. <http://www.convinceandconvert.com/social-media-strategy/instagram-new-logo/>

6. Emotional connect: Does the logo have an emotional connect with consumers?

Logos have to be simple without any flashy effects. A great logo has to work in print, on the web, embroidered on a hat or it may need to be represented as a small icon on a social media account. Designers have to consider how the logo will work in horizontal and vertical lock ups or as a standalone icon. Logo must be designed keeping the target audience in mind. The logo should remind a customer about the product or service being offered. Logo has to be good as well as effective (4).

Logos must also appeal to our subconscious minds (5). Instagram, Google, Starbucks, Tesco, McDonalds, Burger King, Apple are logos that have been successful by following the basic tenets of designing a logo. These logos became popular because of visual saliency. Trends may change over a period of time. But a great logo will stand the test of time. Behind a great logo is lots of hard work. A logo should also have a high propositional density. The design of the logo must convey a lot of meaning with as little detail as possible. Images with high propositional density must appeal to the sub conscious mind.

About the Author

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“Mr. Venkatesh is working as - Associate Professor at Presidency Business School, Bangalore.”



Activities and Updates of the Advisory Group on Examination

Examination

Dear Members,

Welcome to a brief look into the various workings of the Examination Advisory Group (EAG) along with a brief update on the EAG developments in the last few months. The EAG is involved in various activities including discussion of any new exam syllabus with a view to bring uniformity in the Education of all Actuarial bodies across the globe, publication of Institute of Actuaries of India (IAI) Exam time tables, arrangement and coordination of exam centers, timely completion of marking process and publication of results, implement changes in Actuarial Common Entrance Test (ACET) syllabus and study material developments from time to time and investigation of suspected copying cases.

- **Curriculum Strategy 2019:** One of the biggest focus of the EAG in the past few months have been discussion on the IAI new curriculum strategy 2019 adopted by Institute and Faculty of Actuaries (IFOA).

The EAG has discussed in detail the pros and cons of IAI's adoption of new Curriculum Strategy 2019 in line with the implementation of New International Actuarial Association (IAA) syllabus considering the current practice of mutual recognition between the two actuarial bodies. EAG deliberated in detail the impact

of implementation of the new curriculum on the students. The decision about adoption of the same by IAI is currently under Review stage and will be communicated to our students shortly.

The discussions on Curriculum strategy are expected to remain as area of continued focus for the EAG along with collaborating with the task force of Education strategy. This paves the way for conducting of focused workshops for examiners to acclimatize them with the potential changes to be adopted.

- **Syllabus and Study material for ACET Online Exam Conduction:** The members have suggested modifications in the existing ACET syllabus and distribution of marks. The members have also provided their valuable inputs for the RFP for ACET Study Material Development. Subsequently, EAG has also initiated RFP for development of ACET Study Material.
- **Disclosure of marks in ACET Examinations:** It has been

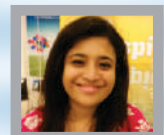
decided that there will be no section-wise cut off marks for ACET examination. Further, the students will be able to know the marks scored and the pass mark for the examination.

- **Implementation of new IAI Exam Time Table:** The new Exam Time table will come into effect from March 2018 examination
- **Review of Exam Results:** EAG administered the process of Release and Verification of Answer Booklets on the basis of requests from students. The EAG has addressed 49 Verification cases from the students.
- **Address suspected Misconducts:** EAG is involved in the enquiry and interrogation of students on spotting of suspicious activities reported by examiners and enforcing disciplinary measures.
- **Exam Centers:** EAG has Worked towards improving the regular exam centers by replacing old centers with new centers which offered better facilities in terms of Infrastructure and Invigilation

About the Author

Ms. Peuli Das

“Ms. Peuli Das is an Interim Chairperson of Advisory Group on Examination.”

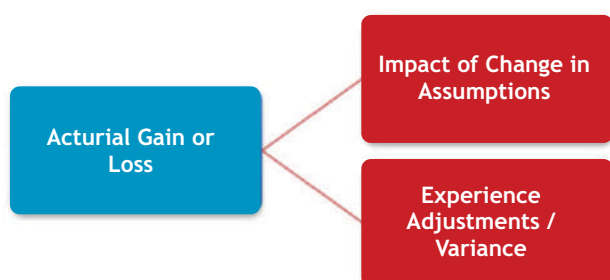


All About Actuarial Gain/Loss

Firstly I would like to thanks all readers of Actuary India Magazine for liking my previous article titled “All About Gratuity” published in February 2017 edition of Actuary India monthly magazine under student column. Now I would like to talk on Actuarial Gain or Loss arising on liabilities:- Technical word for common people and a most often used word in the offices of Actuarial consultancies serving in the area of Pension & Employee Benefits.

