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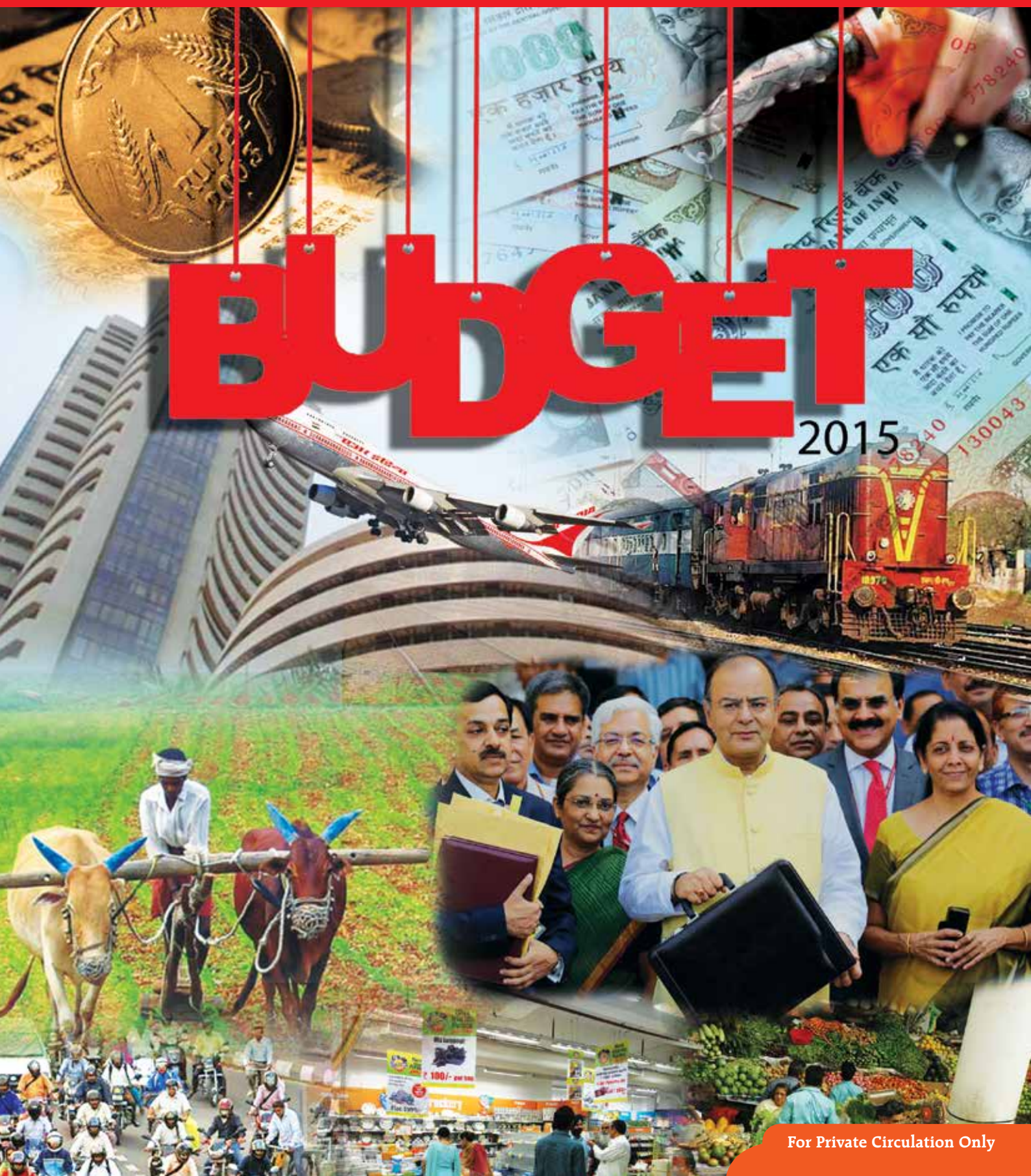
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Serving the Cause of Public Interest

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(पूर्व का भारतीय निर्यात क्रेडिट गारंटी निगम लि.)

ECGC Ltd.

(Formerly Export Credit Guarantee Corporation of India Ltd.)

(भारत सरकार का उद्यम)

(A Government of India Enterprise)

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ECGC Limited

(A Government of India Enterprise)

Vacancy: Appointed Actuary

ECGC, a premier export credit insurance organization wholly owned by the Government of India urgently requires an "Appointed Actuary" at Mumbai.

Applications are invited from resident Indian Citizens for the post of "Appointed Actuary" on Full time employment on 3 to 5 years contract basis.

Qualification, Experience & Age Limit: The candidate should preferably possess the following qualifications and post qualification experience in handling the Actuarial matters. He or she should be

1. A resident in India.
2. A fellow Member of Actuarial Society of India and he/she should satisfy all the requirements specified in Regulation No. 3 sub regulation 2 of IRDA(Appointed Actuary Regulations,2000)
3. Preferably not above the age of sixty years (as on 01.01.2015)
4. Have a post qualification experience of minimum of 5 years. Preference will be given to people with experience in General Insurance Industry.

Duties and responsibilities: Duties and responsibilities of the Appointed Actuary will be as per Regulation 8 of IRDA (Appointed Actuary) Regulations, 2000.

The appointment will be on a full time employment basis. The Appointed Actuary cannot undertake any professional consultancy / work for other organisation during the period of employment.

Compensation will be in line with levels prevailing in the General Insurance Industry. Candidates may indicate expectations.

Applications in conformity with Form IRDA-AA-1 (particulars of Appointed Actuary) of IRDA, (Appointed Actuary) Regulations 2000; superscribed at left hand upper corner of the envelope "ECGC Appointed Actuary" should be sent to the following address:

The General Manager (HRD), ECGC Ltd, "Nirmal" 5th Floor, Nariman Point, Mumbai-400 021 or by e-mail at hrd@ecgc.in together with self attested copies of all relevant certificates with a recent passport size photograph, so as to reach ECGC by not later than 15th April, 2015.

General Instructions:

- a) Corporation reserves the right to restrict the number of candidates to be called for interview.
- b) The decision of the Corporation will be final and binding in all matters.
- c) In case it is found at any stage of recruitment that the candidate does not fulfill the eligibility criteria and/or he/she has furnished any incorrect/false/incomplete information or has suppressed any material fact(s), the candidature will stand cancelled. If any of these shortcomings are noticed even after appointment his/her services are liable to be terminated forthwith. Before applying for the post, the candidate should ensure that he/she fulfills the eligibility and other norms mentioned in this advertisement. The decision of the Corporation in respect of matters concerning eligibility of the candidate, the stages at which such scrutiny of eligibility is to be undertaken, the documents to be produced for the purpose of conduct of interview, selection and other matters relating to recruitment will be final and binding on the candidate.
- d) The Corporation shall not entertain any other correspondence or personal enquiries. Canvassing in any form will disqualify the candidate.

General Manager (HRD)

‘नर्मल’, 5वीं मंजिल, 241/242, बैकबेय रिक्लेमेशन, नरीमन पॉइंट, मुंबई - 400 021. भारत. फोन : 6659 0700-709 फैक्स : 6659 0766 / 6659 0755
Nirmal, 5th Floor, 241/242, Backbay Reclamation, Nariman Point, Mumbai - 400 021, INDIA. Tel. : 6659 0700-709 Fax : 6659 0766 / 6659 0755

ऑफिसियल कार्यालय : एक्सप्रेस टॉवर, 10वीं मंजिल, नरीमन पॉइंट, मुंबई - 400 021. भारत. फोन : 6659 0500-509 फैक्स : 6659 0517 सी आई एन : U74999MH1957G0I010918

Chief Editor

Sunil Sharma

Email: sunil.sharma@kotak.com

Editors

Kollimarla Subrahmanyam

Email: ksmanyam52@gmail.com

Raunak Jha

Email: Raunak.Jha@CignaTTK.in

Puzzle Editor

Shilpa Mainekar

Email: shilpa_vm@hotmail.com

Librarian

Akshata Damre

Email: library@actuariesindia.org

COUNTRY REPORTERS

Krishen Sukdev

South Africa

Email: Krishen.Sukdev@iac.co.za

Frank Munro

Srilanka

Email: Frank.Munro@avivandb.com

Anshuman Anand

Indonesia

Email: Anshuman.Anand@aia.com

John Laurence Smith

New Zealand

Email: Johns@fidelitylife.co.nz

Rajendra Prasad Sharma

USA

Email: rpsharma0617@yahoo.com

Nauman Cheema

Pakistan

Email: info@naumanassociates.com

Andrew Leung

Thailand

Email: andrew.leung@iprbthai.org

Vijay Balgobin

Mauritius

Email: Vijay.Balgobin@sicom.intnet.mu

Kedar Mulgund

Canada

Email: kedar.mulgund@sunlife.com

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FROM THE DESK OF PRESIDENT

MR. RAJESH DALMIA

Dear Members,
I found it hard to believe that we have more than 80 members who are left only with one paper. More than ninety percent of these are left with one SA paper. I am sure that every-one of these know the difference between a qualified actuary and a student member even if he/she is an associate member. The difference is parallel reflected in the commercial world in terms of salary/promotions etc. Yet, when the Institute conducted workshop in SA2 and SA3 this month, we had registrations running in single digits. I would urge the students to take the qualification seriously and put in all effort to qualify. I at the Institute would do anything that can help you qualify. Please write to me

Some of you who were present at the seminar would have heard me outlining the things that are on the cards. I would take this opportunity to highlight some of the key aspects of the strategy. It is a known fact that India lacks qualified actuaries. Yes, today we produce nearly 30 qualified actuaries in a year and yet that is not enough. After 15 years of opening of Insurance sector our membership has just gone up from 220+ to 280+. I do hear that there are no opportunities or no jobs for actuaries. I disagree to that. Not long ago, I used to hear the same when we used to produce 4/5 actuaries in a year. There is shortage and it is a matter of concern. US have 22,000 actuaries in a population of 320 million and yet I understand that US has shortage of actuaries and more than thousand vacancies exists. Now that actuarial skill set is in demand beyond traditional fields, this shortage is going to exist for long.

In the profession, we need to address this and there cannot be an easy solution to

this. There has to be a multi-prong approach to this issue. We need to facilitate our members who are stuck with the exams. The Institute would hold coaching classes for students so that they can clear the papers faster by learning from experienced actuaries. I would request you to take advantage of these initiatives and qualify as a fellow at the earliest. The coaching classes for SA2 and SA3 are already announced. The students who fail should get counselling opportunities so that they can learn from their mistakes. We have made counselling available from CA to SA levels for all papers so that students can clear the papers faster. I would request you to take advantage of these initiatives. Please note that counselling can also be taken on phone in case you are unable to travel.

At SA level, student faces a lot of difficulty due to lack of study materials. Institute would focus on the same so that we can create our own study material which would make it easier for future students to appear for SA papers. However, at this level of examination, a student is expected to go beyond the study material even though we may bring out with a comprehensive study material.

Of course, we need to attract the right talent with potential to qualify as an actuary. Therefore, there is a need that it should be marketed to the right students so that we attract right talent. Besides, the entrance exam should be such that it filters and allows right candidates who are likely to become an actuary. We currently have large number of students (though not qualified actuaries where short fall exists) and not all of them can be employed in the traditional actuarial field. Therefore, many of them end-up in broader fields and it is required as actuaries need to be involved in

the broader areas, going beyond the traditional ones. It is important that we recognize broader areas where an actuarial student is likely to work and future actuaries are likely to be employed.

We need to focus on professionalism. Many of the professional standards were drafted more than a decade ago and it is important that they get reviewed more often. Other professional bodies across the world do undertake such reviews periodically. It is a high time that we not only undertake such a review but also introduce standards for various other issues facing appointed actuaries and other practicing actuaries. You would see more action in these areas in the time to come. The draft on CPD scheme is out and we welcome your comments on the same. Very soon we would announce an interim version of CoP scheme which would undergo further changes after a detailed review.

I argued last month that this is the year of change. True to that spirit, it is the first time we saw the regulator, IRDAI, convening a joint meeting of CEOs and IAC to take their views before releasing the draft regulations for public comment. We, at the Institute, welcome this initiative and congratulate the chairman, Mr. Vijayan, for such a nice initiative. This is imperative that the regulator takes the view of the industry and other stakeholders before drafting such regulations.

I am lucky to be here in this era of change across the world. This is an interesting phase of change where the impact of technological revolution is greater than the industrial revolution. This would also impact the actuarial profession and it will undergo significant changes in the future. Let's hope that we adapt to these changes.



It gives me immense pleasure to connect with you post 17th GCA. This was the **17th Successive Global Conference** successfully conducted in India by the Institute of Actuaries of India. It was a massive event with representation from all across the globe. More than 700 people attended the conference held in Mumbai. **The Conference was inaugurated by Mr. T S Vijayan, Chairman, IRDA.** There is always scope for improvement; however, I must say this was a grand success event given the challenge of managing such a large number of attendees. There was wide varieties of papers presented by Indian and overseas speakers. The Event was truly a global event. **The Current Issue of Actuary India has a pretty good coverage of the various Plenary and Concurrent Sessions.** It is intention of the report

writers is to provide readers a feel of the event, even for those who could not attend the events. I would like to thank all the reporters for putting their efforts to take notes during the seminar and put together the minutes of the proceedings.

The Union Budget for the FY2016 has really paved a way for attracting FDI in the market hopefully leading to higher investments resulting into significant economic growth. The passage and approval of the Insurance Amendment Bill is likely to take the Life insurance Industry in India to a new horizon. The Budget made an announcement to raise the overall limit on health insurance to Rs. 25,000. The additional deduction limit for insuring parents is also revised to Rs. 25,000 and to Rs. 30,000 if your parents are senior citizens. This is likely to immensely benefit the industry and

buyers to take health coverage in a tax efficient manner.

Finally, I on behalf of the Indian Actuarial Profession and Actuary India team would like to congratulate Ms. Pournima Gupte on her appointment as Member Actuary, IRDA. This position was vacant for a long time and I am very confident, given her significant insurance experience in India and overseas, this appointment will immensely help industry, profession and the eventually policyholders. I wish her all the best and great success in her new role.

The financial year end is coming closer and it's going to be a busy season for actuarial community. Therefore, without taking too much of your time, I would like to sign off to spare you more time to work on new products settings for valuation and reporting.

Letters to the Editor

We invite readers to respond briefly to our articles and to suggest new features with letters to the editor. Kindly mail your responses on library@actuariesindia.org with your name & contact details. Appropriate responses will be published in Actuary India magazine with the approval of competent authority.

INTRODUCTORY ADDRESS made by **MR. RAJESH DALMIA**
President of Institute of Actuaries of India (IAI), at
17th Global Conference of Actuaries on 2nd February, 2015

Welcome everyone, here ! I welcome the **Chief Guest of Honour – Mr. Vijayan**. I know him and have interacted with him when he was the LIC Chairman. I welcome distinguished guests, speakers, members of IRDA, actuaries and all our members & non-members. We have been hosting this function successfully for the last 17 years and this is our 17th GCA. Many thanks to all of you for taking time out and travelling long distances to come and attend this conference here, which tells us that this is a significant thing that we are doing and we should continue to do it. I am honored, we all are really honored by having so many guest speakers who have come to share their experiences, their expertise and I would request all of you, whichever topic of interest you have, to really contribute to these sessions by asking questions, by contributing your points of view to the discussion. Unless it is interactive, the learning doesn't crystalize. So it should not be just one way. Whenever you are attending the session, I would request you to participate in that.

Dilip Da did cover this topic, however, I wanted to just dwell a little bit more on it. Being a statistician before I becoming an actuary, I was talking to quite a few of my statistician friends about "expect the unexpected" and they were quite intrigued about it. All of you know that expectation by definition would include even the extreme events in its calculation. So they were quite intrigued as to what it means! Even the linguist would find it very difficult because the moment you expect, then it doesn't remain unexpected anymore. So what does it mean – expect the unexpected! As you all know by now that we actuaries are experts in bringing concepts from around the world and coining a magical word to create mystique out of it. So in short, this "expect the unexpected" is nothing but the "black swan" which you must have read. 2008 events have very famously coined this word. The question is, why is it so

important? Black swan event! And what is it that we are trying to achieve here in this conference around that. If we look at the history of mankind, the pace of growth, learning/innovation that we are having today was unmatched over thousands of years of history. We are fortunate to be in this era, which is witnessing this pace of growth. Internet & inter connected devices have really impacted the world around us significantly and it is going to bring out further changes. What does it mean? It means it's a great growth, great learning, great innovations and all that is happening, but along with it there are hidden risks, additional risks which are out there, which one needs to see and



prepare for it. The 2008 event, the way it spread across the world was unbelievable. Its ripples were felt across the world and the way central bankers and politicians from across the world came together to fight against it, to take the economies out of it was again unparalleled. We actuaries need to prepare ourselves for risks which are going to come in this era. We are known to understand the risks, quantify them & we are known to manage the risks. Insurance companies too take the risks from other sectors & manage it! That is where we need to focus and we need to prepare ourselves for these unknown risks. Some of these unknown risks for example would be in the health sciences, we have been fighting a war with bacteria for years and yet today you have bacteria which are multi drug resistant and very complicated. So this war is going one step ahead against us. Another example would be Global

warming and we yet don't know what the consequences would be. We have seen just glimpses of it till now. Cyber threats, cyber wars again are just glimpses of it, because once you get into inter connected devices which talk to each other than a computer bug can paralyze the entire system across these devices. Probably some of these are still expected because we know about it, that's why I am talking about it. Some of this will be unexpected, that's where the challenge lies, I won't be able to talk about it right now because even I don't know. But the tools, techniques that we learn, the analytical thinking that we apply would help us whenever it arrives to identify, manage and prepare ourselves for it.

And I hope even if one of you can expect the unexpected after this conference, the purpose of this conference will be achieved. It will be a small contribution towards that direction.

Friends, I would like to talk about the challenges that Indian actuarial profession is facing & how we at the Institute and Council have planned to go about dealing with it. I am fortunate enough that I have got Council members, many of them are supporting me and we are all prepared to act and tackle these challenges. A significant challenge is strengthening the professionalism. When I say professionalism, it's something probably all of you understand what it means or you probably know in your heart what it means. However as a profession its importance and impact comes from what our customers, and others who see us, say about us. Yesterday I was having a discussion with **Mr. Vijayan** – Chairman of IRDA and one of the comments he said was, "Two actuaries don't agree on anything!." What does it mean? Is it good? Is it bad? It's coming from a regulator, it's coming from our customers. I still recall when around 2 years back, I was having a discussion with the Secretary – Ministry of Finance. And he was telling me that, you know I get really surprised, two actuaries giving me a number and they differ by more

than 100 crores. Why does it happen, why can't we agree on it? I think it's a challenge; it just doesn't work like that. I had been appointed as actuary of Life Insurance Company. I'll give you a simple example. There are two life insurance companies selling an identical product, having almost identical experience. Liability of the two policies sold by these two companies will not be equal. Should not that be equal! Again some of this is impacted probably by the regulations that we have in this country. So if I take this example further, say first company invests heavily in equity against that liability, another company doesn't invest in equity! The state of regulation today may very well give a lower liability and lower capital number for the first company. Though all of you and myself would agree that the risk of the first company will be probably higher than the second company and probably capital requirement overall should be higher for the first company. The profession needs to work with the regulator, with other professional bodies like ICAI to address some of these issues and I would request the Chairman that probably we should move towards market consistent, risk based solvency framework so that some of these things can be ironed out. Good thing is that an ordinance has been passed, so probably that allows the regulator to have far more manoeuvre than it was in the past. Besides regulator, the profession needs to put in place stronger professionalism principles so that some of these things can be addressed. In this year we will see new CPD scheme, new COP scheme is going to be launched. As I speak, actuarial professional standard on CPDs is probably on the website now for public comments which got passed by the Council yesterday. We would have to introduce mechanisms which can probably improve the quality or if the quality is already good then at least give second assurance, an additional assurance to all the parties who are relying on the work of actuaries specifically in a certification role. When I say certification role then work done by appointed actuaries or work done by consulting actuaries under AS15 is covered in that. So the profession will work towards strengthening and introducing new mechanisms which probably audits the work of actuaries. Second focus area would be member services. We have large number of students and the statistics given by **Dilip Da** a few minutes back clearly show the tilt, that we are hardly

around 280 fellows & against which we have 9000 or 10000 students. Certainly the fellow members are far limited to serve the interest of this large body. This means we need to improve the pass rate of the students to increase the pool of fellow members. Now how do we do that? So the profession probably would work towards introducing more coaching classes especially in the subjects where the pass rates are low, so that students can clear them. However, if the person doesn't have an inherent ability to become an actuary then it is unlikely that this path will serve. So the two prone actions need to be taken around that. And as I was talking to one of our UK colleagues day before yesterday, the statistics that he revealed to me were amazing. When they looked and analyzed their data, they found roughly 40% of the students who joined them became qualified actuaries within a span of 10 years. That is the global standard which they found. However, when they analysed it geographically, the pass rate from India was 6%. 6% of the population who joins them become qualified actuaries over a period of 10 years. So probably there is a need to strengthen the entry criteria which we have, so that we attract the right students, the right kind of talent that we allow to come in to the profession who starts writing exams. To introduce more mechanism and facilitation so that those who enter the profession can pass papers faster. The UK body has gone for a different solution. It's the same problem but the solution is different. They introduced additional qualification, analyst qualification for these people who are not able to qualify and who can probably move in that direction. We are yet to figure out, whether the additional qualification is going to be helpful for us or not and if we should move in that direction or not. However, we are very clear that entrance examination for fellowship needs to be strengthened, coaching classes need to be introduced. We need to use more IT services, more technology to improve our services towards members. So that's something which we will be doing over the course of next year and you will be able to see that. Some of that will be around examination and some of it towards CPD kind of things that we plan to introduce. Webinar or web based learning which we will be able to bring to your door-step!

We are a global qualification, we are proud that our students can work in any

geographical part of the world. That also puts a lot of burden and responsibility on us in terms of is it still remaining relevant to the world. And as I said earlier, the risk is changing, the profile is changing, so probably the skill set required by future actuaries will be different than the skill set required by today's actuary. Globally, International Actuarial Association, Institute and Faculty of Actuaries, Society of Actuaries, Casualty Actuarial Society, everyone has started review of their syllabus to identify what additional elements can be added, more importantly also what can be deleted. So we will also be joining them to see what needs to be done here in India.

And last but not the least is transparency. I personally believe that an organization which is transparent has no way other than to improve, simply because there is a lot a responsibility which comes along with transparency. You cannot be inefficient if you are transparent. You will be ashamed of yourself. The Indian Government gave a great tool to the citizens, to the individuals – Right to Information. So even if an organization is not transparent, a person has right to information to ask for any information that he/she desires. Ministry of Finance, if you go to their website, have put that tool on the internet saying that you don't even have to take any trouble. Just go to their website and ask for any information that you want. So in case we falter on our transparency, in case we falter around anything, I would request you all to use right to information so that we remain on our toes. This is true for any government organization including us.

So this is the direction where we need to move and I do hope that next year I'll be here to say that some of these things we have achieved and will be probably looking ahead and creating more work for us, where do we go from there.

Do write to us. You have our email ids; everything is there on our website. Do write to us so that we can get to know what it is that you want and how best we can serve you. Thanks for your patient hearing! I am looking forward to interacting with you all and also attending some of the sessions. Very interesting sessions are planned and I am personally interested in quite a few of them and hope to see you all there. Thanks!

INAUGURAL & KEY-NOTE ADDRESS made by MR. T.S. VIJAYAN
Chairman of Insurance Regulatory and Development Authority of India (IRDAI), at
17th Global Conference of Actuaries on 2nd February, 2015

Being an annual event organized by IAI with participants from various countries, the conference provides an excellent platform to discuss topical issues where actuaries have to play an active & decisive role and also serves purpose of improving image of the profession in the country. Given the critical role played by the actuaries in management of insurance business, it is very necessary to have such platform to garner wider perspective which facilitates adoption of sensible approaches to address the emerging challenges.