Actuarial Gain/Loss on liabilities is defined in **IndAS 19/AS -15 (Revised 2005)/ IAS-19 (Revised 2011)** as follows:

- “Actuarial gains and losses are changes in the present value of defined benefit obligations resulting from:**
- (i) experience adjustment (the effects of differences between the previous actuarial assumptions and what has actually occurred); and**
 - (ii) the effects of changes in the actuarial assumptions.”**



Every Actuarial student/ professional working in the area of Pension and employee benefits aims to minimize actuarial gain/loss arising on liabilities. They try to set assumptions, after analyzing past data and discussing with the client or management, in such a manner so as to have Actuarial Gain/Loss (tend towards) 0. For Common People Actuarial Gain/Loss is just the residual item in the given below table. Despite Actuarial Gain/Loss being an unavoidable component, it is more significant figure for an Actuary rather than assuming it to be a residual item. It is a useful

guide/barometer to test the Actuarial Liability before finalizing the report. Actuarial Gain/loss summarizes the significant changes that have occurred in during the time period of calculation of opening liability and closing liability.

Table 1:

Opening defined benefit obligation	100
Current Service Cost	10
Interest Cost	5
Remeasurement (gains)/losses:	
Actuarial (gains)/losses arising from changes in demographic assumptions	-
Actuarial (gains)/losses arising from changes in financial assumptions	-
Actuarial (gains)/losses arising from experience adjustments	75
Past service cost, including losses/(gains) on curtailments	-
Benefit Paid	(70)
Closing defined benefit obligation	120



Actuarial Gain/Loss
(Residual Item)

Can Actuarial Gain/Loss arising on liabilities ever be Zero?

Is it possible to set assumptions in a way so as to reduce Actuarial Gain/Loss to Zero? To answer this question, first we have to understand what this Actuarial Gain/Loss Comprise of:-

Actuarial Gain/Loss comprise of all those factors which are not in control of management and an Actuary. Since Actuary is a professional who looks

into future contingencies can certainly assist management in bridging the gap between Actual vs Expected.

As evident from the definition above, actuarial gain/loss comprises of following two components:-

- (a) Actuarial Gain/Loss arising from changes in Assumptions and,
- (b) Actuarial Gain/Loss arising from Experience Adjustment

These Components of Actuarial

Gain/Loss are briefly described below:-

1. Change Due to Actuarial Assumptions: The major cause of Actuarial Gain/Loss is change in Actuarial Assumptions from calculating of Opening Liability to Closing Liability.

Actuarial Assumption comprises change in Financial Assumptions, (like Salary or Benefit Escalation Rate and Discount Rate) and Change in

Demographic Assumptions (like mortality rates, morbidity rate, disability rate and Employee Attrition rates). More details on actuarial assumptions can be found from my previous article titled "All About Gratuity" published in February 2017 edition of Actuary India magazine.

If there is any change in actuarial assumption from opening liability to closing liability due to reasons best explained by Management and Actuary then there will be actuarial gain/loss arising due to change in financial or demographic assumptions.

2. Change Due to experience adjustment: It comprises of reasons which are beyond actuarial assumptions i.e. **change caused by actual experience during the inter-valuation period being different from the assumptions used for determination of value of Obligation** e.g. If Actuarial Liability is determined with a salary escalation rate of 10%(say) uniformly for all employees and Actual experience reveal that some employees have different than 10% increase in salary then Actuarial Gain or loss due to experience adjustment is inevitable.

So, coming back to our question on whether Actuarial Gain/Loss can ever be Zero? I am here to discuss the matter by quoting examples of two important Defined Benefits in the Indian Context:-

- (a) Gratuity (as per Gratuity Act 1972)
- (b) Leave Encashment (Company specific rules)

Gratuity: Assuming Salary/benefit escalation rate and employee attrition rate following the long term assumptions and no new hiring of new employees during the year. There are two major factors resulting in Actuarial Gain/Loss:

(i) Discount rate: Discount rate is determined in compliance of para 78 of AS15 (Revised 2005) / para 83 of

Ind AS 19 issued by ICAI which depends on Government Bond Yields. Since yields on Government bonds are subject to Market Risk and Estimated term also vary with time. Change in discount rate may result in Actuarial Gain/Loss due to change in financial assumption.

(ii) Mortality: Mortality rates in use for valuing Actuarial Liability is decade old and may not truly represent mortality characteristics of every enterprise. Companies too rarely have proper maintenance of past records to help actuary in adjusting the corresponding mortality rates. No separate female mortality table further increase the deviance. So Actual deaths vs Expected Deaths further add to Actuarial gain/loss and may result in Actuarial Gain/Loss due to experience adjustment.