The theme of the conference is slightly difficult to grasp. The theme indicates that change is inevitable; it's quite relevant for current situation of Indian insurance business in the background of insurance laws amendment ordinance and other rejuvenating activities taken up by the policy makers to improve the growth of Indian industry. We are witnessing in India, downward pressure on interest rates and equity markets going up while oil prices in international market are fast declining. All these things add up to some sort of excitement in the business environment. We are for interesting times especially with a lot of changes carried in the Insurance Act apart from increase of foreign investment from 26% to 49% being focused by many analysts. Large number of reinsurance companies may be setting up their operations in India. Health Insurance would get enhanced focus. In distribution space, agents are to be appointed by insurers rather than licensed by IRDAI and Corporate Agents would become intermediaries rather than tied agents. These are some of the changes that are going to take place.

Insurance market in India, the financial year 2013-14, collected total premium

of around Rs. 3,90,000 crore which is around USD 65 billion. With life insurers collecting around 80% and general insurers collecting the rest. Currently, Indian Insurance Industry manage the funds of Rs. 22,00,000 crore which is around USD 360 billion. India is expected to have highest number of income earning households and internet penetration in the world by year 2020. Current lower level of insurance penetration of around 4%, whereas the global average is above 6%, coupled with fair demographic profile, the grit of policy makers to improve the business environment in the country, the economy which is 3rd largest (PPP based) in the world and with emerging



middle class provide an environment for immense growth opportunities for insurance industry. Further, with the ordinance paving way for enhanced avenues for reinsurance and catering the capital needs, insurance industry is having a favourable situation.

When we talk about insurance industry in India, products get a lot of importance. 'Products' is an area which is keenly monitored by Indian regulator owing to the information asymmetries which is typical to most of the financial products (more so in case of retail lines), relatively lower insurance literacy levels and also not so matured market conditions. Though the regulations in this area seem to be intense, the core objectives

are 'transparency' and 'value for the customers'. On the name of innovation are otherwise, often it was observed that the insurance products are made exceedingly complex to comprehend by a typical policy holder and requires policy holder to make choices on many options. Such product designs thereby lend themselves being treated as not so transparent and vulnerable to misunderstanding and mis-selling. As actuaries play central role in design and pricing of products, the issues of transparency and value for customers should be given due consideration by them in product development process. One of the things that could attract attention of actuaries from insurance business is the

presence in the media. Today, savings through life insurance is projected at the media as a lowest priority item and quite often is not properly understood. It is time that industry comes together and make concerted efforts to improve the understanding on savings through life insurance and how it differs from other savings instruments.

Embracing the emerging technology and fully utilizing its potential is another area which can significantly enhance the value offered by the insurance products. With India expected to surpass even USA in number of internet users clearly indicates necessity to ensure insurance business processes are amendable to emerging milieu. Technology could be leveraged to offer insurance coverage in a cost effective manner to non internet users also by adopting suitable processes based on Aadhar Card, Customer Service Centers (CSCs). Insurance Repositories is another initiative by the regulator for enhancing affordability of the insurance products. Affordability, be taken as affordable savings too. Affordable products to the customers should be the natural consequence of increased use of technology. Focus on affordability

is necessary. In this regard, we may consider what has been reported in the press during recent Delhi elections that 60% of the electorate are earning less than 16,000 rupees per month. Unless there is a suitable product positioned to attract them, we are leaving out 60% of an urban market like Delhi. Insurers generally prefer to adopt technology. The preference should naturally result in saving significant amounts. Though, Indian insurance market has witnessed decent reduction in the premium rates under protection products especially term life policies and motor policies by offering them through online mode, the situation is not the same for most other insurance products. Apart from sales process, convenience and ease of access facilitated by the digital technologies have significant influence in persistency and renewal rates. It is heartening to observe that persistency rates of insurance policies sold through online medium are relatively higher when compared to those sold through offline mode. The situation clearly indicates the increased utility to customers with enhanced transparency and cost effectiveness offered by online mode. Thus, making available the option of carrying insurance related transactions (sale of policies, premium collections, submission of claims, etc.) using technology should be taken up as a cost saving opportunity for consumers rather than for income augmentation of insurers. Actuaries should ensure optimum utilization of technology in design of the product, design of the processes including actuarial valuation. Pricing discipline continues to be an area of focus more so in non-life segment of the business. Recently, the burning cost data is published by Insurance Information Bureau of India. Such benchmarking is expected to improve the situation in this area.

In the case of insurance, distribution plays a very important role. Enhancing the avenues of distribution with emphasis on cost efficiency by leveraging technology and existing infrastructure has to be focused. By effectively utilizing technology, we can address the insurance needs of low income groups as in case of earlier referred segment of Delhi population. Collection of small premium at higher frequency (daily, weekly, monthly modes) should be possible when we utilize and

link up the options available by the CSCs, Mobile premium collections, etc.

Quite often it is observed that insurance capital is spent on establishing distribution relationships with large corporate entities to leverage their presence or strengths arising out of their existing customer base. Such relationships shall be approached by insurers with a view to enhance value to the end customers rather than to benefit solely for themselves or such other entities. Not just life insurance, even in the motor insurance business we observe the trend. Where does the effect of premium reduction go? Whether it goes to the end customers? We should address the issue. Another area of concern is the emergence of unregulated entities in the distribution space with relatively opaque remuneration / compensation arrangements and quite often such entities are active and enjoy monopoly in certain geographies particularly among low income group segments of the society with undesirable consequences for the insurance industry. Actuaries can play an active role in early identification and disincentivizing such leakages and sensitizing the insurers and regulators about the increased risk emerging out of such unregulated entities.

Cost of distribution is an important factor in running insurance business and giving value to the customers. During 2013-14, in case of Indian private life insurers, the total commission paid to the distributors is around 5% as against operating expenses of around 20%. We observed that marketing expenses are significant proportion of the operating expenses. If we consider the operating expenses in respect of first year premium collection and related marketing activities, the ratio could be much higher. Though the operating expenses in formative years of a life insurance company could be significant, but owing to the fact that most of today's largest private insurers have commenced their business more than a decade ago, the level of operating expenses being observed highlights the higher fixed cost component associated to the procurement of business. The desirable situation in respect of procurement of business is to have higher variable component of expenses. Variable component should become higher, that's the best way rather than much higher fixed expenses which

supports the business procurement activity. The situation of non-life insurers in the industry is no different in respect of managing their operations. In meeting the statutory expense limit, many life and non-life companies are facing challenges. Effect of lack of necessary control on expenses is reflecting on the premium collected or benefits offered to the customers.

Insurance is by nature a complex business to manage and it requires involvement of professionals from diverse areas like finance professionals, doctors, engineers, legal experts and actuaries' role is central in running insurance on sound financial basis. Actuaries are expected to ensure coordination with all business functions and well versed with the activities happening across various functions of an insurance industry for them to appropriately design / price a product and for maintaining adequate level of solvency to honour policyholder liabilities. Indian regulatory regime requires critical role to be played by the actuaries through the system of 'Appointed Actuary' and wide ranging powers are given to facilitate fulfilment of their duties and obligations. Owing to the deep understanding of the business and skill to analyse the data, actuaries are better placed to communicate the issues to be focused in an appropriate and convincing manner. The communication includes both internal to the business organization and also public communication which would facilitate in shaping appropriate public policy.

Emergence of new risks like technology, operational, strategy as also regulatory is making the actuaries' job more challenging. We heard about a new pool coming in, the nuclear pool. Surprises, if not crisis, in some of the advanced financial markets have triggered global insurance regulatory reform with enterprise risk management and market consistent balance sheet approaches becoming central theme as we see in Solvency-II or Insurance Capital Standard of IAIS and imminent global accounting standards IFRS-4. The message from these emerging standards is that the role of actuaries in the management of insurance business is going to enhance further. The conference facilitated knowledge sharing and healthy debate on topical issues.

The Actuary India – Editorial Policy

Version 2.00/23rd Jan 2011

- A: “The Actuary India” published monthly as a magazine since October, 2002, aims to be a forum for members of the Institute of Actuaries of India (the Institute) for;
- Disseminating information,
 - Communicating developments affecting the Institute members in particular and the actuarial profession in general,
 - Articulating issues of contemporary concern to the members of the profession.
 - Cementing and developing relationships across membership by promoting discussion and dialogue on professional issues.
 - Discussing and debating issues particularly of public interest, which could be served by the actuarial profession,
 - Student members of the profession to share their views on matters of professional interest by way of articles and write-ups.
- B: The Institute recognizes the fact that;
- there is a growing emphasis on the globalization of the actuarial profession;
 - there is an imminent need to position the profession in a business context which transcends the traditional and specific actuarial applications.
 - The Institute members increasingly will work across the globe and in global context.
- C: Given this background the Institute strongly encourages contributions from the following groups of professionals:
- Members of other international actuarial associations across the globe
 - Regulators and government officials
 - Professionals from allied professions such as banking and other financial services
 - Academia
 - Professionals from other disciplines whose views are of interest to the actuarial profession
 - Business leaders in financial services.
- D: The magazine also seeks to keep members updated on the activities of the Institute including events on the various practice areas and the various professional development programs on the anvil. E: The Institute while encouraging stakeholders as in section C to contribute to the Magazine, it makes it clear that responsibility for authenticity of the content or opinions expressed in any material published in the Magazine is solely of its author and the Institute, any of its editors, the staff working on it or “the Actuary India” is in no way holds responsibility there for. In respect of the advertisements, the advertisers are solely responsible for contents of such advertisements and implications of the same. F: Finally and most importantly the Institute strongly believes that the magazine must play its part in motivating students to grow fast as actuaries of tomorrow to be capable of serving the financial services within ever demanding customer expectations. Version history: Ver. 1.00/31st Jan. 2004 Ver. 2.00/23rd Jan. 2011

VOLUNTEERING OPPORTUNITIES

IAI invites its fellow members and qualified actuaries of IFoA, UK and IAA, Australia to join in its Volunteering Opportunities Initiative. Through this platform, members will be able to share ideas, gain a broader perspective and experience of work outside their own specialist area, through networking with peers, gain CPD hours and be able to give something back to the profession. We invite members who respect the IAI values and what it stands for and wish to take the profession to newer heights of success through their willingness to share their knowledge and/or skills by working in partnership with peers/colleagues.

If you are interested in applying, please visit our website for more details : www.actuariesindia.org

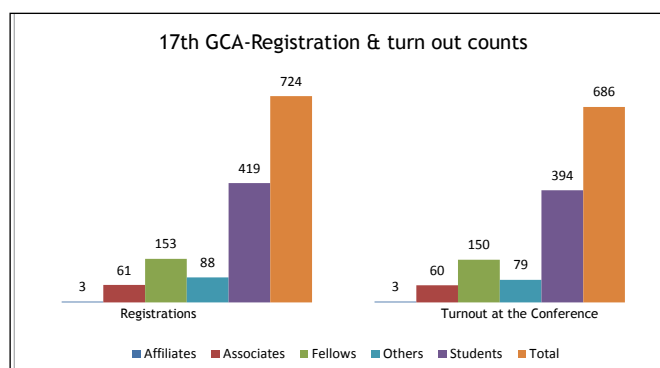
2015 AGFA & 17TH GCA PARTICIPANT'S SURVEY-SUMMARY REPORT

Did Actuaries ever consider mosquitoes in their risk matrix?

Probably not or at least not seriously. It appears that, a time has come to consider the “mosquito factor” as one of the significant items in the risk matrix as the survey has received a number of references on mosquitoes as a risk factor at least for all future GCAs!

Apart from few criticisms on different aspects of the event and also suggestions to introspect on the academic value of sessions and its apparent departure from the theme of the event, it appears that participants assigned “value for money and time” to 17th GCA and 2015 AGFA at large. It's no wonder that organising such an event earned appreciation from a very large section of the participants every year, keeping in view of organisational lapses and flaws experienced in similar conferences in spite of their much longer years of accomplishments.

GCA registrations in recent years appear to be more or less stationary and counted 724 this time. A 95% of registered members turned out as delegates from more than 120 companies/ Institutions. There were 60 speakers from India and abroad together enriched the two day conference sessions.

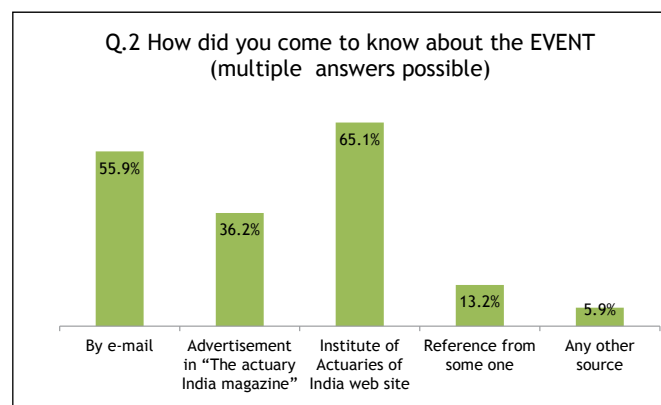


The survey is limited to 16 questions which were very relevant for the organisers to understand the pulse of the delegates, however, there were verbal feedbacks from participants expressing views that the survey is too long to handle and many questions appear to be irrelevant and out of context for them. This feedback also appears very sensible from the point of view of participants as each delegate might have presented themselves to limited number of sessions and have exposed to only limited scenarios of the event. A proposal to overcome these issues might be to reach out to delegates on the spot while sessions are in progress or immediately after a session in order to capture the impression of academic part of the conference; the overall impressions on the conference may also be collected from the venue by appropriate methods. Let's look at such feasible alternatives next time!

The respondents of the survey appear to be a good cross sectional representation of conference delegates, hence the impressions of survey respondents reflecting the pulse of the event. Now, let's

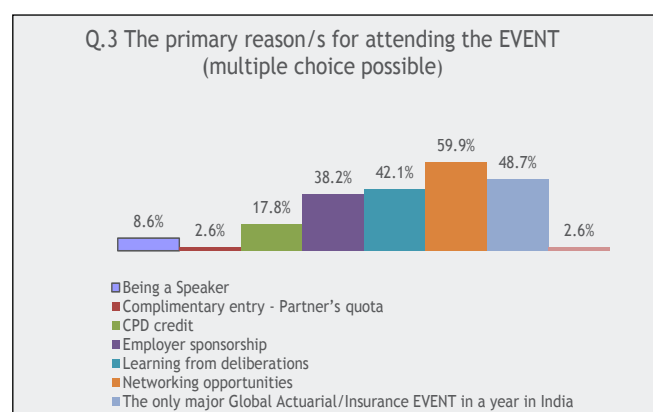
look at the feedback from 154 survey participants questionwise, barring few questions which rated speakers of both plenary and concurrent sessions.

Q.2 152 respondents



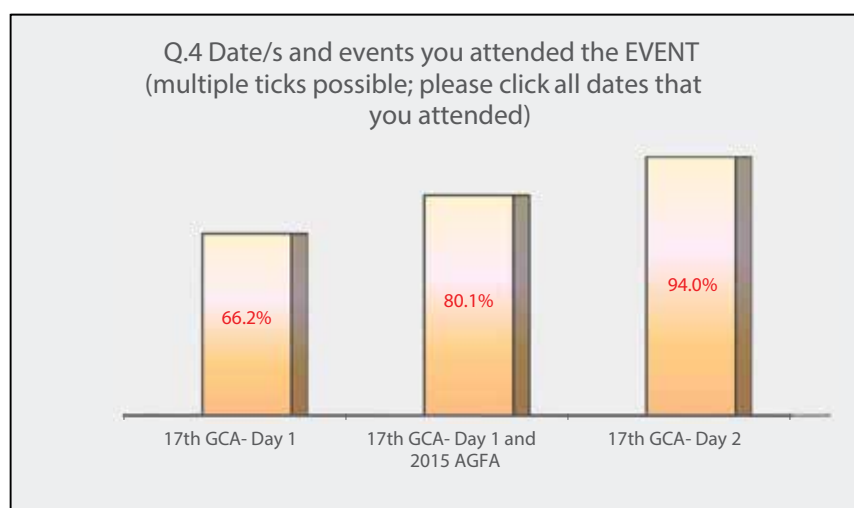
A number of member service initiatives recently rolled out by the Institute made active members to visit the website frequently is reflected in the survey with 65.1% of them have the GCA site as the primary source of GCA related communications and updates; this followed by regular e-mails from the marketing team alerting members about various aspects of the conference including timelines. However, few members expressed that such frequent reminders turned out to be counter-productive for many as they have many instances ignoring such mails without reading. The marketing team may need to find alternative methods to exclude those who have already done their GCA related jobs and also limiting the mails with the same objective.

Q.3 152 respondents



There are multiple reasons for participants attending the GCA event. Many employers favour their actuarial team by sponsoring part/ full cost of their participation. The CPD credit and networking opportunities appear to be main reasons for fellow members to take part. However, there are quite a good number of delegates keen to learn from deliberations as well. The reasons, though multiple in nature appear to serve the purpose of

delegates and most of the objectives of the organisers.



Q.4 151 respondents

The result cannot be generalised for all GCA delegates as it was observed that the AGFA participants were less than those who have been present during the first day sessions.

Q.5 Rating (1 to 6, 6 being the highest rating) on Website and admin support

153 Respondents

Website and admin support items	Average rating
The Website?	4.68
Details of Speakers displayed on the website	4.72
How smooth was the online payment process for registration?	4.96
If you booked hotel room through the site, how smooth was the process?	4.45

The hotel booking appears to be less hassle-free among all services. Though there is scope for improvement of all above services, 87% of survey participants rated all functions 4 and above which is a good indication. Few comments removed after finding irrelevant; there are few comments found not related to the question, however, retained.

Comments

- It was a vibrant event
- Nothing global about the conference.
- Please keep speakers on Role of actuaries in Non-Traditional areas like Investments too.
- Unable to use credit card to pay for event for international participant.
- As this was my first time attending and registering for the conference from outside of India, it was a little lengthy. If I attend next year, I now know what to expect.

- Website could be much better
- On the website it was mentioned that the Student event will have sessions on "What an actuary is?" And how to answer people when the ask "What work do you do?" I could find that part in the Student Event.
- The site wasn't very easy to navigate. Key features like the schedule should be easily accessible.
- The content of the presentations should be enhanced. Some presentations did not really make an impression and some came across as not very well prepared.

Q.6 Cover notes on the website from the perspective of being of use to you (Rating from 1 to 6, 6 being the highest)- 153 respondents

Cover note	Average rating
Economic & Demographic trends	4.38
Enterprise & Risk Management	4.24
General Insurance	4.18
Health Insurance	4.02
Micro Insurance	3.84
Pensions, Employee Benefits & Social Security	4.10

75% of survey respondents rated all cover notes together with ratings 4 and above. Purpose of cover notes is to share some important updates on economy and insurance market in India in a short format and all ratings makes sense.

Q.7 Registration process time at the counter- 150 respondents

TIME TAKEN FOR REGISTRATION							
	Less than about a minute	About 1 to less than 2 minutes	About 2 to less than 5 minutes	More than about 5 minutes	Not applicable(Not registered on day 1)	Not applicable (Not registered on day 2)	Total responded
GCA-Day 1 (2nd Feb'15)	17.33%	20.67%	27.33%	34.00%	0.67%	0.00%	150
GCA-Day 2 (3rd Feb'15)	28.95%	13.16%	7.89%	1.75%	6.14%	42.11%	114

An incident of breakdown of the system on day1 at the peak time of registration has made quite a good number of delegates waiting for more than 5 minutes at the counter. The issue needs to be seriously looked into by the IT team not to repeat in future

Q.8 Services and venue rating (Rating from 1 to 6, 6 being the highest) 152 respondents

Items	Average rating
Efficiency of help desk	4.97
Overall ambience at the venue - Renaissance Mumbai Convention Centre Hotel	4.79
Convenience of access to venue	4.43
Networking facilities	4.60
Space availability for movement- Halls and Corridors	4.27
Ease of locating & movement from one Session Hall to another	4.79

Ratings on items such as convenience of access to venue and space availability reflecting the reality as the venue is quite far away, particularly for those who are reaching to the airport from other locations. The space availability was also limited due to arranging food services within the limited space of corridors. Both are important takeaways for organisers.

Comments

- Far off from airport and local railway stations
- Acoustics at seminar halls could be better
- It was too cold in the session hall making it too difficult to sit at a stretch for more than 30-45 mins.
- During the breaks, the space looks too crowded. Sometimes difficult to move properly, especially at the first break on Day 1
- I liked the room set-up and the comfortable chairs ... more comfortable than you would find at most conferences in the US.

- I would like to see GCA happening at new and better places every year. Same centre is becoming boring for everyone and some new centre will help in attracting interests of the attending members.
- There were a lot of mosquitoes at the venue inside the conference rooms. You could see speakers sitting on the stage shewing away mosquitoes / trying to kill mosquitoes
- Sitting in one session hall you could hear the sessions on in the other hall. Would be better if that didn't happen.
- I would suggest to have a hard look at changing the venue. Poor quality of rooms, mosquito menace, poor quality of food served during the conference - there is no reason why we have to stick to this venue next time.

- Sometimes the rooms were not marked clearly, had to go to multiple sessions before finding the right one.
- The halls were so cramped, smaller in size than last year. Water bottles were placed only on one side and hence people on the other side of the hall had to walk out for water. Not enough time to network with people as sessions were packed

- On Day 1, the movement of delegates from the left hand side door to the right side sitting arrangement wasn't very convenient as there wasn't any space for members to walk across to the other side except from the front. It disturbed the speakers. Also, lots of mosquitoes
- Main hall was too cramped for the early sessions. Actually dangerous from a health and safety (fire) perspective.
- No favourable environment to network.

Q.9 Ratings on 2015 AGFA items (Rating from 1 to 6, 6 being the highest) 140 respondents

Items	Average Rating
The Program Structure	4.58
Ambience and Seating	4.59
Dance events	4.54
Compering	4.63
Maths Stars Awards	4.58
Magic Event	4.73
Family Videos	4.52
Associate, Fellowship and other Excellence Awards	4.91
Light and Sound Effects	4.43

Those who were present at 2015 AGFA appear to have enjoyed most of the events.

Comments

The seating was too close so lots of disruption when people enter/leave. Almost everyone had left their seats for the Maths stars awards which were disappointing...these awards should be given before the Fellowship Awards so everyone is still seated. Magic show and dancing were enjoyable. I feel the program topics are lacking from a content perspective and the individual presentations in each plenary session had no real link to each other nor really spoke to the "expecting the unexpected" theme. The industry appears to see GCA purely as a networking event at this stage with little to be gained from the presentations themselves and this is a missed opportunity in my view.

The Indian dance performances can be avoided. Especially the Bollywood dances as such a formal and professional event. Also, while playing the video of the family of students obtaining fellowship, it's useful to show the picture of the person who obtained the fellowship.. We still don't recognise the students only their family!

I believe that last one of the Magic event was not suitable for the professional conference.

I have attended concurrent sessions, i was seating in last middle row i m not able to see any speaker as well screen as camera man is hiding the screen and stage height is very low ...sound is pathetic, as half of times mic is not working in those session.

I really liked each aspect of the program separately, in particular, the presentation of the Associate and Fellowship awards. However, put all together, I thought the entire program was a little lengthy. At the end, there were few people still sitting in the seats. I thought the magician was really good, as well as the dancers.

Not up to the mark. The programme of GCA needs a complete overhaul.

Did not understand anything the magician was trying to convey. Math Stars awards was a really good initiative.

Opening the bar before the awards for maths stars were given should have been avoided. There were hardly few left to applaud the efforts of the kids who had been invited specially for this event. This showed scant respect to the event.

Lights on the stage / speakers could have been brighter. The quality of projections of the presentations wasn't good. It was not sharp and was dull, not bright. The ones on the TV screens were good.

Q.10 Ratings on Plenary sessions (Rating from 1 to 6, 6 being the highest)- 143 respondents

Plenary sessions	Average rating
P1- Inaugural	4.32
P2- S2- Diversity and the importance of promoting actuaries on a global stage	4.38
P2- S2- Current issues on Life Insurance-Global	4.65
P2- S2- Current issues on General Insurance in India	4.21
P2- S2- Current issues on Retirement Benefits Practice in India	3.65
P3- S5- Welcome & Setting the Scenario	4.27
P3- S5- Regulatory challenges in Pension industry	4.20
P3- S5- US Defined Benefit (DB) environment	4.24
P3- S5- Sum up and Vote of Thanks	4.17
P4- S6- A brief update on actuarial issues	4.47
P4- S6- IPO in Insurance Industry	4.39
P4- S6- Actuaries Role in GI-Challenges and Opportunities	4.33
P4- S6- Maturation of Global Actuarial functions in India	4.22

in the same plenary are not necessarily linked to each other or to the theme of "Expecting the Unexpected". This makes it difficult for the audience to engage. When introducing speakers, short introductions are much effective than reading out very long bios. Topics should be more focussed around really relevant and pressing issues facing the industry e.g. transparent management of with profits business

General: Lack of Focus & Research Content

Comments

👤 I attended GI sessions and was highly disappointed by the content of the presentations made by highly renowned Actuaries in Indian industry. I believe, the content of the presentations should be audited beforehand and the material should be presented should be thought provoking for the industry.. not just the presentations made for name sake

👤 The seminar has lost its sheen. The presentations looked as if they are filled vacancies. Looks no screenings of topics or presentations were done at the acceptance stage.

👤 The sessions seemed to not have a theme and flow. The content of most of the talks was quite average and unfortunately it was not very interactive. When compared to last few years, the panel discussions were missing including roundtables. The format was not useful as some of subject specific topics were put in a plenary sessions which may not be interesting for the wider audience.

👤 The presenters were well experienced and knowledgeable, but the presentations were dull. Also, though the schedule called it a panel discussion, it was nothing like that. The theme of the event made no relevance.

👤 Speakers never had any sense of time. This could have been managed better.

👤 In general, I felt that the theme of GCA - "Changing Risks, Expecting the Unexpected" and the presentations were not aligned. The presentations should be based on the theme or at least the presenters should be asked to try and link their presentations to their theme - this was missing and was disappointing. Although we had experts giving us presentations - the quality of presentations did not live up to the mark. The presentation skills were such that it was easy for the audience to get distracted. The presentation style and slides were both not up to the mark for most of the presentations. There was difference in the Indian presenters and the international presenters - the style of presenting of almost all Indian presenters could have been better. e.g. make slides less wordy, don't read from a script, be better prepared, sound more passionate about the subject. It is a conference and not a college class. The introductions provided at start of the sessions were too long. The chairperson often spoke for like 5 minutes about the speakers - this was too much and made the tone of the presentation dull. Introductions should be short and the speaker should do most of the talking. A lot of Actuaries from abroad had been invited - but the quality of presentations did not live up to the mark to showcase the skills of Indian Actuaries. I feel presentations at CILA and the discussion that happen are more engaging. GCA should match the level of CILA. Also within a session; the talks were often not linked to each other. They were at times on completely unrelated topics. Also, the video prepared by IAI was tacky! The music piece used was a misfit; the font used was tacky this could have been done away with totally.

Q.12 Attendance on Concurrent Sessions

Concurrent Sessions	Response percentage	Response count
C1.1 Regulations, Actuarial and Business issues (Life)	54.1%	66
C1.2 Behavioural drivers of Mortality experience	45.9%	56
C1.3 Results from Gen Re's Survey on Critical Illness	40.2%	49
C1.3 Global emerging actuarial issues and the role of emerging markets in meeting actuarial needs	40.2%	49
C2.1 Regulation, Actuarial and Business issues (GI & HI)	30.3%	37
C2.2 Actuarial modernisation	31.1%	38
C2.3 Applying behaviour economics lessons to Health Insurance	32.8%	40
C2.3 Health Insurance: Leveraging of Global Best Practices	19.7%	24
C3.1 Regulation, Actuarial and other issues (Pensions)	22.1%	27
C3.2 Accounting standards on Employee Benefits (AS15)	18.0%	22
C3.2 Improving disclosures in financial statements- Strengthening Corporate governance	13.9%	17
C3.2 Serving the Public interest: Co-existence of Accounting and Actuarial Profession	15.6%	19
C1.4 Current state of Bancassurance	29.5%	36
C1.4 Regulation and impact of life industry	34.4%	42
C1.4 Insurance Education	30.3%	37
C1.4 Distribution in Life Insurance	37.7%	46
C1.5 Pandemics and other Catastrophes: managing the impact on your life and health portfolio	27.0%	33
C1.5 Participating Business in India: where do we go from here?	30.3%	37
C1.5 Changing product designs	33.6%	41
C2.4 Problem? What Problem? An heretical perspective on the ageing population burden	28.7%	35
C2.5 A structured approach to defining and identifying risk	29.5%	36
C2.5 Role of Actuaries in ERM	47.5%	58
C2.5 Issues in implementation of ERM in a Non-life insurance company	34.4%	42
C3.3 Takeaways from the study on salary scales of PSU Banks (1947-2013)	11.5%	14
C3.4 Global update on Retirement Benefits	14.8%	18
C3.4 Canadian Mortality studies	13.1%	16

Comments

A different room set up might have facilitated more interaction from the audience during the concurrent sessions.

Frank Ashe's presentation was very engaging. It was excellent. Behavioural drivers of Mortality experience by M.Karunanidhi was also very good.

I think we have to promote some more session like Mayur has given crisp and with new thinking otherwise i found most of session repeated.

Speakers in general were okayish. Speakers which catch the attention of the audience throughout their speech are needed.

Q.14 Ratings on 17th GCA and 2015 AGFA overall (Rating from 1 to 6, 6 being the highest)-131 respondents

Item	Average rating
2015 AGFA & 17 th GCA organising-overall	4.58

84% of survey participants rated the conference at 4 and above. If survey participants represent a random sample of all delegates, this proportion counts to 576 delegates. Rest of the 110 delegates, is also a significant lot which means, efforts need to be put to improve different aspects of the conference in the years to come.

Comments

Very well organised event. Only area for improvement is the content of the presentations.

The PD provided to all does not contain all papers presented. It should contain all papers

Overall, I thought it was a wonderful conference, rich in tradition, culture and learning. I have one suggestion -- perhaps have more sessions of interest to the students. It seems like they spent a lot of time networking. Thank you for your gracious hospitality. I know the effort to put on a large conference and you could see the effort put into the GCA was tremendous.

I have been repeating this from past 3 years that Veg and Non veg food needs to be served separately. Jain dishes should be increased in parity with vegetarian dishes. Food should be more of Indian style rather than just catering to foreign needs.

I liked that members were made aware that loitering in the corridors outside while the sessions were in progress was unprofessional and disrespectful. I think it worked. Maybe we need to pursue that further.

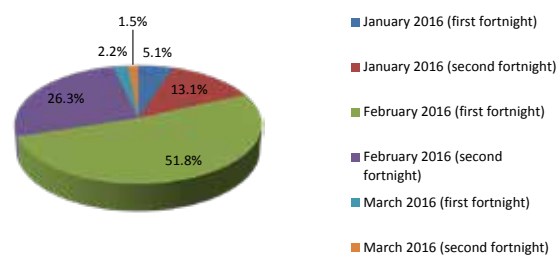
Mosquitoes created at times nuisance Lack of Self-discipline; The soft copy contains only PPT but not FULL PAPERS

A welcome change of focus. Much more actuarial in nature (two sessions for life etc.), getting back into the core purpose of the conference. Less commercial. Worthy of true CPD credits. Well done to the organisers. One small point in that the quality of sessions could be enhanced (fewer more quality sessions?), but this will come as the industry matures. WELL DONE AGAIN.

I would appreciate if the GCA was held on weekends instead of weekdays. There are two reasons. One is that people have to take a leave from their job to attend the event and the second reason is that the traffic in Mumbai is terrible, which makes travelling difficult.

Q.15 2016 AGFA & 18th GCA – 137 respondents

Q.15 The future: 2016 AGFA & 18th GCA What would you like the 2016 AGFA & 18th GCA to be held over?



Q.16 Comments/ Suggestions for 2016 AGFA & 18th GCA- 35 respondents

It should be on Thursday and Friday.

Much is covered only at the review level; look for more original research content

Better presentations and no magic shows please!

More option in food.

The IAI should seriously introspect on why we need the GCA. Many attendees stand outside the session rooms chatting the whole day. It disturbs those in the rooms. They stand outside because the program inside is boring and not adding value. Yet, they come for GCA for CPD/networking. It is wrong to ask Fellows to sign on the second day 4 pm. By signing on day 1 start and day 2 closes, is the IAI assuming that they attended all sessions? You don't trust your fellow members? If so, ask them to sign after every session. The basic flaw is in the IAI running GCA as a money generating marketing event. How many presentations relate to the theme of the event? And, speakers and chairpersons are largely chosen because they represent sponsors or they are personal friends of the key organisers, and many competent people are kept out. Please review the format of GCA. Please introduce a purpose that is linked to genuine relevant knowledge addition. Make it worthwhile for those attending it. Notwithstanding the above, the IAI has done an outstanding job of organisation of GCA.

Sufficient time should be provided to the speaker who has done a lot of preparations on critical issues and will add value to the session.

Please keep more of student events.

Pl include separate session on investments

Change the venue. Grand Hyatt was much better in 2013. Or change the city and organize the same in Delhi or some other city.

Games, Interactive sessions as well as Students sessions should be increased. Students should be given an opportunity to develop more and more contacts as well as the lectures should be such that it keeps students as well as other members interested.

I Defied all my expectations. Continue the good work.

Comments

I thought the student sessions were excellent!!

The next GCA should be held over 3 days as it was done previously. Further, more plenary sessions should be included.

Wonderful experience!

Should be more learning based session or cover technical actuarial aspects (rather than general actuarial knowledge).

Please hold it in some other city for a change

More student events could attract more students.. I being a student member could not understand most of the technical events.. More details regarding examinations.. Preparation could be of help to students.. Thanks

Excellent

City and place should change every year

The programme looked pretty disconnected. Requires better planning, better choice of topics and better quality of speakers. In 2016, hopefully these aspects would be looked at by advance planning.

Student event was suitable for all attendees and should be open to everyone

I expected a lot from the Student Event but that was not up to the mark. The CAA introduction was good but there was no coverage about the "What an actuary is?"

It is important that the presentations are organised in a manner that they build up to the theme of the GCA. Also, it is important to ensure that the presentations being used are of a decent standard and not too wordy. Students should be given an opportunity to be a speaker at the GCA. This might lead to reducing the dullness of the event. The schedule should not be mis-leading. A panel discussion should be a panel discussion and not a group of people speaking on different topics.

Value that one derives from such events is typically from the quality of presentations and networking opportunities. I have left out sightseeing which is not a consideration for local actuaries. While opportunities to connect with peers and other participants is left to the individuals, the quality of presentations leaves much to be desired with just one or two presentations that come up to reasonable standards each year. The presentations ideally will have to highlight a current issue followed by a decent thoughtful discussion or it should bring in a new perspective / development or an insight that would be relevant and interesting to actuaries. In my view, the quality of presentations were much better when the Institute used to insist of submission of research papers, of which only selected ones were allowed to present at the event. I urge the Institute to consider vetting the presentations so that they are relevant, comprehensive and set the scene for focussed discussions after the presentations. Presentations seem to have been lined up to fill up the time rather than intended to bring in new perspective or to find a reasonable approach / solutions to existing problems. Institute may even consider commissioning research work much in advance (say from second or the third quarter of a calendar year) which would then be presented at the following GCA.

Make it affordable

Avoid Chines New Year week - 8/9 February 2016! So I guess second half of January or second half of February.

More question rounds and better planning of events

Quality of food should be improved

It has to be better than 2015 event.

Encourage participation of younger members More discussion sessions - less speakers - especially in the Concurrent sessions

Key takeaway items:

- ✓ Distant venue, congestion in corridors, space constraints in ball room and mosquitoes
- ✓ Quality speakers , alignment of topics with theme of the conference
- ✓ Simplified registration process at the counter; effective management of peak hours.

1) Conducting on Thursday and Friday rather than on Monday & Tuesday. Working professionals find it difficult to arrange a late check out from hotel on day 2. Lost almost near to an hour in checking out as everyone started at the same time. At an increased nominal amount the hotel should allow to have check out by 3 PM instead of 12 PM 4) Wonderfully organised for such a large participants and to continue the same

The dais where the speakers sat did have an over glare of back light from the hoardings that caused no clear viewing of the persons on the dais or the speaker. The flood lights should have been placed to illuminate the persons particularly the speaker on the dais and not the hoardings alone - The shadows on the hoardings in the backgrounds can be eliminated by side lighting. Thus we have the hoardings as well as the persons in clear view for the audience. The micro phone and the hall echo did some mischief especially with those who spoke in very low tones. Or rather too fast for an Asiatic audience

ABOUT THE AUTHOR



Mr. Vinod Kumar Kuttierath

is an Associate member of Institute of Actuaries of India and currently working as Head-Reasearch in IAI
vinodkumar@actuariesindia.org

2015 ACTUARIAL GALA FUNCTION AND AWARDS (AGFA)

Venue:

Renaissance Mumbai Convention Centre Hotel, Powai

Date: 2nd February, 2015

Organized by:

Institute of Actuaries of India

The Actuarial Gala Function and Awards (AGFA) is an annual event organised by Institute of Actuaries of India; which aims to recognise academic achievements and qualification milestones in the field of Actuarial Science. The 2015 AGFA, like each year, was a fun packed event with multiple dance performances and mysteriously enchanting tricks performed by Illusionist.

The event started with an introductory speech given by Mr. Rajesh Dalmia, President - IAI, India. He congratulated all award winners, newly qualified fellows and their family members for respective achievements and also advised them to continue on the journey of learning and growth.

His speech was immediately followed by a sublime folk dance performance by a dance group from 'Anil Tandav Dance Academy'. The performance was based on traditional 'Garba' dance highlighting typical flavour of Gujarat. This vibrant dance performance set the mood of the evening right.

The dance performance was followed by welcoming 'Little Math Stars', students from NGO who are part of 'Math Star Project', to the podium. 'Math star project' is in its 5th year of operation and has been successful in providing basic education and inculcating the importance of mathematics in lives of over 2000 students belonging to economically weaker section of society.

The 'Math Star Event' was followed by the speech by Mr. Akshay Pandit from KA Pandit, Consultants and Actuaries. In his speech, he highlighted the importance

of team work through rather interesting modified versions of famous 'Hare and Tortoise' story. He further unveiled 'competing with self' to improve further as the secret of longevity of his '72 years young' firm.

His speech was followed by another splendid dance performance by the same group who this time danced to tunes of three Bollywood songs. This was a perfect prelude to the main award presentation ceremony. All the awardees and newly qualified Fellows were excited and eagerly waiting for their names to be announced. Few of the family members of awardees and fellows were also present to witness the important milestones of their loved ones.

The first set award was presented for Best Theme of 17th GCA - '**Changing Risk - Expecting the Unexpected**' - to **Mr. Tejinder Kapila** and **Ms. Jyotsna Kaushik**. The next set of awards was for Best Article and Best Reportage in '**the Actuary India**' magazine for the year 2014. This was followed by rewarding individuals scoring highest marks in Actuarial Common Entrance Test (ACET) held in year 2014.

Then was the time for few surprise videos to be revealed to newly qualified actuaries. These videos were of their family members describing the actuarial journey of their loved ones and support provided by them during this journey. Institute of Actuaries of India acknowledges the sacrifices and support from each family member of these fellows.

This was ensued by a marvellous show by illusionist, Mr. Mangesh Desai, who is the only Indian to be a member of 'The Magic Circle', London and has also featured on the TV show 'India's Got Talent'. He started the show by cracking jokes on Actuaries which made the entire audience burst into laughter. His show was very engaging show and the left the entire audience awestruck by skills demonstrated during the show.

This was followed by a short speech by

Mr. Chirag Rathod, Appointed Actuary, Canara HSBC OBC Life Insurance, who acknowledged the value that Actuaries bring to the Company.

Then was the time for presenting academic excellence award for students securing highest marks in 2014 exam diets. This time, the Institute of Actuaries of India modified the normal sequence of awards to first recognise a very special person - Mr. Veeral, who secured highest marks in SA4 actuarial exam in October 2014 exam diet. He is differently abled and is working as a consultant with Kotak Life Insurance. He received standing ovation for his marvellous accomplishment and being an inspiration for each one of us.

Later on awards for obtaining highest marks in different subjects for the May and October 2014 exam diets were presented to the remaining candidates. This was followed by presenting Fellowship and Associateship certificates to the deserving candidates.

In addition to the Actuarial awards, Students from NGOs were also given prizes for performing well in competitions conducted by 'Math Stars Club'.

The Gala Evening concluded on a very successful note followed by Cocktail and Dinner.

ABOUT THE AUTHOR



Mr. Ashish Taneja

is an Associate from Institute of Actuaries of India and is currently working as Chief Manager with Max Life Insurance Company.

ashish.taneja1104@gmail.com

PLENARY SESSIONS

Venue:

Renaissance Mumbai Convention
Centre Hotel, Powai

Date: 2nd- 3rd February, 2015

Organized by:

Institute of Actuaries of India

Session 1: Inaugural Session

Chairperson :

Mr. Dilip Chakraborty,

Chairperson, 17th GCA Organizing Group

Speakers: **Mr. Rajesh Dalmia**, President, Institute of Actuaries of India; **Mr. T S Vijayan**, Chairman, Insurance Regulatory and Development Authority, India; **Mr. K Subrahmanyam**, Chairperson, IAI Advisory Group on Peer, Stakeholder and International Relations



Mr. Dilip Chakraborty

Mr. Dilip Chakraborty welcomed the elite gathering of 735 participants, including 34 overseas participants. He began with a brief introduction on the theme of the conference “**Changing Risks, Expecting the Unexpected**”. He linked the topic to the current situation prevailing in India relating to economic uncertainty and political developments. He noted that there has been a transformation of the economic scenario which has produced spectacular results for the Insurance Industry and has resulted in huge optimism in the industry. He believed that the industry in some sense is **EXPECTING THE UNEXPECTED**. He aptly correlated ‘Changing Risks’ part of the theme to the new risks such as nuclear liability risks. He emphasized on Actuaries expanding the horizons in analysing and quantifying such non traditional risks.



Mr. Rajesh Dalmia

Mr. Rajesh Dalmia, urged the actuaries in process of understanding and managing risks to focus and prepare on unknown risks like global warming, deadly bacteria, cyber wars and threats. He then spoke about the challenges that Indian Actuarial Profession is facing and the need for strengthening professionalism. He then focussed on developmental issues like introduction/improvement of COP & CPD procedures, introducing measures to improve the quality of actuarial work, use of more IT to improve services, strengthening entry criteria in the profession, focussing on changing the syllabus and introduction of coaching for subjects with low pass rates. He accepted that the profession needs to work with the regulator and other professional bodies like the ICAI. As regards the Life Insurance Industry, Rajesh appealed IRDA chairman to take steps so that industry moves on to market consistent risk based solvency framework to address the inconsistency issues.



Mr. T S Vijayan

Mr. T S Vijayan, in his key note address said that the annual GCA event provides an excellent platform to discuss topical issues where actuaries play an active and decisive role and also serves the purpose of improving image of the profession in the country. He gave vital statistics on the Indian insurance penetration and explained the role of IRDA in addressing the information asymmetries, ensure

transparency and provide value to customers. He spoke about improving the business environment to provide immense growth opportunities for Insurance and Reinsurance industry. He also explained the importance of improving the technology penetration, enhancing affordability of products, meeting the needs of low income groups, improving the premium collection modes and frequency, improving internal and external communication, profitability of insurance companies, importance of expense control and need for having self sustaining products.



Mr. K Subrahmanyam

Mr. K Subrahmanyam presented the vote of thanks expressing gratitude to the speakers, delegates, and sponsors of the conference.

Session 2: Issues related to the International Profession & Industry; Current Issues in Life Insurance, General Insurance and Retirement Benefits Practice in India

Chairperson: **Ms. Fiona Morrison**, President-elect, Institute and Faculty of Actuaries, UK

Speakers: **Mr. Nishit Majmudar**, CEO, Aviva, Singapore; **Mr. G. Srinivasan**, CMD of New India Assurance Co., Ltd., India; **Mr. D K Pandit**, Partner, M/S. K. A. Pandit, India



Ms. Fiona Morrison

Ms. Fiona Morrison focussed on the promotion of actuarial skill set and values that actuaries could bring in the changing world. She also stated that to be successful in a world full of change, it is important to be adaptable and embrace diversity of the industry in which we work. She also

emphasized that the future of investments and impact of ageing population are huge challenges for the industry. Actuarial skill set is vital in finding and implementing solutions to these challenges which can help in supporting and development of the insurance industry. She then spoke about **Certified Actuarial Analyst (CAA)** which is a professional qualification based on technical actuarial skills and underpinned by membership of a professional actuarial body. The worldwide recognition need and value for actuarial skills in regulation, decision making and risk management makes CAA a new valuable qualification and career destination.



Mr. Nishit Majumdar

Mr. Nishit Majumdar shared his 25 years of experience in Life Insurance. He shared a heart touching example before moving to the topic of his presentation about how the dream life industry looks like. According to him happy customer, wealthy shareholder, satisfied regulator and strong distributor are key components of dream life industry. To achieve this dream he highlighted a few things that can be improved like expanding the planning horizons, increasing customer focus in linked business and for improving persistency, talent development and continuity in profession. His presentation inspired to make customers and other stakeholders happy.



Mr. G Srinivasan

Mr. G. Srinivasan began his presentation by providing the current status of General Insurance (GI) industry in India. He touched upon the aspects like opening up of the pricing under de-tariff regime, file and use system, regulation for policyholder

protection and monitoring solvency and the grievance redressal mechanism. He highlighted the recent developments in the GI sector in India including the PMs Jan Dhan Yojana where in the second phase covers insurance and pensions. He discussed the issues relating to low penetration levels, high combined ratios, low profitability and evolving regulations. According to the speaker, despite significant changes in GI industry over last 14-15 years, the penetration level is low and there is tremendous potential in the years to come.



Mr. D K Pandit

Mr. D K Pandit briefed about the statutory and voluntary employee benefit schemes available in India. He linked the defined benefit scheme structure to the 17th GCA theme. He also spoke on the key characteristics of the employee benefit schemes available in public and private sector organisations. He highlighted the role that actuaries play in valuing such schemes under various statutes and accounting standards. He addressed the accounting, investments, legislative and economic issues concerning such schemes. He advised on the need to create a balance between DB and DC schemes, have a real trustee system and pension protection fund.

Session 3: Regulatory Changes in Pension Industry; US Defined Benefit (DB) environment

Chairperson: Mr. Rajesh Dalmia, President, Institute of Actuaries of India, India

Speakers: Mr. Hemant G Contractor, Chairman, PFRDA, India; Ms. Emily Gingrich, Vice President – AIG Life & Retirement, FSA, American International Group, USA; Mr. Dilip Chakraborty, Chairperson, 17th GCA Organizing Group

Mr. Rajesh Dalmia welcomed the guests, speakers and delegates on the second day of the conference. He spoke on the importance of pensions given the joint family system breaking down and how it

becomes a social cost if there is no individual provision. He highlighted how increasing longevity and maintaining expenses is going to be a challenge. Progress in pension industry is slow despite of introduction of NPS which is the lowest charge product in the world. He insisted on having incentives like tax breaks to encourage retirement provision. He urged that IRDA and PFRDA work together to achieve the common goal of fulfilling the dreams of the people.