Due to above two reasons it becomes difficult to have **Zero** Actuarial Gain/Loss. Other causes of Actuarial Gain/Loss can be changes in Salary Escalation Rate, Employee Attrition rate etc.

Leave Encashment: In addition to the above key factors as mentioned in Gratuity, which are also direct relevant in Leave Encashment valuation, one more significant factor result in Actuarial Gain/Loss being non-zero in case of Leave Encashment Valuation.

CTC Salary: Actuarial Liability of Leave Encashment comprise various components out of which one component is valued at CTC : Leave Value at Availment of leaves (generally Sick Leaves can only be availed not encashed). CTC Salary is not equal to the salary which is used in computation of actual payment (Benefit Paid) of Leave Encashment to employees in the event of exit from service. Therefore Benefit Paid (as shown in Table 1) of Leave Encashment during the period excludes an amount equivalent **CTC Salary minus Qualifying Salary** for Leave Encashment. Due to this inherent contradiction, a residual

item is unavoidable, which some may put in Actuarial Gain/Loss.

At the end I would like to express my views on rising Gratuity Liability after 7th Pay Commission implementation for Central Government Employees. Remuneration of Central Government employees are governed by CCS Pension Rules and are revised from time to time with the coming of Pay Commissions. 7th Pay Commission an up gradation of the earlier 6th pay commission brought many changes. Gratuity being an important retirement benefit in the Indian Context was targeted structurally in the new pay commission:

Gratuity Calculation 7th Pay Commission

Some Key Changes under 7th Pay Commission and their effect on Gratuity Liability:

1. DA Merged with Basic: Basic Salary (including Basic Pay and Grade Pay) under CCS Pension Rules generally increases by 3% Compound interest while DA being a certain %age over Basic increases by certain Simple Interest. Once DA gets merged with Basic, price escalation till retirement takes into account of compounding effect of Basic Pay and results in a substantial increase in liability.

2. Change in Gratuity Ceiling: Before 7th Pay Commission Monetary Ceiling on Gratuity was restricted to ₹10 lakh which means a government employee cant draw a Gratuity of more than ₹10 lakh in their life time. With the changes in the 7th Pay Commission, this monetary ceiling has been increased to ₹20 lakh. With this change Gratuity liability of the Government employees specially ones drawing higher salary will result in an increase in liability. There is also a special provision under 7th pay commission which says **"The**

monetary ceiling on Gratuity will increase by 25% whenever DA rises by 50% of the basic pay". This special provision will certainly act as a catalyst for pushing the liability further up and tending the Gratuity

liability towards the Gratuity Liability with no ceiling!

3. Change in rates in case of Death Gratuity: Earlier for an employee dying during service period in the

interval "5 years or more, but less than 20 years" death gratuity was admissible as 12 times of "emoluments", now under 7th Pay Commission this interval is break down as under :

5 years or more, but less than 11 years	12 times of 'emoluments'
11 years or more, but less than 20 years	20 times of 'emoluments'

With this new change, the Gratuity liability of an employee for the reason of Death will increase.

Falling of government bond yields resulting in falling of interest rate of

discounting will again cause an increment in Gratuity Liability.

The Consolidated effect of the above changes may bring an increase in Gratuity liability of appx 2.5 times

the liability reported in the previous financial year. Actual increase may further increase if data has high composition of employees with large salaries and large service period.

Thank You!

About the Author

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"Mr. Rajat Gupta is a student member of Institute of Actuaries of India and currently working as Senior Analyst (Actuarial) at MetLife GOSC Noida."



FAREWELL

Quintus Mendonca has been a part of IAI family for more than Five years. During her tenure in IAI, she found very sincere, hard working and cooperative with each one. She handled approximate 70 Seminars, 5 GCA's & Asian Actuarial Conference till date.

We wish her great success and happiness for her future ahead.



Quintus Mendonca



AN UPDATE ON ACTUARIAL DEVELOPMENTS IN SOUTH AFRICA

Economic Overview

The Honorable Minister of Finance of South Africa, Minister Malusi Gigaba presented The Medium Term Budget Policy Statement (MTEF) in October 2017. The main features of the statement were as follows:

- ♦ The forecast for economic growth for South Africa was reduced to 0.7% for 2017;
- ♦ The debt to GDP ratio has risen to 54.2% and is projected to top 61% by 2022. The Tax Revenue Shortfall was R50.8Bn;
- ♦ There will be more caution on future spending and a focus on efficiency;
- ♦ The need for Business, Labour and Civil Society to work together;
- ♦ The unemployment rate was 27.7% and there is a huge focus on creating jobs;
- ♦ A focus on redistribution of wealth - currently 95% of the wealth is in the hands of 10% of the population; and
- ♦ Improving governance of State Owned Enterprises and the need to reduce Government Guarantees to these entities.