Mr. Hemant G. Contractor

Mr. Hemant G Contractor briefed on the role of PFRDA in regulating NPS and other pension schemes. He also spoke on how PFRDA is actively involved in promoting NPS to increase the pension coverage in the country. He provided key statistics on the number of subscribers and amount under management for the variants of NPS scheme. He discussed the challenges in regulation, supervision and promotion and the measures to face those challenges. One of them is including Svavalamban in phase II of Jan Dhan Yojana. He also highlighted the role that actuaries can play for NPS. He also urged on the need to make people of the country aware to save for pensions.



Ms Emily Gingrich

Ms. Emily Gingrich introduced retirement security as a three legged stool with government provided social security, personal savings and employer pensions (public & private) being the three legs. She provided an overview of the US retirement market where the liabilities for public and private DB plans exceed the assets. She discussed the state of social security and personal savings and the need for actuarial

analyses, financial literacy, and improvement of product designs. She also highlighted the challenges faced by public and private pensions and how DC plans are becoming main employer-sponsored pension vehicle. She spoke on actuaries' role in de-risking of pension plans using Liability Driven Investing (LDI) strategies.

Mr. Dilip Chakraborty discussed the role that actuaries can play in PFRDA. He also explained how actuaries can partner with PFRDA and assist in the accumulation and de-accumulation phase of NPS. He highlighted the role that PFRDA can play in managing and regulating the benefit designs governed by act of parliament or pay commission. He spoke about the actuarial services relating to benefit projections, measurement and disclosures; asset liability matching, demographic analyses and investment advice.

Session 4: Updates on Actuarial Issues

Chairperson: Ms. Pournima Gupte, Member Actuary, Insurance Regulatory and Development Authority, India

Speakers: Mr. Kunj Behari Maheshwari, Consultant, Towers Watson, India; **Mr. S S Gopalathnam**, Managing Director, Chola Mandalam MS General Insurance Company Ltd, India; **Mr. Ankur Agarwal**, Head - Actuarial, AXA Business Services, India



Ms. Pournima Gupte

Ms. Pournima Gupte briefed on the Life, Health and General Insurance Regulations. She spoke about how the 2013 regulations covered every aspect to bring stable regime for product approval, consistency in designs and good value to policyholders. She also mentioned about the draft regulation on expenses of management in life insurance where in there is a need for all stakeholders in insurance company to understand the significance of prudent expenses management. She then highlighted the 2013 product regulations for health insurance along with guidelines for standardisation which addresses most

concerns of policyholders, standard definitions and methodologies. She discussed about the development of general insurance industry post Mar12 including initiative taken by authority for the analysis of valuation report and financial conditions report. She also emphasized on the need for strengthening actuarial department in GI companies.



Mr. Kunj Behari Maheshwari

Mr. Kunj Behari Maheshwari spoke on the Initial Public Offering (IPO) by insurance companies. He briefed on the listing regulations in India including the manner and procedure listed in IRDA regulations, 2011. He discussed the key considerations for Indian insurers and the reasons for them opting for an IPO. Explaining the advantages and disadvantages of an IPO, he set out the procedure for IPO and he also highlighted an actuaries' diverse role in this process including the key input of Statement of Opinion on economic value, the underlying basis and adequacy of reserves to the prospectus. He discussed the choice of methods and assumptions which are governed by Indian Embedded value as per APS10 and the disclosure requirements.



Mr. S S Gopalathnam

Mr. S S Gopalathnam provided details on the current GI industry environment on de-tariffing, pricing inadequacy, varied reserving practices and very little product differentiation. He highlighted the role that actuaries currently play in reserving, pricing, decision making, solvency and asset liability management. He listed the various roles that actuaries can play in business development, managing risks

and technological innovation. He discussed the skill set requirements for actuaries to comply with the emerging roles. According to him, the emerging role for actuaries is moving from image of 'Controller' to 'Enabler'/'Analysts'.



Mr. Ankur Agarwal

Mr. Ankur Agarwal presented the actuarial value chain with respect to the business value of each function and whether it is rule based or involves complex judgement. Changing business environment in the form of customer expectations, technology and risk management is unprecedented. He spoke on the transformations taking place in insurance industry in the form of customer centricity, product strategies, operational agility and regulatory compliance. He explained the list of global actuarial functions and how can they convert risks to opportunities using the right strategy. Despite of its conventional and upcoming challenges, actuaries can play pivotal role in this strategic transformation through proper management, innovation, flexibility and ability to learn and adapt.

The two day conference saw active participation from the delegates and everyone had a common goal of '**Serving the Cause of Public Interest**' to achieve.

ABOUT THE AUTHOR



Ms. Kruti Patel

is a commerce graduate from University of Mumbai and a Fellow Member of Institute of Actuaries of India

krutikpatel@rediffmail.com

CONCURRENT SESSIONS ON LIFE INSURANCE

Venue:

Renaissance Mumbai Convention Centre Hotel, Powai

Date: 2nd - 3rd February, 2015

Organized by:

Institute of Actuaries of India

There were 5 concurrent sessions on life insurance, 3 sessions on the first day and 2 sessions on the second day of the GCA. All the 5 sessions reflected the theme of the conference, i.e. **"Changing Risks, Expecting the Unexpected"**.

Session 1: Panel Discussion on Regulation, Actuarial & Business Issues

Chairperson: Mr. Chandan Khasnobis - Director and Appointed Actuary, IndiaFirst Life Insurance Company Ltd, India

Speakers: Mr. Chirag Rathod - Appointed Actuary & Director - Products & Strategy, Canara HSBC Oriental Bank of Commerce Life, India; Mr. B N Rangarajan - Chief Risk Officer and Appointed Actuary, Exide Life, India



Mr. B N Rangarajan, Mr. Chandan Khasnobis, Mr. Chirag Rathod

Mr. Chandan Khasnobis introduced the panel and gave a brief introduction about the discussions to follow. He briefly talked about the Life Insurance Industry during the last 14-15 years. He also mentioned about the regulatory changes during 2005, 2010 and 2013 which were aimed at standardising the products and bridging the gap between the products and customer's needs.

Mr. Chirag Rathod started the discussion with the question that how much time actuaries actually work on looking at customer outcomes from the products. Does the customer really understand the product and if their needs are actually met? He also mentioned that the increase in consumer activism and information asymmetry is causing a shift towards principles based regulations. The things that are expected from an Actuary are coming in the form of regulations.

From sales perspective it is more important to know the customer groups for which the product does not work than those for which it works.

He suggested that the following should be considered at the product design stage:

- suitability (the target market)
- the risk and profitability and reasonableness of customer expectations
- flexible to cope with customer's changing circumstances
- a process to regularly review customer feedback
- focusing on the customer's full journey and not only the point of sale
- actively engaging customers and not only going by technical and legal aspects

He concluded by saying that a good product design is necessary but not a guarantee for good customer outcomes and actuaries, being technically sound, have to play a meaningful role in protecting policyholder's interests.

Mr. B N Rangarajan raised the following questions that we should ask ourselves at the time of product design:

- Will we buy this product or recommend to someone we personally know?
- Does the customer really want the features available in the product?

- How the product will be sold to the customer?

He insisted on the importance of protecting the policy which is not only important for the insurance industry but also our profession. We should also be in a position to help if the customer expresses his concern over the unsuitability of the product to him anytime during the product lifecycle.

An audience raised questions around mutuality in insurance and pooling of risk, Mr. Chirag Rathod responded that insurance business is surely mutual and it is one of the reasons why he has chosen this career. Regarding the risk pooling, he said that pooling is not only for the risk part but also for other factors such as investments and he has seen many cases where pooling has benefitted the customers.

To another question regarding insurance being a business of giving and taking money, Chirag said that there is nothing wrong in this, however, insurance business should be seen as giving away uncertainties and taking certainties in return.

Session 2 : Behavioural Drivers of Mortality Experience

Chairperson: Mr. N M Govardhan - Actuary and Former Chairman, LIC of India

Speakers: Mr. M Karunanidhi - Executive Director, Actuarial Services, RGA, India

Mr. M Karunanidhi's presentation was about how policyholder behaviour affects the mortality experience either their own individual risk or by impacting the relative risk of the insured pool. He commented that most of the challenges we often tend to have are due to overlooking some basics of the insurance business.

Showing the statistics of trends in smoking habits, obesity & suicide of some countries he stated that there is an improvement in the prevalence trend of smoking (male) and increasing trend in obesity. Using the



Mr. M Karunanidhi & Mr. N M Govardhan

George Akerlof's "Lemons" model he demonstrated how the information asymmetry between the applicant and the insurer create an unraveling market for both.

Underwriting reduces information asymmetry between the applicants and the insurer. He highlighted that the primary objectives of underwriting which included minimization of adverse selection, accurate assessment of risk profile.

He also stated that making quick decisions, minimising intrusiveness or underwriting costs and maximising business are secondary goals. Simplified underwriting improves the secondary goals, however experience sometimes tends to be much worse than originally anticipated. Using the example of post-level term product experience he showed how the anti-selective behaviour of people affects mortality. He also commented that the demand for insurance is positively correlated with the risk.

He concluded with the following three opportunities are available to insurers to manage the overall experience of an insurance product:

1. **Pre-issue stage** – improving sentinels, need based selling, competitive pricing, pre-screening
2. **Selection process** – sound underwriting practices, need based coverage, reducing information asymmetry
3. **Management of the insured pool** – sound claim practices, policyholder retention, encouraging favourable policyholder behaviour.

Session 3 (I) Results from Gen Re's Survey on Critical Illness

Chairperson: Mr. Richard Holloway -

MD, South East Asia, Milliman, Singapore

Speakers: Dr. Wolfgang Droste - Chief Advisor, Asia, Gen Re, Germany

Dr Wolfgang Droste's presented high level results of Gen Re's 2008-2012 Dread Disease Survey conducted across 8 countries namely China, Hong Kong, Malaysia, Singapore, South Korea, Indonesia, Thailand and Australia and looks at more than one million claims. He



Mr. Andrew Rallis, Mr Richard Holloway, Dr. Wolfgang Drose

mentioned that dread disease products haven't yet reached the popularity in India as in any other Asian market.

He presented the main trends emerging from China where A/E for "Death only" is slightly decreasing due to mortality improvements, however there is a steep increase in the trend for "Accelerated Dread Disease only" for both males as well as females. According to the survey Cancer is the leading cause of claims in China, Hong Kong, Malaysia and Singapore. It is followed by ischemic heart disease in males and stroke in females.

He also presented the trends in specific incidence rates of cancer, heart attack, stroke and kidney failure. It was interesting to see the detailed trends of various cancer sites. In particular he talked about the worsening Thyroid cancer experience from Korea and the lessons one should learn from the deteriorating claims experience.

To a question from the audience on any particular reason for the huge difference in the experience of thyroid cancer in China and Hong Kong, Dr Wolfgang said that they are still analysing this trend and as of now he does not think that there are any ethnicity issues involved. Also, the incidence rates are expected to go up if there is an increase in medical screening.

There were other questions pertaining to poor take-up of dread disease products in India and re-pricing of dread disease products.

Session 3 (II) Global Emerging Actuarial Issues and the Role of Emerging Markets in Meeting Actuarial Needs

Speakers: Mr. Andrew Rallis - Executive Vice President and Global Chief Actuary, MetLife, USA

Mr. Andrew Rallis started his presentation on **Global Emerging Actuarial Issues and the Role of Emerging Markets in Meeting Actuarial Needs** with a brief about Metlife background. Using the model of transformation of Metlife's Actuarial processes he described the important aspects of the role of the Actuarial professionals. He stated that Actuaries need to be seen as trusted advisors in a company.

Moving on to the systemic importance of insurers globally, he discussed about the increasing number of regulators and their requirements including Solvency II. The presentation also covered low interest rate environment and how to manage its impact on the business. He talked about importance of scaling and flexibility within an organization and to work around customers' needs.

He concluded by giving an overview of key service offerings of Metlife's offices in India & Argentina. He highlighted the importance of shared service centres for actuarial talent and global developments leading to demand for actuarial services.

To a question from the audience about any regulatory issues faced while operating globally, Andrew Rallis replied that the regulatory issues needs to be handled locally and because of global Actuarial

professionalism standards he has not faced any regulatory problems directly.

Session 4 : Panel Discussion on Current Industry Issues

Chairperson: Mr. Kamalji Sahay - Advisor, GIC Re, India

Speakers: Mr. Sudhin Roy Chowdhry - Ex Member (Life) IRDA, India; Mr. Sushobhan Sarker - Director, NIA, India; Mr. Thomas Mathew - Ex Chairman in Charge, LIC of India

Mr. Kamalji Sahay talked about the **Current State of Bancassurance** in India. He started with a brief about how the global economic meltdown and the efforts

India came up with guidelines on how banks should sell products of different life insurance companies.

He concluded by saying that a lot is expected from Bancassurance channel although it is not that simple as it is yet to perform very effectively. However, a lot of clarity has come and also the Insurance Law amendment ordinance has been issued by the Government of India which indicates progress and growth for the industry.

Mr. Sudhin Roy Chowdhry through his talks threw light on **Regulation and its impact on the Life Insurance Industry**. He started that with the brief history and

- stringent fines
- multi-level marketing is totally banned
- amendment in section 45

He concluded by advising companies to perform within the regulatory framework as regulations are to help to industry. He also said that companies should pack their products nicely and sell with ethics.

Mr. Sushobhan Sarker shared his thoughts on the **Insurance Education**. He said that most of the students he has seen have no family background in insurance which indicates insurance awareness is very low. He talked about introducing insurance in schools and the gaps in education. He believed that rather than teaching through books basic education should adopt teaching about insurance through lessons. He also said it is very difficult to find a suitable insurance course and that insurance education is not attractive. The industry must offer more internship and placement opportunities.

Talking about the higher education in insurance he said that in view of the rapidly changing economy and the industry, the insurance professionals need to regularly update their knowledge. With the total demographic change we have more number of young people and the industry must try to attract them. He also said that the technology has advanced so it should be possible for the industry to offer "Instant Insurance".

He concluded by highlighting the importance of continuous professional development as lot many changes are happening in the insurance environment. He also stressed on the need of institutions to come together at least once annually and discuss the issues in expanding insurance education.

Mr. Thomas Mathew talked about the **Distribution of Life Insurance Products** in India. He took the audience through a brief journey about the industry, the importance of insurance and some statistics about the insurance market. 78.4% of the premiums is brought by the agency channel, this figure being 96% for LIC and 40% for private players.

The three challenges of the distribution are:

roles of the regulator. The regulations are not meant to harm the business but are there to ensure that the industry is performing the way it should be. He said that the Insurance Act was introduced in 1938 and since none of the laws are static regulator came up with an ordinance to change some of the Acts. He also shared his experience of working with an insurance company and then the regulator.

He said that during the last 2 years the regulator has been successful in correcting the market a lot. He also mentioned that one big blunder that insurance companies did, while bringing in ULIPs, was to put shareholder's profits above customer's interests which a major reason for ULIP downslide. He discussed the problems associated with ULIPs that were brought in. That was the trigger when the regulator thought of correcting the market.

He also listed the salient points of the amendments in the Insurance Act, 1938:

- stricter laws
- more controls and checks for companies' investment pattern



Mr. Thomas Mathew, Mr. Sushobhan Sarker, Mr. Kamalji Sahay, Mr. Sudhin Roy Chowdhry

by the regulator to correct the industry slowed it down. The new regulations which aimed at all products being re-filed resulted in de-growth on the number of policies. He also said that after the reduction in the number of available plans, a majority of the sales professionals do not find any new product attractive enough to sell.

He mentioned that bancassurance channel is the star channel for distribution in India since 2005-06. Companies in India thought on using the large network of banks for distribution of insurance products after the channel's success was observed in France and Spain. This channel achieved huge success only in urban or metropolitan areas still it generated about 44% of the premiums. He also talked about the drawback of the restriction on a bank to tie up with only one life insurance company. The demand for allowing banks to have more than one tie-up was increasing as many companies lost their direct agents with the downslide of ULIPs. Very recently Reserve Bank of

- cost-effectively reaching the untapped market
- enter new alliances for better reach in the untapped market
- responding to varying needs of various segments

The challenges faced by the agency channel are huge attrition, low productivity, large part-time agency force and low persistency.

While talking about the bancassurance channel he mentioned that grievances from this channel are more than any other channel. He mentioned about the proposal of Insurance Marketing Firms (IMFs) by the regulator which would recruit and train the staff and also sell the products.

He stated that digital media has large number of users and puts large number of information readily in the hands of the customer and thus affects all channels of distribution.

He concluded by highlighting the importance of long term relationship with the customer and stated that the era of intermediaries will continue to dominate the insurance industry.

Session 5 (I) Pandemics and Other Catastrophes: Managing the Impact on Your Life and Health Portfolio

Chairperson: Mr. Sanjeev Pujari - Executive Director - Actuarial & Risk Management and Chief Risk Officer, SBI Life Insurance Co. Ltd, India

Speakers: Mr. Subhash Chandra - Associate Director, Life Reinsurance, Aon Benfield, Asia Pacific, Singapore; Mr. Pierre Vende - Head of Accident, Health and Life Aon Benfield, Asia Pacific, Singapore

Mr. Subhash Chandra started with the introduction that a pandemic is an epidemic of infectious disease that is unstable and has spread through human populations across a large region. In today's world pandemic is associated



Mr. Subhash Chandra

mostly with Influenza. Spanish Flu during 1918-1919 claimed more than 40 million lives. A pandemic occurs approximately every 15-30 years and has an annual probability of occurrence of 3%-7%. He then talked about the conditions that may lead to influenza and that there is great uncertainty about its time of occurrence, its severity and its impact.

Considering the insurance business he mentioned the various risks involved, in particular potential impact on the insurance risk (deaths, disability and medical costs).



Mr. Pierre Vende

Mr. Pierre Vende continued the presentation with how to model the pandemic risk. He discussed the various indicators of such occurrence that need to be considered for setting up the assumptions from historical events. He then talked about the catastrophe risk giving the examples of the main catastrophes, terrorism in particular, that should be considered in India. His presentation also illustrated a scenario for modeling the terrorism risk.

He discussed the various risk transfer solutions for catastrophe and pandemic, namely, excess of loss reinsurance, Cat XL, stop loss reinsurance, capital markets - extreme mortality bond / swap.

He concluded by highlighting the importance of considering realistic disaster scenarios, even if these events have very low occurrence probability, and that risk transfer solutions are available to reduce a part of risk on the insurance liabilities.

Session 5 (II) Participating Business in India: Where do We go from Here?

Speakers: Mr. Shamit Gupta - Consulting Actuary, Milliman, India; Mr. Alex Bryant - Consulting Actuary, Milliman, Singapore

Mr. Shamit Gupta gave an introduction to the history of par business in India. Upto 2003-04, 80% of new business was



Mr. Shamit Gupta

from par products and by 2010 ULIPs formed 80% of new business. Restrictions introduced by IRDA in 2010 and impact of global financial crisis in 2008 led to fall in sale of ULIPs and a corresponding increase in par sales which accounted for more than 70% of new business premium in 2013. Some private sector companies are refocusing on ULIPs following the revival of stock markets.

Par sales is quite significant in Hong Kong, Singapore and China. All the three countries showed similar trend of increasing linked business till 2007 and then back to par.

He also spoke about the regulations pertaining to par products in respect of shareholder profit sharing, solvency requirements and par fund governance. The recent introduction of new governance requirements for par business in India suggest it is more advanced in this area than other Asian markets.

He concluded by highlighting the issue of low interest rate environment in other countries which make guarantees more expensive.



Mr. Alex Bryant

Mr. Alex Bryant discussed how the par business evolved in the United Kingdom. He mentioned the factors that led to development and popularity of the unitized with-profits market during the 1980s. Proportion of new participating life insurance business has come down significantly since the late 1990s because of failure of equitable life, endowment backed mortgages and market value

reductions. The major concerns were lack of transparency, conflicts of interests and poor policyholder communications.

He concluded by highlighting the learning from the trends of the UK par business with regards to both the policyholders and the shareholders. Aspects like guarantees, good communication, greater transparency and the management of PRE are important for the long-term feasibility of par business.

Session 5 (III) Changing Product Designs

Speakers: Mr. C. Srinivasa Kumar - Deputy Director, Actuarial, IRDA, India; Mr. S. Karthikeya Sarma - Assistant Director, Actuarial, IRDA, India



Mr. C. Srinivasa Kumar

Mr. C. Srinivasa Kumar talked about the changing designs of the non-linked products. Usually the companies provide for lumpsum benefits, however some companies have started also offering periodic payments instead.

In the first structure of products he talked about an endowment or a term assurance with embedded annuity certain. Periodic survival benefits are paid after the premium paying term (with or without deferment) till the end of the policy term. In another version, periodic maturity benefits are paid after the policy term with options to the policyholder to choose the payout term. During the payout period of the maturity benefits, risk coverage is normally not available.

For a term product with embedded annuity certain, the death benefit is paid as income benefits to the nominee. Another variation is an option to choose part of the benefit as lumpsum and the balance in the form of regular payments.

In the second structure he talked about life assurance embedded with life annuity (80 years or 100 years or till death) instead

of an annuity certain, however is mainly available under the with-profits platform.

He said that enhancement of transparency, innovation, demand for regular income, flexibility, product differentiation could be the possible causes leading to such product designs.



Mr. S. Karthikeya Sarma

Mr. S. Karthikeya Sarma highlighted the following risks that emerge from these new product styles:

- **Financial Risk** – Investment approach, sensitivity of business volumes to interest rates, increased liability duration, reinvestment risk, market value risk.
- **Option Risk** – The risks from options to choose the payout period of maturity benefits which will depend on the interest rate movements and the policyholder's behaviour.
- **Mortality Risk** – Actual mortality experience can be difference from pricing assumptions.
- **Expense Risk** – Emerges due to longer effective term.
- **Lapse Risk** – Lapses may happen if return from the policy is low.
- **Operational Risk** – Longer servicing period, additional system requirements.
- **Marketing Risk** – Due to gaps in marketing activities. May require additional training to sales and other professionals.

Mr. C. Srinivasa Kumar then talked about the various risk management solutions that can be adopted for efficiently and effectively managing the risks that are arising from the changing product designs. Some of the solutions he mentioned were margins in assumptions, close monitoring of interest rates, offering under participating platform, choosing

longer term assets, restriction of payout term.

He concluded by highlighting that the income benefits are more attractive and flexible but insurance companies need to focus on the management of emerging risks, in particular, financial risk, operations risk and mis-selling risk.

An audience raised a question on how to manage the investment risks involved for a longer term in case of a non-par income protection products and the expense risk if the policyholder lapses the policy when returns from the policy are low. Mr. C. Srinivasa Kumar responded that by close monitoring, investing in interest rate derivatives and stochastic modeling can help the insurance companies in management of such risks.



Mr. Sanjeev Pujari

Mr. Sanjeev Pujari ended the conference by thanking the organizers, presenters and the audience for making 17th GCA a success.

ABOUT THE AUTHOR



Mr. Sachin Jain

is a student member of the Institute of Actuaries of India and currently working with SBI Life Insurance Company Limited. He has experience of more than 7 years in the Actuarial domain.

sachin.jain@sbilife.co.in

CONCURRENT SESSIONS ON ERM AND OTHERS - AGEING POPULATION

Venue:

Renaissance Mumbai Convention Centre
Hotel, Powai

Date: 3rd February, 2015

Organized By:

Institute of Actuaries of India

Session : Concurrent Sessions on ERM and Others - Ageing Population

Chairperson : Mr. P A Balasubramanian,
Ex Member (Life), IRDA, India

Speakers/ Presenters : Mr. Frank Ashe,
Owner Quantitative Strategies, Australia

Topic : Problem ? What Problem? An
heretical perspective on the ageing
population burden

Speaker : Mr. Frank Ashe

The session started with Mr. P A Balasubramanian highlighting how rapidly the world population has been increasing over the past. This together with the fact that countries are moving towards development is causing a major demographic structural change called 'Ageing population'. Mr. Subramaniam stated that in India, currently the population who is aged above



Mr. P A Balasubramanian

60 years is 1/12th of the total population of the country. However, this ratio is expected to increase to 1/5 by year 2050.

Mr. Frank Ashe then started with his presentation which talked about two different perspectives on the impact of an ageing population. He began with how ageing population is commonly believed to increase the Fiscal Gap in an economy. With an ageing population, health cost rises is considered as an indicator of increased

government expenditure and subsequent financial problems.



Mr. Frank Ashe

Mr. Ashe then presented a different perspective on the impact of an ageing population. He looked at the possible impacts of an ageing population from the perspective of economy as a whole. The economy is a closed economy where one person's spending here is someone else's saving. When government deficit increases, income is passed in the hands of private sector, whose assets then increases. Spending on health services of the ageing population would not affect the total GDP. Hence the common perception of treating an ageing population as a financial burden to the society is a false perspective.

The primary concern with the ageing population is whether or not the economy will be able to produce goods and services to meet the projected demand of its population. Another major concern on this would be if money can be distributed to facilitate the efficient production and distribution of goods and services.

There is a need to focus on economic issues rather than worrying about possible fiscal gap with an ageing population. One such area of concern is Government's role in maintaining the employment level in the economy because with an ageing population, the demand to employ the workers becomes a question mark.

The session concluded with an important message of the importance of considering a problem from a wider macroeconomics

and historical perspective before classifying a problem as a 'problem' and rushing towards its solution. And in the case of 'ageing population', macroeconomic analysis suggests that it not something to worry too much about.

Session : Concurrent Sessions on ERM and Others - Presentation by IAI members

Chairperson : Mr. B N Rangarajan, Chief Risk Officer and Appointed Actuary, Exide Life, India

Speakers/Presenter

- Mr. Simon Walpole, Partner, Deloitte Consulting, Hong Kong
- Mr. Sonjai Kumar, Head - Insurance and Financial Risk, Aviva India, India
- Mr. Rajiv Mukherjee, Associate, IAI, India
- Mr. Atmaram Cheruvu, India Representative - Non-life, Hannover Re Consulting Services India Pvt Ltd, India

Topic : A structured approach to defining and identifying risk

Speaker : Mr. Simon Walpole

The presentation briefed about some of the fundamental concepts and measurement techniques of risk, focusing mainly on the insurance industry.



Mr. Atmaram Cheruvu, Mr. Rajiv Mukherjee, Mr. B N Rangarajan, Mr. Sonjai Kumar, Mr. Simon Walpole,

Mr. Simon Walpole started with the definition of risk. He said that the term risk is very wide as it applies to all forms and everywhere. If we were to make a list of the risks that we are exposed to, it will probably have no end to it. Hence it is important to have a specific definition for it. For an insurance company it is commonly assumed that risk is ultimately financial risk.

This means the possibility of losing money, or making lower profits than expected. Mr. Walpole then spoke about a few risk measurement concepts which primarily depend on exposure and uncertainty (which in turn is affected by various external and internal environments).

Exposure refers to the value that we assign to something. The definition of exposure in turn affects how the risk would look like.

The assumptions that we make in calculation of the uncertainty are also uncertain. Uncertainty is the possibility that the exposure value changes. For an insurance company, all assumptions which are required in its valuation and/or in calculation of the best estimate liabilities are uncertain.

The presentation demonstrated how vast and complex the term 'risk' could mean. But for practical purposes, we generally define it through some simple measures. This simplification, although is necessary, is a source of another major risks to the organizations. Risk is present almost everywhere and hence it is important to manage the risk to avoid/minimize adverse consequences.

Topic : Role of Actuaries in ERM

Speakers : Mr. Sonjai Kumar and Mr. Rajiv Mukherjee

The talk was about how the concept of ERM is gaining widespread attention in not just the insurance industry, but with other organisations as well. And how and what are the different opportunities that it has opened up for the Actuaries.

Mr. Rajiv Mukherjee started the presentation by talking about how over the last two decades, with the economy witnessing multiple failures in risk events, the importance of risk management has gained attention. An integrated risk culture has come into focus. Integrated risk management culture is required as issues are in all types of industries. And with all this has emerged the concept of ERM (Enterprise Risk Management). ERM is gaining increased attention from insurers as well as by other organizations.

Actuaries, with their skills and expertise of identifying and quantifying risks, making assumptions and communicating complex results play an important role in ERM. They have long term understanding of financial business and a good knowledge of the insurance business. Historically, work areas of Actuaries were primarily pricing, valuation, modelling, asset liability matching and experience analysis and reporting. But over the last decade, a lot of focus has shifted

on Solvency-II, Basel-II/III and ERM, for all of which Actuaries provide valuable inputs. Actuaries are involved in various stages of Solvency-II –determination of economic capital, risk management and production and disclosure of end results.

Mr. Mukherjee also talked about the risk management control cycle of IMMMR (Identification, Measurement, Management, Monitoring and Reporting). The cycle is widely used in the risk management process of the insurance companies as well as the banks.

Mr. Sonjai Kumar continued with the presentation by highlighting the various opportunities that Actuaries have in the risk management process in the banking sector. A lot of similarity can be drawn between the insurance and banking sector, such as long term nature of their liabilities and assets, capital requirements and exposure to economic risks and operational risk. Actuaries having an experience in managing the solvency of insurance companies can also help banks to better understand and manage their insolvency risks.

Mr. Kumar concluded the presentation with some suggestions to the Actuarial profession for development of ERM. Some of these include having an ERM committee to oversee the development of ERM in India and widening the scope of study materials to include more recent case studies. The concept of ERM will continue to gain even further momentum in the future.

The presentation drew attention towards contribution of Actuaries in the process of ERM. The scope of Actuaries does not end with what is currently witnessed in the industry. The experience and skills of the Actuaries provide them a wider opportunity to increase their role in ERM and with an increased professional development we will soon witness this change.

Topic : Issues in implementation of ERM in Non-Life Insurance Company

Speaker : Mr. Atmaram Cheruvu

The last presentation in the session spoke about the enterprise risks of a P&C (Property and Casualty) insurer.

Mr. Atmaram Cheruvu started his presentation by emphasizing that insurers who take on risk from the policyholders and are themselves exposed to a variety of risks. One of such major risks is the assumptions that are made for various calculations and measurement.

According to the Banana survey (2013), actuarial assumptions lie in the top 10 risks that the industry is exposed to.

Currently, there are various limitations in measurement of risks the insurers are exposed to. Some of the major enterprise risks to a P&C insurer are insurance hazard risk, financial risk and operational and strategic risk. **Mr. Cheruvu** also focused on the fact that in the process of identifying and transferring risk that insurers are exposed to, heterogeneity of portfolio is an important consideration.

The presentation, though had some specific references to the non-life insurance companies, told us that the task of risk management brings with it challenges which need to be effectively managed for an effective ERM by the insurance and financial enterprises.

The session concluded with a discussion on how operational risk is estimated, where speakers gave their perspectives and practices followed in different countries. **Mr. Simon Walpole** said that past data and case studies can be used to estimate operational risk. **Mr. Rajiv Mukherjee** added that in New York 10% of Value-at-risk is taken as operational risk. However, this is very difficult to estimate and there will always be some residual risk.

The session, chaired by **Mr. B N Rangarajan**, brought to us a structured view of ERM. ERM provides a huge opportunity for the Actuarial profession. But at the same time, it is a challenging field. The challenge is not just about managing risk but starts from the definition of risk itself. ERM is gaining widespread importance in the industry and is expected to gain further momentum with increasing awareness and continued professional development. Actuaries should further add to this with their active involvement in the financial analytics and widening of their role is the risk management process.

ABOUT THE AUTHOR



Ms. Shristy Agarwal

is works with the Life Insurance department of Towers Watson as a Senior Analyst. She is a student member of the Institute of Actuaries of India.

shristy1218@gmail.com

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CONCURRENT SESSIONS ON GENERAL INSURANCE AND HEALTH INSURANCE

VENUE:

Renaissance Mumbai Convention Centre Hotel, Powai

Date: 2nd February, 2015

Organized by:

The Institute of Actuaries of India

Session 1: Panel Discussion- Regulation, Actuarial and Business Issues

Chairperson: Mr. Biresh Giri

Speakers : Mr. Mayur Ankolekar, Ms. Tania Chakrabarti



Mr. Mayur Ankolekar

Mr. Ankolekar explained Behavioral Finance in Non-Life Actuarial Work. He said that when estimating reserves, it is very likely that the Actuary's estimate be influenced by what he hears about a class of business or what he perceives as a result of certain knowledge about the general environment (subjectivity). He discussed four theories in Behavioral Economics that contribute to this subjectivity- Anchoring, Money Illusion, Prospect Theory and Mental Accounting. So how do we reserve correctly; more objectively? Mr. Ankolekar suggested that an Actuary should not work alone. Forming a provisioning committee, for example, comprising of the CEO and the Senior Leadership, may help to provide an independent overall view. The provisioning committee can meet before the actuary starts the reserving process, in order to draft an input for the Actuary's estimations.

He concluded by stating that the role of the Actuary in General Insurance Risk management has increased since the regulator made it compulsory for the Appointed Actuary to also be a full time Actuary of the Company. The Actuary has moved from a reserving role to being seen as a 'partner' in business. Regulations are demanding increasing involvement of the Actuary in various business roles, driving decision-making to be more and more objective and unbiased.



Ms. Tania Chakrabarti

Ms. Chakrabarti spoke about the trends in court awards of Motor Third Party (TP) Claims. She discussed how all key indicators of TP claims court awards show an increasing risk. Although not mandated by regulation, she suggested that the Actuary must separately estimate IBN(Y)R (Incurred But Not Yet Reported) and IBNER (Incurred But Not Enough Reported) claims. IBN(Y)R can be more objectively estimated. However, IBNER estimation involves a great deal of subjectivity. The two are different by characteristics, and although a combined estimate may not be incorrect, the need to analyze these two separately cannot be overstated. It can be used either as the main method of estimation or at the least, as a check on combined reserving through traditional methods. She stressed that structured feedback is very important for this; and that transparency within the company helps people understand and appreciate actuarial judgment.

Mr. Giri concluded the session by saying that it is important to segregate the



Mr Biresh Giri

IBN(Y)R and IBNER estimates, and that it can be done best when the Actuary receives quality inputs from the various heads of department in the company. It will help form a clearer picture of things for the company as well as the regulator.

Session 2: Actuarial 20/20: Modernizing the Actuarial Function



Mr. G. N. Agarwal

Chairperson: Mr. G. N. Agarwal

Speaker: Mr. Darryl Wagner



Mr. Darryl Wagner

Mr. Wagner started the presentation by explaining that **Actuarial Modernization** is aimed at Improving business value and effectiveness of actuarial functions. Actuarial Modernization encompasses assessing actuarial processes, establishing

‘end-state vision’, freshening up systems to provide end-to-end solutions, enhancing data availability, optimizing actuarial information, redefining actuarial talent strategies and building an enhanced governance structure around actuarial systems.

There are numerous drivers for the need for Actuarial Modernization, both internally-generated as well as in response to regulatory requirements. Key Issues could relate to:

1. Technology

Outdated systems, limitations to capabilities and tools, heavy reliance on manual processes and end-user computing (e.g. spreadsheets); Decentralized and segregated actuarial systems leading to redundancies and inefficiencies

2. Processes

Manually intensive processes, wasted time spent reconciling and/or explaining results, Actuarial staff spending material amount of time on data capture, validation and production instead of analysis; lengthy valuation run times and actuarial close process

3. Data & Reporting

Intensive data collection process requiring significant resources, lack of consistent data definitions driving inefficiency and creates reconciliation requirements, sourcing and storage of data is performed inconsistently across actuarial processes, plan-to-actual variance analysis is not sufficiently granular undermining the ability to explain movements in results

4. Governance

Limited controls of coding changes in modeling systems resulting in integrity issues; Decision rights, risk ownership are unclear; the process for risk oversight is informal and inconsistent; lack of documentation (e.g. undocumented controls)

Addressing these challenges requires an integrated approach with long term view. Actuarial Modernization seeks to shift the Actuarial function from Operational roles into more Strategic roles for the business. Implemented well, this will lead to improved efficiency, enhanced controls,

increased effectiveness and improved talent management. In conclusion, the execution of an Actuarial Modernization plan could look like this:



Mr. Wagner stated that **Actuarial Model Governance** is also gaining importance in the industry given:

- ✘ Potential for adverse consequences from decisions based on incorrect or misused model results
- ✘ Financial loss
- ✘ Poor business and/or strategic decision-making
- ✘ Damage to an organization’s reputation
- ✘ Actuarial projection models are becoming more integral to financial reporting, planning, and management at insurance companies, and their importance is being recognized by senior management
- ✘ Multiple uses of a common model require additional care in the maintenance and management of model changes
- ✘ Increased scrutiny of regulation

While many companies acknowledge the need and benefits of Enhanced Model Governance, several hurdles remain to be overcome including resource constraints, company cultural barriers and organizational structures, and company’s collections of systems and related processes.

Implementation	Operating Model	Maintenance
Focus: Framework	Focus: Transformation	Focus: Institutionalize
Chief Components: • Policies & Standards • Process Flow • Model Inventory • Documentation and System Clean-Up • Testing • Computing Environments	Chief Components: • Organizational Structure; Adaptations • Roles & Responsibilities • Ownership – Who Does What Where? • Training	Chief Components: • Formal Change Management • Release Calendar and Impact Documentation • Documentation and System Lock-Down • Formal Validation • Ongoing Refinement

Effective model governance establishes a cohesive framework to govern the actuarial and risk modeling activities within the organization. It is composed of several component items.

Documentation is key to the viable implementation of a model governance framework. To this end, five key documentation items exist to facilitate proper memorialization of governance compliance activities: Model Documents, Testing Package, Model Release Memo, Change Request and Validation Report. Documentation should be sufficiently detailed such that a) model users unfamiliar with a model can understand how the model operates, its limitations, and its key assumptions, and b) the model can be replicated by a knowledgeable developer

Lastly, the **Test Plan** defines the approach of how testing of model and model changes will be performed, and which test types will be utilized. It is often useful to incorporate testing thresholds, materiality considerations, and measurement metrics for applying thresholds within the Test Plan.

Session 3: Health Insurance- Consumer Behavior and Risk Evaluation

Chairperson: Mr. Andrew Wong

Speakers : Mr. Arjun Kumar Kanduri, Dr. Sidharth Kachroo

Dr. Kachroo spoke about the Concepts and Impact of Risk assessment in India. He highlighted an increasing trend for demand of Health Insurance in India and stated that “Increasing consumer demand will continue as the Indian economy grows”.

Next, he showed how underwriting

defers between Health Insurance and Life Insurance on basis of various parameters like the Risk of Adverse selection with single claim and multiple claims, evaluation of Excess of Mortality (Life) and of Morbidity (Health) with regards to the availability of data and complexity of products, medical inflation, claim frequencies and fraud risk. All these parameters add to the complexity of underwriting health products.



Dr. Sidharth Kachroo

Next, **Dr. Kachroo** discussed the concepts and Impact of Risk assessment in Health Insurance. He highlighted that knowing the risk well is important in order to be able to ask for premiums based on the equivalence principle and to achieve a profitable, competitive portfolio. Two aspects to this are Risk adequate premiums and Adverse selection. He discussed a few examples of underwriting indicators using statistic correlation, and possible underwriting results, advantages

and disadvantages of general and specific exclusion instead of risk loading, concept of risk loading and the importance of medical diagnosis at the application stage and policy rejection.

In conclusion, **Dr. Kachroo** highlighted the need for active management of cost and risk in Health Insurance.



Mr. Arjun Kumar Kanduri

Mr. Kanduri first introduced the concept of Behavioral Economics (BE). The decision making process of a customer is influenced by a number of circumstances and factors. BE is nothing but understanding the Emotional, Social and Psychological need of the customer. Applying BE to Health insurance shapes the way one does business. He explained influences on human behavior through the concept of MINDSPACE i.e. Messenger, Incentives, Norms, Defaults, Saliency, Priming, Affect, Commitment and Ego.

He stressed that BE is real and has been proven to improve the behaviors towards

better decisions. He explained this using a game theory which showed that the quantum of gaining (or losing) at varied probabilities has strikingly different human behaviors (decisions), and where how insurance fits into the game.

Lastly, he discussed how BE can be applied in to insurance to:

- Address low insurance penetration
- Reducing non-disclosure rates
- Drive product design innovations

He concluded the session by saying that Actuaries armed with predictive capabilities should add BE skills to guide the Health Insurance forward.

ABOUT THE AUTHOR



Ms. Mitali Zaveri

is part of the Actuarial Team at Cigna TTK Health Insurance. She is a student member of the Institute of Actuaries of India.

mitali_zaveri@yahoo.co.in

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CONCURRENT SESSIONS ON PENSION & OTHERS

Venue:

Renaissance Mumbai Convention
Centre Hotel, Powai

Date: 2nd-3rd February, 2015

Organised By:

Institute of Actuaries of India

Session 1: Regulation, Actuarial & Business Issues

The first concurrent session on Pension and Others began with introductory remarks by the chairperson **Mr. Saket Singhal**, Consulting Actuary, India. The other panellists were **Mr. A. D. Gupta**, Consulting Actuary, **Mr. Charan Gupta** Consultants Pvt. Ltd and **Dr. K. Sriram**, Consulting Actuary, India



Mr. Saket Singhal

In his opening remarks, **Mr. Saket Singhal** highlighted four key risks associated with Retirement Benefits namely longevity risk and the fact that we do not have too many associated research studies in India, risks associated with asset valuation, risks associated with defined contribution schemes in a falling interest rate regime and understanding risk to companies due to warranties.



Mr. A D Gupta

Mr. A D Gupta focused on the regulations, actuarial and business issues relating to consulting actuaries since scheme actuary

concept is not prevalent in India. He talked about Professional Conduct Standards (PCS), Guidance Notes and Actuarial Practice Standards and discussed at length on the challenges associated with the current level of completeness of the Actuarial Practice Standards. Key professional issues discussed were relating to desired consistency and level of professionalism. He also mentioned about the level of clarity that is required in PCS and various standards that are issued by the Institute to ensure compliance by the consulting actuaries for greater effectiveness of the profession.

There were discussions around some other “non-traditional” areas that actuaries advice on, like valuation of liabilities of the Companies towards warranties, Credit/reward/loyalty Points etc.



Dr. K Sriram

Dr. K Sriram discussed various business opportunities for the actuarial profession. While the core of the current business is to enable the client to meet measurement and disclosure requirements under different Accounting Standards, there are possible extensions where actuarial knowledge can be used effectively. Some examples are valuation of Interest Rate Guarantee, valuation of Warranty Claims, valuation of Loyalty Plans, ESOP Valuation etc. Some more areas are Human Resource Accounting (Levy-Schwartz Model) and valuation of Intangible Assets like Brand Valuation.

The changing macroeconomic environment requires a focus on Defined Contribution schemes and a better understanding of an adequate replacement ratio where actuarial knowledge can be used effectively.

From the perspective of key professional issues that the profession is being exposed to be mentioned specific areas that need attention. For instance, we need to ensure that there is consistency in our approach to assessment of liabilities and assets and also have a more robust approach to modelling interest rate guarantees. He very nicely used the acronym ERM for “Ethical Risk Management” to drive home the need for understanding various sources of reputational risk for the profession.

In the ensuing Q&A session, there were interesting discussions around various other areas where actuarial knowledge/techniques can be used effectively. A particular aspect that needed attention was being a part of registered valuers in India. This would ensure that the actuarial profession is recognised in other wider areas. There was also a specific discussion around the need for revamping the Guidance Notes/Actuarial Practice Standards to make them more robust.

Session 2: Accounting Standards on Employee Benefits (AS 15)

This session was chaired by **Mr. M M Chitale**, CA, Partner, Mukund M. Chitale & Co, India **Dr. Avinash Chander**, Technical Director, ICAI, India and **Mr. Dinesh Khansili**, Partner - Mithras Consultants - An Actuarial Firm, India as the panellists.

The chairperson opened the session by talking about the expectations from the actuarial profession the key elements being a basic actuarial education, continuous professional development and transparency.



Mr. Dinesh Khansili

The first speaker **Mr. Dinesh Khansili** in his presentation on “**Serving the Public Interest: Co-existence of Accounting and Actuarial Profession**” talked about co-existence of accounting and actuarial profession and quoted many interesting

publicly available statements from UK on the actuarial profession.

While taking the audience through some recent news on criticism of the profession, he emphasized the need for Actuarial professionals to have to look at their professional activities so as to have a larger context with non actuaries. Effective communication with non-actuarial personnel would go a long way to help in this regard.



Mr. Avinash Chander

Mr. Avinash Chander spoke on “Improving Disclosures in Financial Statements - Strengthening Corporate Governance”. He focused on the importance of disclosures in corporate governance. He highlighted some key imperatives for quality disclosures like identifying the people responsible for disclosures and content of disclosures that are relevant to stakeholders. He walked the audience through some key clauses of the Accounting Standards 15 (rev) and drew aspects that reiterated the importance of transparent disclosures. Mr. Avinash Chander emphasized on three key principles of accounting standards namely recognition, measurement and disclosures highlighting the onerousness of disclosures when standards become principals based as is the case under the recently notified IND AS standards. He updated the audience on the “disclosure initiative”, a framework aimed at identifying common concepts prevailing across all disclosures and statements that has been undertaken by the International Accounting Standards Board (IASB)

The chairperson **Mr. M M Chitale** wrapped up the session by discussing evolution of the accounting standards and recapped critical dimensions of actuarial valuations namely actuarial assumptions that need to be logical, consistent and transparent. He highlighted aspects that help in developing profession and



Mr. M M Chitale

professionalism like education and training, greater communication with other professions, peer review and bridging the gap between expectations and delivery.

Day 2 – 3rd Feb 2015

Session 1: IAI Research Paper

This session was based on a recent study by the Institute of Actuaries of India. The session was chaired by **Mr. K K Wadhwa**, Consulting Actuary, India and the presentation was by **Mr. Vinod Kumar**, Head of Research, IAI, India who headed the study was on salary scales in PSU Banks in India. He presented highlights of the study as well as the key observations. Given the importance of salary



Mr. K K Wadhwa & Mr. Vinod Kumar

assumptions to project future cashflows in actuarial valuation of employee benefits schemes, the outcome of the study was very pertinent to practicing actuaries in the employee benefits space. In the presentation Mr. Vinod Kumar walked the audience through the objectives of the study namely study of progress in basic salary and dearness allowance viz- a- viz CPI movement as well as arriving at long term trends in basic salary, basic salary plus dearness allowance and consumer price index. He discussed various models that were used to fit the data as well as their limitations and relevance to the context.

He concluded the session by mentioning broad thumb rules around how to arrive at best estimates for future salary increase

assumptions to be used for valuing employee benefits liabilities for public sector banks.

During discussion, it was felt that this study will help the practicing actuaries deciding salary increase assumption for all public sector undertakings having similar pattern of salary revisions & dearness allowance increases.