In other developments; Standard and Poor lowered the South African foreign and local currency rating by one notch in November 2017. The Rating agency did however move it's outlook on South Africa from negative to stable. The Reserve Bank's Monetary Policy Committee (MPC) decided that it would be prudent to maintain the repo rate at 6.75%. The Consumer Price Index was

4.8% in October 2017

Actuarial Society Convention

The Actuarial Society of South Africa held its annual convention on the 17th and 18th of October in Johannesburg. Some of the topics discussed were as follows:

- ♦ Incorporating wider fields risk management into short-term insurance;
- ♦ Allowing for changes in the general business environment in claims reserves;
- ♦ Insurance for people living with HIV;
- ♦ An introduction to advanced predictive analytics;
- ♦ Actuarial advice in the Defined Contribution space on income adequacy;
- ♦ How machine learning is the death of the conventional actuary;
- ♦ Systematic risk for insurers (The impact of non-disclosure on the South African life insurance industry);
- ♦ The role of the actuary in risk management;
- ♦ The future of insurance - what is the future of insurance in the changing world;
- ♦ Blockchain applications to insurance; and
- ♦ Credit enhancement, risk management and structured finance for accelerated investment and economic growth

in Africa.

Some of the matters under consideration by Practice Areas were as follows:

- ♦ The Compensation and Damages Committee will respond to the South African Law Reform Commission's recent call for comments regarding possible reforms in respect of medico-legal claims, particularly those against the State;
- ♦ The Investments Committee produced an article on the credit ratings downgrade and it's impact on investments;
- ♦ The Life Assurance Committee updated APN107 (Embedded Value Reporting) and discussed member comments received;
- ♦ The Short-term Insurance Committee discussed recent major fires. There might be a need to reconsider reinsurance, reserving, capital and pricing processes;
- ♦ The Demography and Epidemiology Committee has commissioned the Society's next HIV sub-population model, formalised a project plan and completed initial milestones that focus on informing key model parameters using a very large cohort of South African HIV-infected adults starting antiretroviral therapy (ART);
- ♦ The Banking Committee hosted Francois Groepe, the Deputy Governor of the Reserve Bank, who delivered a case on Bank Stress Testing and the importance of appropriate product design;

- ♦ The Micro-Insurance Committee is committed to engaging with the Financial Services Board to make a meaningful contribution to the industry;
- ♦ The Data Science and Business Intelligence Sessional Meeting focused on the practical application of machine learning and provided useful tips on experimenting with different machine learning techniques; and
- ♦ The Market Conduct Committee continue to suggest the need for more formal discussion of market conduct issues within the profession.

Twin Peaks Legislation

The Twin Peaks Bill was signed into law by the President. The Twin Peaks model of financial sector regulation created a prudential regulator - the Prudential Authority - housed in the South African Reserve Bank (SARB), while the Financial Services Board (FSB) will be transformed into a dedicated market conduct regulator - the Financial Sector Conduct Authority.

The implementation of the Twin Peaks model in South Africa has two fundamental objectives; namely

- ♦ to strengthen South Africa's approach to consumer protection and market conduct in financial services, and
- ♦ to create a more resilient and stable financial system.

About the Author

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“Mr. Krishen Sukdev joined the Government Pensions Administration Agency in August 2015 as the Chief Executive Officer. He also serves as a Non-Executive Director of the Land Bank Insurance Company and Land Bank Life Insurance Company.”



Student Support Scheme

The student Support Scheme was introduced on 8th December 2012. The scheme aims to provide financial support to student members of IAI who are Indian Citizens and are ordinarily residents in India with potential to become an actuary, but who might otherwise find it difficult to mobilize financial resources to pursue the examinations.

More details on the Student Support Scheme are available on the IAI website under the Sub Tab Student Support Scheme of the Student Tab.



Few snapshots of R-training conducted on 1st & 2nd December, 2017
in the classroom of IAI

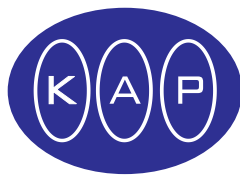
R-TRAINING



CALL for Articles

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 and cut-off date for submitting the articles are available at http://actuariesindia.org.in/subMenu.aspx?id=106&val=submit_article



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