Session 2: Global Update on Retirement

The last concurrent session on Pension and Others at the 17th GCA was chaired by **Mr. K Subrahmanyam**, Consulting Actuary, India. **Mr. Kulin Patel**, Client Account Management, Towers Watson, India and **Ms. Sakshi Gupta**, Process Champion, Mercer Consulting India Pvt. Ltd., India were the panellists.

The first presentation was by **Ms. Sakshi Gupta** who talked about “Canadian Mortality Studies”. She highlighted the objectives, the broad approach and the outcome of the study. The primary objective of the study was to validate the relevance of mortality tables based on US data to reflect mortality experience of the Canadian population and to develop new mortality tables and improvement scale for Canada (if required). Data collected from pension plan contributors from 1999 to 2008 was used for the study. Three types of mortality rates were published - 2014 Mortality table (CPM 2014), 2014 Public Mortality table (CPM 2014 Publ) and 2014 Private Mortality table (CPM 2014 Priv)

Ms. Sakshi also talked about the Industry Mortality Study in Canada that focused



Ms. Sakshi Gupta

on four industries - Paper & forest industry, Metals & minerals industry, Universities and Financial industry. The study concluded that that mortality rates are lower for retirees with higher pension amounts. The study would be very helpful

to do a realistic assessment.

The study can lead to more realistic liabilities to the Defined Benefit pension plans and less exposure to external factors such as having to rely on more general mortality studies.

The second session was by **Mr. Kulin Patel** who presented on “Global update on



Mr. Kulin Patel

Retirement Benefits”. He used a good analogy of a sandwich for the agenda which had three key elements - macro aspects on various countries at the top and some key areas that emerged in research on what individuals are thinking of in terms of retirement at the bottom. The layer in between articulated how the macro aspects and individual needs have really come together in some countries.

Mr. Kulin pointed out that demographic dividend has become a liability in developed countries. He compared the demographic dividend of BRIC countries with that of MINT countries which indicates that Demographic advantage of BRIC countries is beginning to wane while MINT countries are in prime favorable years which may soon evaporate.

Kulin mentioned that from an employee perspective, research has indicated that retirement plan from employees is one among top two sources of income of employees. Employees are increasingly concerned with an expected fall in living standards and working longer is the topmost option to manage inadequate savings. Large number of individuals in developed economies now expect to work past 70.

The key takeaways were that one needs to understand the paradigm shift from B2B to B2C that is taking place i.e. the client is shifting from an employer to an individual. Pension reforms across the globe are recognising this need for change and introducing tax or other incentives to improve individual retirement savings.

ABOUT THE AUTHOR



Ms. Preeti Chandrashekhar

is the Practice Lead for South India of Towers Watson India's Employee Benefits practice. She is involved in the full range of actuarial and consulting services in Employee Benefits space including developing and delivering in actuarial valuations for accounting and funding purposes, advising on scheme design, implementation, redesign, advice on fund manager selection.

Preeti.Chandrashekhar@towerswatson.com



Funny Actuary

Two people are flying in a hot air balloon and realize they are lost. They see a man on the ground, so they navigate the balloon to where they can speak to him. They yell to him, “Can you help us – we’re lost.” The man on the ground replies, “You’re in a hot air balloon, about two hundred feet off the ground.” One of the people in the balloon replies to the man on the ground, “You must be an actuary. You gave us information that is accurate, but completely useless.” The actuary on the ground yells to the people in the balloon, “you must be in marketing.” They yell back, “yes, how did you know?” The actuary says, “well, you’re in the same situation you were in before you talked to me, but now it’s my fault.”

- submitted by David Fountain fountain@supernet.net

Venue:

Renaissance Mumbai Convention Centre Hotel, Powai

Date: 2nd February, 2015

Organized by:

Institute of Actuaries of India



The Number Champs

The study of mathematics, like the Nile, begins in minuteness but ends in magnificence. So we hope is the case with around 2,500 children from various public schools of Mumbai whose journey through the world of mathematics we (a bunch of actuarial students) aim to ease. They no longer see mathematics as just a subject to study in school but rather as a way of life.

We have had lovely sessions with students from three non-profit non-governmental organizations – **Doorstep, Muktangan and Project Street Children (MSWC)** and so often we find that the students we are trying to inspire, end up inspiring us!

Our Pedagogy

Apart from the intriguing 40 minute sessions we have had in various public schools who have partnered with these NGOs, we also conducted a 5 week personal interactive sessions and focused on every student individually.

We initially started with explaining the basic concepts of mathematics, for example, BODMAS, fractions, equations, etc with the help of real life situations which completely engaged them into the subject and helped to understand things in a better way. Our intentions are not to proxy the school teachers, but instead supplement them.

Our stories astound our young audience and urge them to find the answers to some of their own questions. One such question was how 'zero' originated and why we write it the way it is written today. We also make it a point to touch upon some tricky math topics like prime numbers and square roots and make them easy to assimilate and apply.

Event Highlights

This year we invited 26 of our students ranging from the age group 10 to 15 years from various NGOs to join us for the 2015 AGFA event and for a glimpse of the actuarial world. The math champs underwent two rounds of competition; we

began with an objective written test which was followed by a buzzer round. The kids took the competition head on by completing the first round well within the allotted time. Hence it was a challenge for the organisers to shortlist 12 students for the final buzzer round. The kids were delighted by the innovative buzzer round where they to basket a ball first into a big bowl in order to get the opportunity to answer the question.

Mumbai being the home ground of Bollywood, we decided to challenge the kids with an unusual song competition wherein each child was asked to list songs which contained a Math element in it (say a number or any math term in the lyrics). We witnessed an overwhelming competition amongst the kids who created exceptional lists of songs within a span of 3 minutes with one clear winner jotting down a maximum of six songs.

Speakers

The students were enthralled to interact with some of our dear actuaries- **Mr. Frank Ashe**, Owner, Quantitative Strategies (Australia) who brought about an exuberant insight to maths, positive energy and inspiration to the kids. He even shared a small trick of the trade revolving around odd and even numbers. Everyone was fascinated to have learnt something new and was keen to find its application in their problems. Subsequently, **Ms. Fiona Morrison**, President-elect, IFoA, caused a stir among the students by speaking about her connections with Math during childhood and how she was drawn towards Actuarial Science. She encouraged the students to follow their dreams just like she did and made them believe that dreams do come true with sheer hardwork.

We also had **Mr. Sandeep Goenka**, Director at E&Y, address the students. He introduced them to a game we all might love playing in our past time- Sudoku.

Prizes and more

The next part was where everyone was at the edge of their seats! It was time to announce the winners who were awarded with a scrabble game in Devanagari script. **Mr. Dhiraj Sharma, Mr. Fareen Ansari and Ms. Prachi More** from the junior batch were felicitated by **Ms. Fiona Morrison** and **Mr. Dilip Chakraborty** (IAI) felicitated **Mr. Atul Gupta, Ms. Jhanvi Sonkar and Ms. Bhargavi Satyanarayan** from the senior batch of students. Also, I'd like to make a special mention of the whiz kid **Mr. Dhiraj Sharma** for his exceptional performance. **Ms. Manisha Bharti**, a student from Project Street Children (MSWC) was awarded for the spot musical contest by **Mr. Mayur Ankolekar**.

We are very grateful for the leadership and support of the staff at the Institute of Actuaries of India and **Mr. Mayur Ankolekar** for this wonderful initiative.

Later, the kids enjoyed a lavish dinner alongside the picturesque lake side view before leaving for their respective destinations with content smiles making us feel proud and enriched.

Mr. Harriet Martineau wisely said, "What office is there which involves more responsibility, which requires more qualifications, and which ought, therefore, to be more honourable than teaching?"

ABOUT THE AUTHOR



Ms. Khushbu Shah

is a student member of the Institute of Actuaries of India and the Institute and Faculty of Actuaries (IFoA).

khushbushah955@gmail.com

IAI Student Event: Mastering the Elevator Pitch

Venue:

Renaissance Mumbai Convention
Centre, Powai

Date: 2nd and 3rd February, 2015

Organized by:

Institute and Faculty of Actuaries, UK

Synopsis of the Event:

The event was chaired by **Mr. Derek Cribb**, Chief Executive of the Institute and Faculty of Actuaries (IFoA). This plenary session looked at the soft skills that are required alongside the technical actuarial skillset to be effective in day to day work. To be a successful communicator, it is vital for one to be accomplished in getting key messages across to non-actuarial audiences so that the impact of the advice is understood. Derek, in this interactive session explained the importance of softer skills and provided pointers to help improve verbal communication abilities and to recognise good communication when one sees it.

On the second day, after having heard **Mr. Derek** explain the importance of soft, business skills and how to perfect the elevator pitch students were allowed to put to practice the hints and tips picked up from the day before. Hosted by **Mr. Paul Reynold's**, the IFoA's Director of Public Affairs, individuals were able to deliver their elevator pitch to a judging panel comprising **Mr. Fiona Morrison** (IFoA President-elect), **Mr. Derek Cribb** (IFoA Chief Executive) and **Mr. Dilip Chakraborty** (IAI).

Day 1**Session Title: the Elevator Pitch****(1) Work Based Skills:**

Speaker: Mr. Trevor Watkins

Trevor introduced the subject which was the first part of the session. He explained why Work Based Skills (WBS) is essential. IFoA is a professional body and not a university offering a degree. It offers



Mr. Trevor Watkins

a qualification which prepares a person for a life as an actuary. The qualified actuary needs to be "fit for the purpose", which includes the following:

- Theoretical knowledge- obtained thorough exam system
- Practical skills- obtained through exam and work based skills
- Professionalism – in order for public to rely on the actuary to act in public interest

The Actuaries' code in the UK deals with public interest. Actuaries are increasingly required to work in multidisciplinary teams and this makes effective communication very important. Actuaries' need to understand the inter-relationships between theory and practice, within commercial environment & within professional and ethical framework and in working with lots of different audience.

What are the things that an actuary needs to do, to be fit for the purpose?

- Recognize public interest
- Think in terms of consumer and company needs
- Understand the business context and not just the mathematics
- Understand the uncertainty in business environment
- Communicate to a wide range of audience, especially to people who may not understand their work

Aims of WBS

WBS involves reflection/self-assessment by an individual of his skills across

key dimensions and focussed self-improvement based on defined goals in key development areas. It aims to help develop actuaries as individuals which is necessary besides passing exams. It also seeks the views of supervisor to help the student reflect on his capabilities as well as identify areas of improvement and set goals to achieve them.

Process of WBS

Complete learning logs over period of qualification. This may be demanding but it is important for developing range of competencies in workspace. The WBS emphasizes development on seven key dimensions namely, technical application of actuarial skills, judgement, professional and ethical, communication, commercial, information and communication technology, and management.

For actuaries who deal with numbers and therefore are used to "right" or "wrong" answers the use of judgement is essential. Management experience can only be gained from practical experience. WBS ensures that qualifiers possess a range of different experience, and not just technical expertise in a particular area.

Employer support for WBS is important as it:

- Creates a well-rounded actuary
- Ensures that the students get a breadth of skills as they develop
- Show commitment to WBS not only exams
- Ensures supervisor gives time for feedback on development and is tied with appraisal system ideally
 - Accreditation is available for employers, which involves own assessment of WBS. The institute encourage employers to explore this option

(2) Mastering your elevator pitch

Speaker: Mr. Derek Cribb

Mr. Derek is the CEO of Institute and Faculty of Actuaries and started with an introduction on the importance

of communication for actuaries, an area which has traditionally been a challenge. The session commenced with Mr. Derek asking the audience to introduce themselves to their neighbour in a few words.



Mr. Derek Cribb

Mr. Derek introduced the topic by talking of communicating in executive presence and the importance of knowing the needs and expectations of people being communicated with. A big complaint against actuaries is that they talk in jargon and in great detail about the mechanics of their job. Senior executives don't need the details, they are more interested in the essence of the analysis. It is therefore essential for actuaries to understand the needs and expectations of the audience and be clear about what knowledge one wants to transfer.

Important aspects of good communication that were highlighted were:

- Communicate with confidence: lots of people talk but confidence gets you noticed
- Ask yourself if you will fit in an executive environment
- Learn to be a part of a team and operate at the same level
- Non-verbal cues are extremely important. Avoiding eye contact, shifty behaviour, or overbearing and dominating traits are best avoided
- The message has to be simple and punchy and should enhance the profile of the presenter
- Behaviour: it is important to be approachable and not boss around. Be aware of the needs of the audience and adopt an appropriate communication style

- Be aware of what you want the people to take away from the conversation
- Body language: tone and voice are important. Be polite and build presence
- It is as important to influence peers as it is to influence superiors. However by and large the precepts remain the same

The most common pitch relates to a recruiting manager seeking to understand why they should consider you as a candidate over others who may be equally qualified and capable. The presenter should be concise, punchy and rational in his reasoning.

Preparing for an Elevator Pitch

- Focus is important since one has only about a minute to make the pitch
- The initial 15 seconds are important to make an impact on the listener
- The flow of information should be natural and logical. Do not waffle
- It is useful to practice (in front of a mirror, with friends) multiple times

As a continuation of this talk **Mr. Derek** and IFoA conducted a competition (scheduled for day 2 student event) where students were asked to pitch to the CEO of their firm (as a part of role play) and persuade them to support CAA certification of IFoA. The pitch was to be for a duration of 45 seconds. They would be evaluated by a committee of 3 people and the top contender would receive an apple Ipad as the prize.

More than 20 students volunteered to take part in the competition where they made a pitch to Trevor Watkins who acted as a CEO of a company. Their pitch was evaluated by a panel of 3 judges: Fiona, Dilip and Derek. The volunteers were evaluated by the panel of judges and the audience feedback was taken in the form of the decibel reading of their collective applause.

The panel rated each presenter and emphasized the following points:

- Pace/Speed of delivery of the content
- Overall Content
- Body language: confidence, eye contact, body posture, use of hands to emphasize, don't dance around or keep hand in pocket (diffident posture), firm feet on the ground
 - Body posture is really important for delivering the message
 - Avoid nervousness
- Don't be overconfident
- Persuasiveness
- Clarity of the message
- Focus on the theme
- Good opening (initial 15 seconds to capture attention)
- Need to introduce oneself first so that the CEO remembers you
- Engaging and enthusiastic personality
- Pausing to emphasize, audience knows something is coming
- Do not be casual (such as saying Hi to the CEO)
- Finally Practice, Practice, Practice...

The top 5 contestants were

- 1) Dipti Choudhary: Winner of iPad
- 2) Nidhi
- 3) Swati
- 4) Nikita
- 5) Ripudaman

ABOUT THE AUTHOR



Mr. J V Prasad

has been working as VP-Actuarial in ICICI Lombard General Insurance Co. for the past 7 years. His area of experience primarily relates to reserving and pricing. He is fellow member of Institute of Actuaries of India as well as Institute and Faculty of Actuaries of UK.

jv.prasad@icicilombard.com

Enterprise Risk Management (ERM)

This article describe how ERM helps in providing good framework of capital allocation, optimizing the return and manage projects within the Company in a given the risk and return objectives.

History

Historically, in the life insurance risk management sphere, reinsurance has been used as a tool to manage the mortality/morbidity risks. As a part of financial risk management in early 1970s, financial derivatives were developed by investment banks to manage the risk of exchange rate movement, commodity price, and interest rate and stock prices. As a part of general management, contingency planning and business continuity planning were used to be part of risk management. This has now been topped up with corporate governance to give the shape of enterprise risk management.

Development of ERM

However, it was realized that fragmented approach to risk management does not work as the risks are highly interdependent and cannot be segmented and managed independently, there is also a higher cost of management of risk if handled independently as the benefit of diversification does not come into force. Other advantage of ERM is the integration of risk management across the organization helping them in getting the overall view of risks within the organization.

What is ERM?

There is a no standard definition of ERM, however it must cover the key concepts such as it allows integrated Companywide approach rather than silo; it allows considering the concentration of risk and give benefits of diversification of risk and there is a holistic approach to risk management.

Financial Sense of ERM

ERM help in creating the right balance between the demands of the key stakeholder in the insurance business such as Shareholder, Policyholder, Regulator and Rating Agencies.

There is an interesting dichotomy that

senior management must balance the need of increasing the company's value and policyholder's security needs. Shareholder would be interested to have least amount of capital a company can hold while a policyholder, on the other hand, is almost always concerned about insolvency and wants a company to hold the most capital they possibly can and doesn't really care what the shareholders get in terms of return. On the other hand the two other stakeholders regulator and rating agency are also interested in policyholder's security and solvency of the Company.

So what is the appropriate level of capital that a Company must hold to maintain sufficient level of solvency keeping all key stakeholders happy? What's the appropriate return on capital that Shareholder's want and how to minimize volatility of return? ERM answers these questions.

Capital

Policyholder is interested in capital, they want to buy from people with strong solvency, and on the other hand owners are interested in expected returns and the minimization of volatility of returns. For this purpose a process is required to assess risk, determines necessary capital based on risk levels and required returns, looks at the volatility, and figures out how to minimize volatility. For this there is a need to move from policyholder's interest to shareholder's interest.

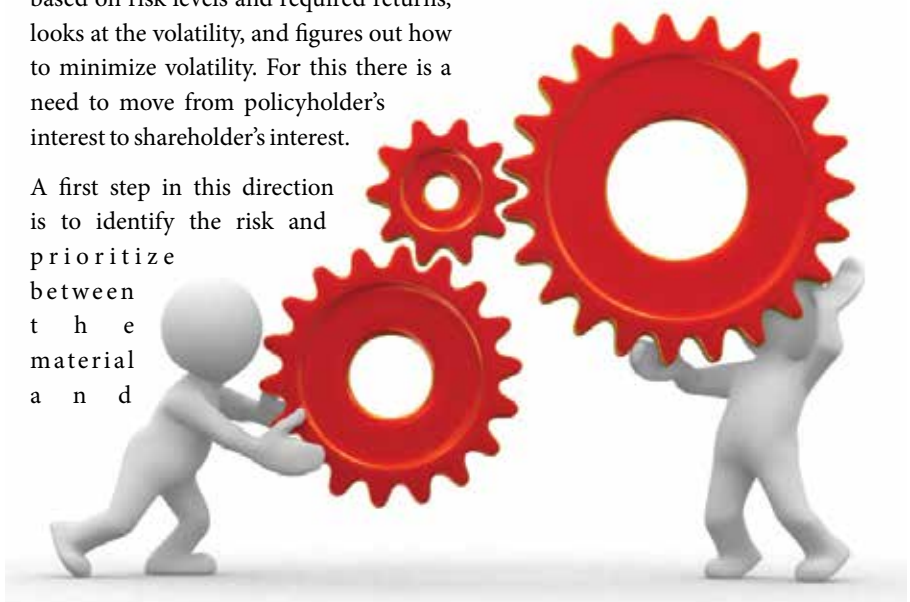
A first step in this direction is to identify the risk and prioritize between the material and

immaterial risk and focus on material risk. Determine how to model and quantify those key risks. This could be performed using stochastic modeling. One of the methods often used for risk assessment is Value at Risk (VaR) which gives rise to economic capital for each risk pre-diversification and allow diversification effect to arrive at Company level economic capital. The value at risk is calculated as maximum loss that a company can face at a given confidence level (99%) within certain time frame (a day or a year).

Once the capital is allocated, there is a need to look at the return on capital. The shareholder's interest is to minimize the variance of the return to stay ahead in the capital market, for this purpose the Board must define and pre-fix the risk appetite (the standard deviation on the return) to maximize the return on the portfolio for the management to focus on. The expected return on the portfolio can be found from capital market line given the risk appetite ($\sigma(A)$) on the portfolio as

$E(P) = r + [E(m) - r] / \sigma(m) * \sigma(A)$, r is the risk free rate and $E(m)$ and $\sigma(m)$ is the mean and standard deviation on the market.

Using this risk and return trade off at an enterprise level helps in taking the decision on which



projects/products to allocate capital and which one not.

So the objective is achieving the return on the capital as $E(P)$ given the risk appetite $\sigma(A)$ in making the decision at a Company level for different jobs and projects within the company may be broken down into small projects such that the weighted return is $E(P)$ and overall risk is $\sigma(A)$. Essentially, while the management is focusing on the upside opportunity, CRO is focusing on $\sigma(A)$ and tail risk. Any return over and above the $E(P)$ while staying within the risk appetite is the value addition to the shareholders. Risk management comes here handy in enhancing the shareholder value addition through helping in deciding which projects, which products, which decision to make and accept the risk. In the absence of such tool, the year-on-year variability on the return on company's price would be very high making its share suspect able in capital market.

While accepting the risk within an organization, the ERM framework provide

a working model of risk identification, risk measurement, risk management, risk monitoring and risk reporting so that overall risk remain within $\sigma(A)$. The risk management further provides tool of risk acceptance, risk transfer, risk avoidance and risk management. Risk governance is therefore important for smooth functioning of the risk management framework and taking the informed decisions. Risk governance cannot be successful without a good risk culture.

So ERM on the one hand helps in reducing the economic capital due to lower risks through risk management, on the other hand it helps in maximizing the shareholder value through keeping the Company within $\sigma(A)$.

Therefore, Solvency-II and Basel-II/III for insurance and banking institutions is based on three pillar approach, pillar-1 responsible for economic capital calculation, pillar-2 responsible for risk management and pillar-3 is for disclosure. When all the three pillars groove well within an organization, it helps in

improving solvency, optimizing profit and minimizing the capital.

In Summary, ERM helps in flowing right balance of life in all organs of an organization keeping the financial health at its optimum to run long distance marathon.

ABOUT THE AUTHOR



Mr. Sonjai Kumar

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

Sonjai.Kumar@avivaindia.com

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Pension Obligation Risk and Bank's ALM: The Case of Indian Public Sector Banks

1. Introduction

Presence of Defined Benefit (DB) pension liabilities is unique to Public Sector Banks (PSB) in India. In theory, both banks and the DB pension funds are liability investors. Pensions is a contractual obligation like deposits and is indexed to inflation (as against term deposits which are not indexed liabilities). Hence it is natural to view the asset-liability management (ALM) of PSB inclusive of pension fund liabilities. However, ALM guidelines by Reserve Bank of India (RBI) do not require banks to include pension liabilities as rates sensitive liability for calculation of duration gap. This is the genesis of this inquiry and the present study progresses in the following fashion.

Section 2 gives an exhaustive survey of ALM models used in banking. Section 3 gives a summary of RBI's guidelines on ALM for banks and also establishes that this line of reasoning of including pension liability in banks ALM has not attracted much attention in theoretical literature on ALM. This makes the present analysis original. Section 4 gives some pitfalls - practical and conceptual difficulties - in Indian context when we attempt incorporating pension liability in ALM framework of banks. Section 5 gives a rough estimate of the impact of inclusion of pension liability in ALM framework of PSB. Lastly, conclusion and discussion follows.

Literature survey of theoretical ALM models in banking

This section gives a fairly exhaustive survey of various models to solve the ALM problem specific to banks. The purpose of this section is to position this study among the wider literature and to draw comparison with present state of

regulation *vis-à-vis* the history of thoughts in the academic literature. Section 3 will touch upon these two aspects in some detail.

ALM models in banking are of various kinds. Following Rosen and Zenios (2006)¹ these models can broadly be grouped under four categories: 1) single-period static models, 2) single-period stochastic models, 3) multiperiod static models and 4) multiperiod stochastic models.

Single period static models

Single period static models are the simplest ALM models. They try to model the effects of a small change in the current state of world. The pioneering work in this category is the immunisation model of Redington (1952) which immunises the balance sheet for small parallel change in interest rates. The economic value approach used in banking is similar to Redington's. Single-period models may use explicit cash flow matching, also known as dedication to eliminate changes in risk factors. Banks use both these approaches with varying degree. But by far the most important single period model employed in banking is the gap/surplus management. The gap management approach is explained in detail in Bessis (2009). Basic premise of gap approach is to minimise the gap-difference between the rate sensitive assets and the rate sensitive liabilities, in various time buckets.

Although very easy to apply, single period models suffer for many drawbacks. Because these models hedge against effects of a small change in the current state of world they lack consideration for risk-return trade-off. Gap management has been criticised by Dermine (1991, 1993) on the grounds that the repricing gaps ignore payment of interest rates, coupons and taxes. Equity is most often slotted in

the non-interest sensitive bucket as if the cost of equity is not sensitive to changes in rate of interest. Such a treatment of equity is permitted from accounting and net-income perspective because the cost of equity is not included under the P&L accounts. However, from the finance perspective, economic profit is the right measure of profitability, which takes away from net income the opportunity cost of equity. Since the opportunity of equity is the rate on risk free bond, Dermine concludes that equity is interest rate sensitive. Dermine (2007) also highlight that this *ad hoc* treatment of equity in banks ALM creates inconsistency in bank practices. The inconsistency arises because banks control the impact of interest rates on the net interest margins (NIM) which ignores the opportunity cost of equity, while they evaluate the performance of business units on an economic profit basis which is net of opportunity cost of equity.

Furthermore, gap model is negatively affected by non-parallel shifts in yield curve, neglects credit risk and natural hedges on bank balance sheet. In the presence of credit risk, gap analysis cannot match liabilities with uncertain stream of cash flows. This problem is more severe for doubtful full claims (Barone-Adesi, 1994). The necessity to include credit, market, liquidity risk and operational risk has led to numerous extensions of Markowitz (1952) portfolio approach.

There have been attempts to improve upon deficiencies of single period static models. Zenios (1995) adapted the static immunisation to a stochastic environment by using Monte Carlo Simulation. Dermine (2007) moved beyond the conventional practice of restricting ALM to interest rate risk and liquidity risk. He proposed a theoretical framework to analyse both value creation and control of risk. To this end he used a neoclassical microeconomics based banking model.

1 Rosen and Zenios (2006) classification of ALM models is very general and covers models for all kinds of asset-liability entities such as insurance companies, pension funds, endowments etc.

His model was formulated in both single and multiperiod framework. Despite many promising features and useful insights Dermine (2007) model is difficult to apply in practice (also see section 2.3).

Single period stochastic models

Single period stochastic model specify a distribution (typically normal) for returns on asset and liabilities. Hence unlike the static models they explicitly incorporate and quantify risk-return tradeoff. The classical mean-variance approach or portfolio approach of Markowitz (1952) and extended by Sharp and Tint (1990) fall under category. Fried (1970) and Pyle (1971) are among the first studies that used the modern portfolio theory to solve the asset and liability selection problem for a bank. Fried's model maximised bank's expected profit subject to three constraints legal, liquidity and the probability that banks' profit will be less a specified amount 'e' will be less than a specified percentage 'a'. Pyle's on the other hand asked the question under what condition would a bank be willing to sell a given deposit liability and buy particular type of financial asset. The model excludes trading activity, matching of assets and liabilities, transaction costs and liquidity. It is possible to extend these approaches to construct more dynamic models but the approach may not be operationally efficient for large organisations (see Kusy and Ziemba, 1986).

Multiperiod static models

A multiperiod static model maximise the expected net present value using linear programming (LP) technique. The initial work in banking using these models is the Chambers and Charnes (1961) intertemporal LP model that maximises net discounted returns subjected to budget and liquidity constraints imposed by Federal Reserve Board. Other similar studies include Cohen and Hammer (1967), Seshadri *et al* (1999). Another subset of these types of models concentrates exclusively on bank liquidity management. Prominent studies on liquidity management include Komar (1971) and Fielitz and Loeffler (1979) who studied bank liquidity management problem in LP framework. Multiperiod static models have been primarily

criticised because they rely on single objective function – profit maximization – subject to linear constraints and their disregard for uncertainty.

The single objective function can be been modified to include multiple objectives. Following this reasoning, Giokas and Vassiloglou (1991) developed a goal programming model which sequentially optimised multiple goals for Bank of Greece. They argue that apart from maximizing profits, bank management tries to meet multiple objectives like minimise risk involved in allocation of bank capital, retaining market share, deposit growth etc. Other studies using goal programming are Kosmidou and Zopounidis (2002) and Kosmidou and Zopounidis (2004) where the authors incorporated uncertainty by combining goal programming with simulation analysis.

Multiperiod stochastic models

Multiperiod stochastic models allow both assets and liabilities to evolve randomly overtime. The earliest work in this type of models is by Brodt (1978) for Canadian Charter Bank. Brodt (1978) is a multiperiod LP under uncertainty based on Markowitz (1952) and an earlier model by Bradely and Crane (1972). Multiperiod stochastic models have a variety of frameworks prominent among them are – decision rules, scenario analysis, stochastic optimal control and stochastic programming. I do not go into details of each of these models but readers are invited to look at Section 2.3.4 of Romanyuk (2010) for detailed survey of these techniques. However I will highlight one study by Kusy and Ziemba (1986) which employs stochastic programming with simple recourse to develop ALM model for Vancouver City Savings Credit Union. Kusy and Ziemba (1986) is one of the few studies that address the dynamic portfolio allocation problem for a bank. Their main conclusion is that stochastic ALM is theoretically and operationally superior to corresponding deterministic linear programming models. However their model did not explicitly considered credit risk in ALM. After subprime crisis Drehmann *et al* (2008) and Allessandri and Drehmann (2010) have adopted a similar approach to Kusy and Ziemba's and integrated the joint impact of credit

and interest rate risk on banks economic value and capital adequacy.

Regulation in respect of ALM

In this section a survey of RBI's regulations in respect of ALM are presented. This section is divided into two parts: first is on ALM regulations and second on RBIs guidelines under Basel III. Particularly, the emphasis in this section is to highlight that there is a need to jointly view the transition under Basel III and guidelines for ALM because in the opinion of this author the dispensation under the Basel III warrants such an approach.

RBI guidelines on ALM for banks

RBI introduced the first circular on ALM in 1999. The objective then was to ensure banks undertake a strategic approach to risk management of various risks (credit and market) in deregulated environment. The guidelines on ALM in 1999 for the first time required banks to alter assets and liabilities (including off balance sheet items) in a dynamic way to manage risk. In this circular RBI addressed two risks liquidity risk and interest rate risk. To this end RBI asked the banks to prepare a 'structural liquidity statement' (SLS) for the former and 'gap report' (GR) (which included both on balance sheet and off-balance sheet items excluding pension liability) for the latter. The RBIs gap report measured the mismatch between the rate sensitive assets and rate sensitive liabilities of bank. Both the SLS and GR required the banks to classify its assets and liabilities into time buckets (re-pricing interval or residual maturity). The shortest bucket was 1-14 days for SLS and 1-28 days for GR. The longest bucket for both SLS and GR was 5 years and above. The gap approach in RBIs 1999 circular is identical to one described in Section 2.1 above.

In 2006, RBI revised its 1999 circular on ALM and advised banks to migrate to duration gap analysis. The underlying rational was that 1999 GR was based on accounting approach, measured immediate impact of interest rate changes; while the duration gap analysis was based on economic value approach (EVA) and hence measured long term impact of interest rate changes. The 2006 guidelines also modified the time buckets for SLS and GR. For the SLS the lower time bucket

of 1-14 days was made more granular and divided into two buckets 1-7 days and 8-14 days. Similarly the '5 year and above' bucket in GR was divided into four buckets: over 5-7 years, over 7-10 years, over 10-15 years and over 15 years. The modified duration gap is calculated using the equation:

$$DGAP = DA - W * DL \quad (1)$$

where; DA (L) = modified duration of assets (liability), W = (Rate sensitive assets)/(Rate sensitive liability). The modified duration of equity is calculated using the formula:

$$DE = DGAP * Leverage \quad (2)$$

where leverage = Rate sensitive assets/equity.

Basel regulation and ALM

As argued in beginning of this section, there is a need to jointly view the transition under Basel III and guidelines for ALM. The ALM guidelines are not subsumed under Basel framework but are given separately by RBI because Basel regulation are formulated under the assumption of asset only approach and do not account for profile of banks liabilities explicitly. Hence, for example, the capital charges for interest rate risk does not consider the behavioral impact of changes in interest rate risk on bank deposits (or equivalently economic value of embedded options) which is in contrast to Solvency II regulations where capital charge for interest rate risk is a product of an ALM exercise. Lack of ALM considerations remains an anomaly in Basel framework and only in Basel III that we see some consideration for liability side by way of incorporating Liquidity Coverage Ratio, but that too is concentrated on the short end of the term structure.

Besides the absence of ALM considerations in Basel regulations, the dispensation under Basel III now takes a more granular look at various Pillar II risk faced by a banks. In 2008 RBI came out with its notification on Supervisory Review Process under the New Capital Adequacy Framework – Guidelines for Pillar 2. The major risks faced by the banks included among others the pension obligation risk (POR). Further as per the Master circular on Basel III Capital Regulations:

Defined benefit pension fund liabilities, as included on the balance sheet, must be fully recognised in the calculation of Common Equity Tier 1 capital (i.e. Common Equity Tier 1 capital cannot be increased through derecognising these liabilities). For each defined benefit pension fund that is an asset on the balance sheet, the asset should be deducted in the calculation of Common Equity Tier 1 net of any associated deferred tax liability which would be extinguished if the asset should become impaired or derecognised under the relevant accounting standards. [Para 4.4.7 (i)]

In terms of circular DBOD.No.BP.BC.80/21.04.018/2010-11 dated February 9, 2011, a special dispensation of amortizing the expenditure arising out of second pension option and enhancement of gratuity over a period of 5 years was permitted to public sector banks... It is not possible to retain this dispensation under Basel III, as all pension fund liabilities are required to be recognized in the balance sheet under Basel III. Accordingly, from April 1, 2013, banks should deduct the entire amount of unamortized expenditure from common equity Tier 1 capital for the purpose of capital adequacy ratios. [Para 4.4.7 (iii)]

Hence, it is clear that POR arising out of changes in rate of interest (or changes in discount rate under AS15R Revised) or high inflation rate or both will have an impact on the economic value of bank's equity besides the impact on capital adequacy. The present 2006 ALM guidelines by RBI do not recognize POR (which is also a contractual obligation like deposits and is indexed to inflation as against deposits which are not indexed) in assessment of ALM risk. It is this deficiency which is the subject matter of this paper. Furthermore, the survey in Section 2 also establishes that this line of thinking: incorporating POR in banks ALM has not attracted much attention in theoretical literature on ALM. This makes the present inquiry all the more novel!

There is another reason as to why ALM for banks should account for POR. This reason stems from the accounting

treatment of POR under AS15(R). Under AS15(R) pension deficits (surpluses) is to be recognized in a firm's (banks) financial statement. IAS19R requires measurement and disclosure of liability risks along with disclosures on ALM strategies. The approach is therefore consistent with the corporate finance perspective which treats the pension fund as part of the sponsor's net worth, requiring full consolidation on its balance sheet. However, realities that prompted such an approach in IAS19 in the US and the UK are not existent in case of Indian banks. The most important reason for recognition of pension liability on sponsor's balance sheet was that in some cases corporate pension liabilities exceeded the market capitalization of firm's equity. While this is not the case for PSB at the movement (and looks unlikely in future) with market capitalization of Rs. 4.95 lakh crore (as on 29-January 2015) and aggregate pension liabilities disclosed on balance sheet as on March 2014 at Rs. 1.58 lakh crore, constitutes only 32% of the market capitalisation.

Nevertheless, there are other compelling reasons to incorporate the pension liability within the standard ALM model to assess the long-run impact on economic value of equity particularly from a systemic stability and planning point of view. Besides POR arising out of changes in interest rate, sponsoring banks of a DB pension fund has underwritten insurance on longevity of fund members. Therefore, future gains in mortality of fund members will also impact the economic value of banks equity in the long-run. Unlike insurance companies that have the theoretical possibility of natural hedging longevity/mortality risk by constructing an optimal mix of annuity and life insurance products (Cox & Lin, 2007), no such natural hedging possibility exists for banks for longevity risk.

Integrating POR with banking books

Integrating POR with current ALM practices for banks is not a straight forward exercise. There are many practical and conceptual difficulties that one must not lose sight off. First and foremost, the risk characteristics of banks' balance sheet is very different from that of DB pension fund. The former is in the business of maturity transformation and is typically

leverage. The latter, although an irrevocable trust, shares the characteristics of a life insurer or a standalone annuity provider and hence performs the function of risk pooling and has no leverage.

Second, the irrevocable nature of the trust is also a hurdle if the objective is to keep the ALM exercise consistent with laws and regulations as far as possible. For example, in case of exempted provident funds, which are treated as DB funds under AS15R due to sponsor guarantee, the profits of the trust remain in the trust and the company has no recourse to the profits or surplus generated by the trust. In the experience of this author there are cases in India when a company has decided to wind the trust as last member has been settled, but could not do so because in final accounts there was a residual surplus which could not be ascribed to any of the participants. In such cases the company cannot lay claim on this residual surplus. As of now there is no limitation periods as to how long a company should wait and what should be the solution as per law in such cases.

If the experience in case of exempted provident funds is our reference point, then one can argue that a sponsor bank of DB pension funds should have no recourse on surplus generated by DB pension fund. If such is the view then returns on the assets of pension fund do not feature in the global balance sheet of the bank while the liabilities of pension fund feature in global balance sheet as far as ALM is concerned. However, if we go for full market consistent approach, then integrating the POR is straight forward but with the drawback that our results may not be consistent with laws particularly the accounting rules and investment policy followed by the DB fund.

Accounting method followed by most of the retirement funds in India is based on historical cost. The DB funds like gratuity and pension funds do mark-to-market (MTM) their portfolio. Asset management is also a function of the investment policy of the trust and how much volatility the sponsor is willing to take on its balance sheet. The present regulation mandates hold-to-maturity (HTM) principle for pension funds mostly in fixed come

securities. As sponsors migrate to IFRS which is strictly based on MTM/fair value principle will may prevent any inclination from the trustees to invest in equities. This behavior of increasing the mix to fixed income security among DB pension funds is well documented in the UK post adoption of FRS17 and IAS19 accounting standards.

At the methodological level also there are two problems. One is aggregating actual bank cash flows with expected future pension cash flows estimated using projected unit credit method and second is adjustment for leverage. One may argue that year wise future pension payouts should be bucketed as per the GR statement of RBI to arrive at global asset liability position of the bank. But then the question is how we treat the cash flows in 'over 15 years' bucket of GR. Should this bucket be made more granular till the last cash flow of pension payout becomes zero. Alternatively, we may calculate the duration of both assets/liabilities for banking book and pension fund separately and then aggregated at the last stage to calculated net duration gap. Lastly, since banks' balance sheet is leveraged the 'W' factor in equation 1 needs to be adjusted in the denominator. Such and adjustment to 'W' may be in conflict with profit maximization motive of the bank and/or systemic stability motive of the regulator. Only when $W = 1$ that objective of bank co-insides with that of the regulator.

Hence in a nutshell, in our ambitions to arrive at a better estimate of economic value of banks equity, our ALM model may inadvertently impose rules on the pension fund, like MTM of pension fund assets despite a HTM investment policy. Such an approach will be to the detriment of sponsor's main business strategy and investment decision because MTM of pension fund assets will induce short-term volatility in valuation of scheme which may not reflect current or long-term reality of the pension scheme itself, thereby increasing the net pension liabilities on sponsor's balance sheets and overestimating the negative impact of POR on economic value of equity.

Methodology, data sources and results

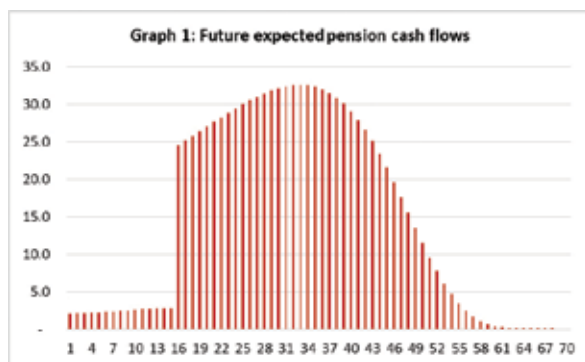
Banking book: This section gives some

ALM simulation results using the asset liability data available in public domain. I use the aggregate data for PSB from Table 10: 'Maturity Profile of Selected Items of Liabilities and Assets of Scheduled Commercial Banks', RBI Statistical Tables Relating to Banks in India, 2013-14. The discount rates for calculating the modified duration as per RBI methodology were also taken from Table 74 'Structure of Interest Rates', RBI Handbook of Statistics on Indian Economy 2013-14. Suitable assumptions were made for some items but largely all discount rates for the calculating duration gap were publically available.

Pension fund: Calculating the duration of pension fund liabilities is the most difficult part. Projecting the future expected cash flows using 'projected unit credit method' requires at our disposal demographic data on age structure of the covered population (working and retired), salary/inflation growth rates, marriage rates at various ages, behavioral assumptions for exercise various embedded options like commutation options etc. and various forces of decrements. None of this data is available in public domain for PSB. Hence, to arrive at the best estimate given the lack of information, following methodology was employed.

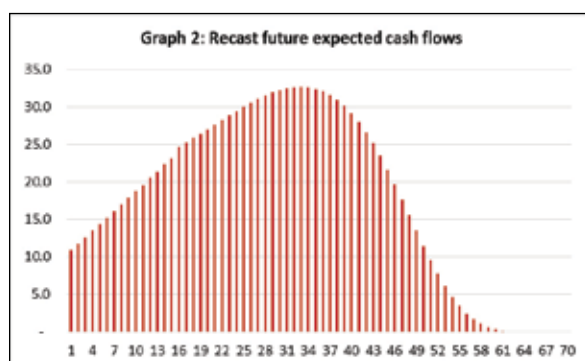
I start with two representative individuals one age 45 is active and second age 62 is retired. Mortality is the only force of decrement for active. This assumption is reasonable for PSB because as per RBI study the average attrition rate in PSB is around 0.5% [See Business Standard (BS), 2011]. Survival probabilities for both actives and retired population is assumed to be as per Indian Assured Lives Mortality (2006-08) Ult. It also assumed that the basic salary of aged 45 and the basic pension drawn by aged 62 is unity. Basic salary grows at the rate of 3% for the aged 45 till the retirement age of 60 and the DA escalation factor for aged 62 is assumed at 8%. The escalation rates are as per the Institutes of Actuaries of India Study on PSB presented by Kumar (2014). Replacement rate is assumed at 50%.

The time structure of the future expected cash flows based on above assumptions is shown in Graph 1. The duration (adjusted for convexity [McCaulay (2013)] under



the assumption that interest rates will fall in next one year) for this cash flow profile at 9% discount rate works out at 19.82 year. To test the reliability of this estimate (which we know *prima facie* is incorrect because the cash flows are not monotonic as age structure and hence the size of the retired population has been completely ignored) we compare our estimate with duration figures for pension funds abroad. The duration of DB plan liabilities can typically be in the range 15–18 years for most of the pension funds in advanced countries [See Ramaswamy (2012)]. Since our figure exceeds this upper bound, we have to smoothen our cash flows using some intelligent guess work.

From anecdotal evidence we know that retirement headcounts will be increasing in PSB in coming years and that these funds are closed for new participants. Hence once can expect gradual rising slope from time point $x=1$ till time point ($x=16, y=24.61$), the jump in Graph 1. By visual inspection, I assume the cash flow at time point 0 (that is y -intercept) is 10. Then we extend a straight line with slope $7/8 [= (24-10)/(16-0)]$. Then using the basic equation of straight line: $y = mx + c$ where $m = 7/8, c = 10$ and $x \rightarrow [1 \text{ to } 15]$ we recast the cash flows for first 15 points for the retired population. This new cash flow profile is presented in Graph 2. The duration (adjusted for convexity) for revised cash flow works out to be 13.61



years. Without convexity adjustment this figure is 12.92. This figure is reasonable given the fact that longevity gains are not to that extent in India in comparison to advanced countries in Europe. The curvature of the Graph 2 is more or less in conformity with our experience for a typical DB pension fund.

Simulation results: Table 1 gives a summary of the data as well as the simulation results. At the aggregate level

Table 1: Summary of Results (INR Million)			
Banking Book			
	Present Value	Discount Rate	Duration
Assets	80,660,030	9.84%	4.48
Liability	81,993,053	7.45%	2.85
Net duration (Leverage adjusted)			1.67
Pension Fund			
Liability	1,587,826	9.00%	13.61
Simulation Results (Banking Book)			
A) Change in economic value for 1% rate shock			1,348,920
Simulation Results (Banking and pension fund combined)			
Net duration (Leverage adjusted)			1.53
B) Change in market value for 1% rate shock			1,232,791
Change in economic value (B-A)			(116,129)
Source: Author's own calculations			

PSB have a net positive duration of 1.67 years as on 31-Mar-2014. For a 100 basis point cut in rate in the next one year (2014-15), gains in the economic value of equity of PSU banks is estimated Rs. 1,348,920 million. The total value of pension fund liabilities disclosed on balance sheet as on 31-March-2014 by PSB is Rs. 1,587,826 million and has a duration of 13.61 years. The combined weighted average duration of PSB liabilities increase from 2.85 years on standalone basis to 3.06 years. Accordingly the net duration, accounting for the

increase in rate sensitive liability due to inclusion of pension liability works out to 1.53 years. The 100 basis point cut in rate in the next one year, now leads to erosion in economic value of equity to the tune of Rs. 116,129 million.

Since we are working with

aggregate data, readers must avoid the pitfalls of 'fallacy of division' that is 'what is true for the aggregate is also true for the constituents' before jumping to conclusions. However, one can draw the broad inference that when pension liability is treated as rate sensitive and included in ALM, economic value estimates can deviate by as much as by 8.6% from baseline, standalone case being the baseline scenario.

Conclusions and discussions

This study began with an exhaustive survey of ALM models in academic literature. Using this literature survey the

present study demonstrated the points of originality of the topic under investigation. This was followed by a detailed discussion on the possible difficulties in trying to incorporate pension liabilities within the RBIs ALM guidelines. Grouped under broad heads 'risk characteristics', 'irrevocable nature of the trust', 'accounting treatment/policy' and 'methodological issues' these difficulties in deriving estimates of the

economic value of equity do not appear to be fully reconcilable. Hence, investigators discretion and clear statement of objective is required to correctly interpret the ALM results. The empirical exercise in Section 5, with its limitations, give a broad conclusion that if POR were to be included in ALM exercise of banking books, the resultant gain/loss in economic value of equity can differ substantially that otherwise.

The study has concentrated at the most initial level of integrating POR with banking books within the framework of single period static models for ALM. However, there are numerous possible extensions and application that can be thought off and developed following the extensive literature survey in Section 2. The study can be particularly useful if PSB contemplate implementing a constraint liability driven investment strategy to minimize the impact of POR on sponsor's balance sheet. Study may also aid PSB in

making relevant disclosures on ALM strategies under IAS19R.

References

Alessandri, P., & Drehmann, M. (2010). "An economic capital model integrating credit and interest rate risk in banking book". Bank of England, Working Paper No. 388.

Barone-Adesi, G. (1994). "ALM in Banking". Retrieved March 2012, from The Wharton School: <http://finance.wharton.upenn.edu/~rlwctr/papers/9424.pdf>

Bessis, J. (2010). "Risk Management in Banking" (Third ed.). John Wiley and Sons Ltd.

Bradley, S. P., & Crane, D. B. (1972). "A dynamic model for bond portfolio management". *Management Science*, 19, 139-151.

Brodt, A. I. (1978). "Dynamic balance sheet management models for a Canadian Chartered Bank". *Journal of Banking and Finance*, 2 (3), 221-241.

BS (2011). "RBI wants all PSBs to have uniform pension provision". Retrieved February 09, 2015, from Business Standard: http://www.business-standard.com/article/finance/rbi-wants-all-psbs-to-have-uniform-pension-provision-111071400059_1.html

Chambers, D., & Charnes, A. (1961). "Inter-temporal analysis and optimization of bank portfolios". *Management Science*, 7, 393-410.

Clacher, I. & Moizer, P. (2011). "Accounting for Pensions", University of Leeds, September 2011.

Cohen, K. J., & Hammer, F. S. (1972). "Linear programming models for optimal bank dynamic balance sheet management". In G. P. Szego, & K. Shell (Eds.), *Mathematical Methods in Investment and Finance*. North Holland, Amsterdam.

Cox, S.H & Lin, Y (2007). "Natural Hedging of Life and Annuity Mortality Risks", *North American Actuarial Journal*, Vol. 11, No. 3, pp. 1-15

Dermine, J. (1991). "The BIS proposal for the measurement of interest rate risk, some pitfalls". *Journal of International Securities Market*.

Dermine, J. (1993). "The evaluation of interest rate risk, some warnings about Basel proposal". *Finanzmarkt und Portfolio Management*, 7.

Dermine, J. (2007). "ALM in Banking". In S. A. Zenios, & W. T. Ziemba (Eds.), *Handbook of Asset and Liability Management Volume 2: Applications and Case Studies*. Elsevier.

Drehmann, M., Sorensen, S., & Stringa, M. (2008). "The integrated impact of credit and interest rate risk on banks: an economic value and capital adequacy perspective". Bank of England, Working Paper 339.

Fielitz, B. D., & Loeffler, T. A. (1979). "A linear

programming model for commercial bank liquidity management". *Financial Management* (pre-1986), 8 (3).

Fried, J. (1970). "Bank portfolio selection". *Journal of Financial and Quantitative Analysis*, 5 (3).

Giokas, D., & Vassiloglou, M. (1991). "A goal programming model for bank asset and liabilities". *European Journal of Operations Research*, 50, 48-60.

Komar, R. I. (1971). "Developing a liquidity management model". *Journal of Bank Research* (Spring 1971), 38-53.

Kosmidou, K., & Zopounidis, C. (2002). "An optimization scenario methodology for bank asset liability management". *Operational Research. An International Journal*, 2 (2), 279-287.

Kosmidou, K., & Zopounidis, C. (2004). "Combining goal programming model with simulation analysis for bank asset liability management". *INFOR*, 42 (3), 175-187.

Kumar, V (2014). "Overview of Research Papers by the Institute of Actuaries of India", Presentation to the 10th Seminar on Current Issues in Retirement Benefit, Slides 11-24, September 18, 2014.

Kusy, M. I., & Ziemba, W. T. (1986). "A bank asset and liability management tool". *Operations Research*, 34 (3), 356-376.

Markowitz, H (1952). "Portfolio selection". *Journal of Finance*, 7 (1), 77-91.

McCaulay, M (2013). "Duration and Convexity for Pension Liabilities", *Pension Sections News*, Issue 81, Society of Actuaries, pg 18-21, September 2013

Pyle, D. H. (1971). "On the theory of financial intermediation". *Journal of Finance*, 26, 737-746.

Rakhe, P.B (2012). "Asset Liability Mismatches (ALMi) in the Indian Banking Sector - The Extent, Persistence and Reasons", RBI Working Paper Series 17 / 2012, DEPR, RBI.

Ramaswamy, S (2012). "The sustainability of pension schemes", BIS Working Papers No 368.

RBI (1999). "Asset - Liability Management (ALM) System" Reserve Bank of India, February 10, 1999.

RBI (2006). "Draft guidelines on improvements to banks' Asset Liability Management framework", Reserve Bank of India, April 17, 2006.

RBI (2014). "Master Circular - Basel III Capital Regulations" Reserve Bank of India, July 1, 2014.

RBI (2014). "Master Circular - Prudential Guidelines on Capital Adequacy and Market Discipline - New Capital Adequacy Framework", Reserve Bank of India, July 01, 2014.

Redington, F. M. (1952). "Review of the

Principles of Life-Office Valuations". *Journal of the Institute of Actuaries*, 78, 286-340.

Romanyuk, Y. (2010). "Asset-liability management: An Overview". Bank of Canada Discussion Paper 2010-10.

Rosen, D., & Zenios, S. D. (2006). "Enterprise-Wide Asset and Liability Management". In S. A. Zenios, & W. T. Ziemba, *Handbook of Asset and Liability Management, Volume 1: Theory and Methodology*, Chapter 1. Elsevier.

Sharpe, W. F., & Tint, L. G. (1990). "Liabilities-A new approach". *The Journal of Portfolio Management*, 16 (2), 5-10.

Shshadri, S., Khanna, A., & Harche, F. (1999). "A method for strategic asset-liability management with an application to the Federal Home Loan Bank of New York". *Operations Research*, 47 (3), 345-360.

Sriram, K (2014). "Developing Appropriate Investment Strategies for Funded Employee Benefit Plans- Need & Scope for Actuarial Involvement", Presentation at 16th *Global Conference of Actuaries & 2014 AGFA*, 17th - 18th Feb, 2014 Mumbai.

Zenios, S. A. (1995). "Asset/Liability management under uncertainty for fixed-income securities". *Annals of Operations Research*, 59, 77-97.

ABOUT THE AUTHOR



Mr. Saket Hishikar

Author has worked for four years as consultant to various pension funds in India. He has a specialization in pension from the Netherlands. He is a student member of Institute of Actuaries of India. Email for correspondence:

saket.hishikar@gmail.com

**Our greatest weakness lies in giving up.
The most certain way to succeed is always
to try just one more time**

- Thomas A. Edison.

Regulator must now ensure flow of insurance money into infrastructure

IANs | March 19, 2015

The insurance regulator must come out with proper norms to ensure that private players invest in long-gestation projects like infrastructure development since this was one of the underlying reasons for hiking foreign equity cap in the sector, experts maintain.

Thus far, the promise of doing their bit for nation building by parking their long-term funds has turned out to be a mirage as the private players mainly sold unit-linked insurance policies (ULIP) where the investment structure is specified by policyholders and is quite uncertain.

"Only the state-run Life Insurance Corp (LIC) has continued to invest in infrastructure out of the premium earned by selling traditional policies," said an industry expert, adding earlier this week it signed a pact with Indian Railways for a Rs.1.5 trillion over the next five years.

"The new insurance law has made substantial amendments to the provisions relating to investment of funds. It is now it is for the insurance regulator to determine the investment framework," D. Varadarajan, a Supreme Court advocate and expert in the sector, told IANS.

"It will also be a challenge for IRDAI (Insurance Regulatory and Development Authority of India) to balance the need for nation-building and securing the interests of policyholders -- not only the safety of their funds but also getting higher returns," Varadarajan said.

The remarks came against the backdrop of parliamentary nod for the Insurance Laws (Amendment) Bill, 2015, which among a host of issues, raises the foreign equity cap in the industry to 49 percent from 26 percent earlier.

India currently has 52 insurance companies -- 24 in life and 28 are non-life. In life business, the state-run LIC is the sole public sector company, while in non-life, there are six state-run firms. Accordingly, there are 45 private insurance companies in operation.

The total underwritten premium in 2012-13 was Rs.3.5 trillion, as per the regulatory authority.

In addition to these, there is sole national re-insurer, namely, General Insurance Corporation of India. Other stakeholders in Indian Insurance market include agents (individual and corporate), brokers, surveyors and third party administrators servicing health insurance claims.

"It's high time the regulator's investment regulations were brought in line with the objectives of market liberalisation," said K.K. Srinivasan, a former member for non-life business with the regulatory authority.

"IRDAI can bring out investment regulations, stipulating that, say, 25 percent of the premium and investment income from Unit-linked insurance policies be invested towards infrastructure development," added R. Ramakrishnan, a member of the Malhotra Committee on

Insurance Reforms.

At the same time, Varadarajan warned that the fundamental purpose of insurance -- of financial security must not be compromised. "Insurance should not be speculative financial instrument. One should be wiser after the experience of volatility in unit-linked plans," he added.

Also sounding positive was a the top official with the Life Insurance Council, a forum for all stakeholders that develops and coordinates discussions between the government, regulatory board and the public.



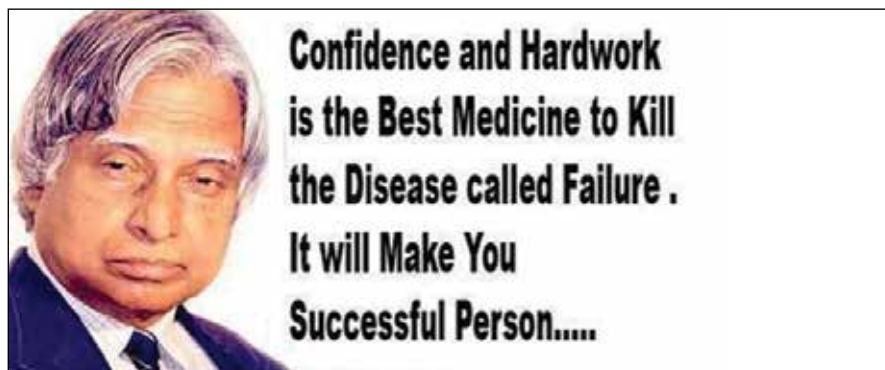
"The idea (of norms for infrastructure and long-term investments) sounds good. It is for the regulator to take a call, taking into account the government's intention and infrastructure needs of the country," Secretary General V. Manickam told IANS.

"The idea (of norms for infrastructure and long-term investments) sounds good. It is for the regulator to take a call, taking into account the government's intention and infrastructure needs of the country," Secretary General V. Manickam told IANS.

But another senior industry official, not wanting to be quoted, said: "Mandated investments are old concepts. There are no investment papers in India for long-term infrastructure investments."

He felt there should be a move instead towards a market for securitisation where the ill-liquid assets are converted into securities that can be traded. "The securitisation market has not yet developed in India," he said.

"If there are investment avenues and the securitisation market is developed, there will be no need for regulatory mandates," he said, adding: "The main purpose of insurance business is to maximise returns to the policyholders."





FROM THE DESK OF CHAIRPERSON

17TH GCA ORGANISING GROUP MR. D C CHAKRABORTY

The 17th GCA and AGFA 2015 is now behind us. On behalf of the IAI and the GCA Organising Committee I thank the participants, speakers, commercial partners, invited guests and our staff members for making a grand success of yet another annual flagship event of India's Actuarial Profession. The job was well done, but there is considerable scope of improvement and innovation. I am currently reviewing the draft results of post-conference feedback survey of 17th GCA and AGFA 2015. 154 participants, representing a good cross section of delegates, responded to the survey that had 16 questions. I sincerely thank all survey participants for their valuable feedback and comments. I assure them that the IAI and the GCA organizing Committee take survey results seriously and we try to act on lessons learnt. The respondents may sometime be disappointed that their suggestions were apparently ignored. Very often we get diametrically opposite views on a question and as a result we cannot satisfy both parties. There may be practical problems in implementing a sensible suggestion. I will deal with a few such items in this article.

First, some data points from the survey results. 724 individuals from over 120 companies & institutions registered for the 17th GCA and 686 (95%) actually attended. 153 Fellows, 61 Associates and 419 students registered. We had 36 delegates from 10 countries abroad, somewhat less than in the 16th GCA. The IFoA was a major partner and contributed greatly to our success. The Institute of Actuaries of Japan sent a delegate. 60 speakers including Chairpersons presented their views, 16 of them were from abroad. We had 29 partners and

Exide Life was the Principal Partner. Without financial support from partners there would be no GCA.

Why do people attend the GCA? There are multiple reasons but major ones as per the survey are: networking (60%), only major global actuarial/insurance event in India in a year (49%), learning from debates (42%), because of employer sponsorship (38%), and CPD for Fellows (18%)

On a scale of 1 (poor) to 6 (excellent), the overall rating of the 17th GCA & AGFA was 4.58. 84% rated the event as 4 and above. A good result no doubt but I recognize that 16% thought it was average or below. We got many complimentary comments, some suggestions of improvement and a few expressing serious dis-satisfaction. The same event was called brilliant by some and a disaster by a few! What should be our take away from these comments? We will examine all comments, particularly the critical/negative ones, as a part of a formal process. Today I will pick up a few for a response. Please note that these are my personal views and may not reflect the final and official position of IAI. I also must mention that I have no clue of the identity of persons making any of the comments made in the survey. I mean no offence if I disagree with him/her.

The overall ambience of the venue was rated a fairly good 4.80. But some were clearly not happy with the hotel and facilities. A few members are bored of Mumbai and Hotel Renaissance. Why not another city or another Hotel in Mumbai? Unbelievable it may sound, we are aware of only two good quality hotels in Mumbai that meet our requirement of a very large auditorium, dining space and open area suitable for a crowd of 700 plus people, a couple of large halls for breakout sessions, a few more adjacent large rooms for other

facilities, and additional space for sponsors' stalls. These two hotels in Mumbai are - Renaissance and the Grand Hyatt, the venue of the 15th GCA. These hotels are in great demand as conference venue and sometime we don't get our preferred dates in the month of February in either of them. Mosquito will be a problem at both venues. I personally think Grand Hyatt feels equally or even more crowded for 730 odd people. And it does not have a lake! Cost is also a consideration in making the final choice. Why Mumbai and not another center? Only realistic alternative is Delhi, where the GCAs were held in the early days. The 1st GCA was organized by my friend K Subramanyam (retired ED, IRDA) with all-out support from Mr. Rangachari, the then Chairman of IRDA based at Delhi. We from LIC provided some manpower. The event was jointly sponsored by ASI and FICCI and was managed by FICCI. Surplus mostly went to FICCI. After a few years IRDA moved to Hyderabad and ASI decided to run the show without FICCI. Most new insurance companies set up their Head Offices at Mumbai. IAI staff base too is Mumbai. All these factors led to the venue shifting to Mumbai and these factors have not changed. 58% of GCA delegates are students and most are based in Mumbai. Will they travel to another city? Many Mumbai based companies sponsor students to GCA as a relatively low cost incentive. They may not, if the cost of transport and accommodation is added. Organizing the event at Bengaluru or Chennai or Kolkata from IAI Mumbai office will be a logistic nightmare. Should we engage an Event Management Company? As happened with FICCI, a good part of the surplus generated by the GCA will disappear if we do so.

A few examples of contradictory views expressed in the survey.

-  The program was too Global” vs “it was not Global enough.
-  The program was too general vs It was too technical” vs “it had the right balance.
-  We should have more plenary sessions vs We should have more concurrent sessions.
-  The program is too lengthy vs speakers were not allotted sufficient time, GCA should be a 3 Day event.
-  Not enough time for networking vs too many people spending the whole day outside doing networking.
-  The student events were excellent vs I expected a lot from student events but that was not up to the mark.... no coverage of What an Actuary is .

I will pick up two contradictory comments for a bit discussion. One delegate commented:

-  A welcome change of focus. Much more actuarial in nature (two sessions for Life etc.); getting back at the core purpose of the conference; less commercial; worthy of CPD.... Quality of papers could be enhanced (fewer more quality sessions?), but this will come as the industry matures.

He/she appreciated the program, recognized a quality problem and understood the cause.

Another delegate commented:

-  IAI should seriously introspect on why need the GCA- many attendees chat outside the whole day, they stand outside because program is boring and not adding value; yet they come to GCA for CPD/ Networking. Wrong to ask Fellows to sign on Day 2 at 4 pm. Basic flaw is IAI running GCA as a money spinning marketing event. The speakers and Chairpersons are mostly from sponsors or personal friends of Key Organisers- many competent people are kept out. Notwithstanding above, the IAI has done an outstanding job of organizing the GCA.”

After posing a few serious questions, he/she concluded with a note of appreciation. Only a few speakers were given speaking/ chairperson slots as part of major partnership deals. Overwhelming number

of partners were not given any preference. Some speakers come from sponsoring companies but they were selected not because of sponsorship deals. Quite a few IAI Council members, Chairpersons of Advisory Groups of IAI on Life, HI, Retirement Benefits, ERM and Global Actuarial Functions rightly got speaking slots, whether their employers/ organisers sponsored or not. We had Appointed Actuaries/ Scheme Actuaries sessions to discuss current issues. Veterans of Indian Life Insurance Industry, CEOs of GI companies, prominent members of Accountancy professions were invited to speak, without any remuneration. Specialist and senior professionals from outside India took the trouble spending their own money and time to make excellent presentations on important topics like Reinsurance, Life Insurance, Pension, Global Actuarial Issues, ERM. As usual we had the IRDA Chairman at the Inaugural Session and for the first time the PFRDA Chairman on the first plenary session of day 2. A few months before the GCA, IAI invited original papers, by emails and publicity in website, from our members for presentation at the GCA. Initial expression of interests were examined by IAI Advisory Groups of the relevant subjects and most were asked to submit their papers. Of the papers submitted, 6 papers involving 8 speakers were selected and presented at the GCA- a few of these speakers were our students. One or two papers recommended by AGs could not be presented due to shortage of time slots. Two student events were organized by the IFoA, UK; the President and the CEO of IFoA participated in these sessions.

I am not apologetic about asking Fellows to sign for CPD at the end of day 2. The CPD credit was increased from 6 hours to 8 hours from this GCA. We should wake up to the reality of a modern global profession- unquestioned automatic trust has disappeared. Society no longer trusts any profession automatically without question, but demands evidence of continued competence.

We also don't expect participants outside while sessions are going on- this is unprofessional. Some technical papers will be boring to students not knowing the subject. This is part of their actuarial

education.

Is the GCA a “money spinning marketing” venture? One of the major objectives of the GCA is marketing the Indian Actuarial Profession. No profession will survive in the 21st Century without marketing and self-promotion. We need to do more- and surely not less- marketing of our small profession and showcase our capabilities in our traditional fields in and outside India, and in wider fields. IAI does not get any subsidy from the Government or from any external bodies. Membership fees from a small membership base is grossly inadequate. Yet IAI's operation costs are going up due to obligations from The Actuaries Act. The GCA delegate fees cover only a small fraction of cost of the Conference. Many of our sponsors give us money mainly to support the profession in exchange of some publicity. To ensure better future for the profession we certainly need maximum partnership revenue and surplus from the GCA.

However, as stated emphatically earlier, we do not compromise the quality of our program and technical sessions for the sake of sponsorship.

One fairly consistent adverse message is on quality of papers presented- on style as well as on content. One survey respondent commented: “make slides less wordy; fewer slides; don't read from scripts; be better prepared and sound more passionate about the subject”. We do have a shortage of good quality research papers. Mr Vinod Kumar, Research Officer of IAI presented an excellent research paper on salary trend of public sector banks in India- a very useful practical tool for valuation of DB Pensions of these Banks. IAI's Research AG provides encouragement and some funds for research. Our experience of inviting papers from members for the GCA is mixed- a few papers presented may not be of high international standard but some definitely are. The reason is relative lack of maturity of the profession in India and absence of academic actuaries. I expect research capabilities to improve in near future.

I conclude thanking once again participants, partners and organisers of the GCA and also all stakeholders of IAI. We will strive to do a better job next time.

ADVISORY GROUP ON PEER, STAKEHOLDER & INTERNATIONAL RELATIONS MR. K. SUBRAHMANYAM



This is a group formed for a specific purpose; mainly for organizing GCAs. This is a group which works behind scenes working along with External Affairs Committee [EAC] of the IAI to do various jobs for Global Conference of Actuaries---entertaining actuaries, educating actuaries, events management, etc. The group is supposed to do other important activities---interactions with other statutory and professional bodies, international bodies,

marketing the profession of actuaries, image building of actuaries, and identifying actuarial education support needs of countries in South Asia and Asia Pacific and facilitate delivery of the same. The group plans to do these activities. The group reports to and works under directions of EAC. Please visit the website for more details.

We are exploring and trying to interact with regulators and professional bodies in Myanmar [Burma] which has opened the

insurance business to private sector. We are also thinking whether we can design some courses to suit to the needs of certain sections of the insurance industry [broking, insurance services, underwriting, health, general insurance, employee benefits]. For instance, enterprise risk management is a tool used by many establishments. Still these are thoughts. We will deliberate and endeavor to do something soon to help the actuarial profession.



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

MANY HAPPY RETURNS OF THE DAY

the Actuary India wishes many more years of
healthy life to the fellow members whose
Birthday fall in **MARCH 2015**

R. C. CHADHA

K. K. DHARNI

S. KRISHNAN

G. CHIDAMBAR

H. C. MEHTA

Life Insurance Industry Update

At the time of writing, the Insurance Bill which includes a hike in Foreign Direct Investment (FDI) in Indian insurers to 49% has been passed by the Lok Sabha. The Bill will now be presented in the upper house, Rajya Sabha, where it has been pending approval since it was first presented in 2008. The government, that opted for the Ordinance route for the Bill post the winter session and keen to pass the Bill, has indicated towards a possibility of convening a joint session of both the Houses of Parliament if resistance to the Bill persists in the Rajya Sabha.

In prolonged anticipation of the FDI hike, press reports on intended stake increases by foreign joint venture partners continue to reappear. Standard Life is reportedly planning to increase its stake in HDFC life to 33% from the current holding of 26% before the company launches an Initial Public Offering ("IPO"). AIA plans to hike its stake in Tata AIA Life to 49% from the current holding of 26% post the approval.

There has also been some activity among domestic shareholders. HDFC Limited has divested 1% stake in HDFC Life by selling its equity shares to Azim Premji Trust. ICICI bank and Prudential Plc are reportedly in talks to sell a minimum of 5% stake in their joint venture ICICI Prudential Life.

Renewed market conditions are reflected in the 12.7% growth in weighted new business premiums recorded by private insurers in the first three quarters of FY2014-15, the result being an increase in the market share of private insurers to 45.7% as compared to 34.5% in the same period in FY2013-14. The Life Insurance Corporation (LIC), on the other hand, recorded a contraction of 29.5% in weighted new premiums due to a sharp year-on-year contraction in individual regular premium business. As a whole, industry premium collection was nearly INR350 billion, a year-on-year decline of 15.0%. The third quarter of FY2014-15 witnessed around 18 product launches, of which three were ULIPs and rest traditional products. Companies are seen

to be adopting varying product strategies with some focusing on ULIPs to leverage on the strong performance of the stock markets, while some others catering to rural markets are targeting higher sales of simpler guaranteed return products.

After much deliberation, the Reserve Bank of India (RBI) has permitted banks to act as brokers for insurers. In its revised guidelines for entry of banks into insurance business, RBI has allowed banks to set up subsidiaries or joint ventures to undertake referral services and/or sell insurance policies of multiple insurers. It also allows banks to act as corporate agents for insurers, without seeking prior approval from the RBI, in compliance with the guidelines prescribed by the Insurance Regulatory and Development Authority (IRDA). In response to this development, IRDA, which has been advocating the 'open-architecture' model for banks for quite some time now, is reportedly drafting fresh guidelines governing proposed revamping in the role of banks as intermediaries for insurers. Latest reports suggest that the IRDA is reconsidering making it mandatory for banks to adopt open architecture.

In another significant development pertaining to distribution channels, the regulator has allowed insurers to appoint agents without its intervention, effective April 2015, thereby eliminating the erstwhile licensing mechanism. The IRDA has also issued an exposure draft governing appointment of insurance agents which requires insurers to check black-listing of agents prior to their appointment, among other prescribed norms.

Bolstering its efforts towards protecting policyholders, the regulator has undertaken the following measures:

- The IRDA has asked insurers to clearly define all the benefits and terms of products to consumers and put all product related information in the public domain, in the revised draft regulations on consumer protection.

- In another directive to insurers, the regulator has asked them to promote claim settlement guarantee provided it has been disclosed in the submissions to IRDA during file and use. The move is expected to improve consumer confidence as well as establish accountability of such claims by insurers.
- The IRDA is also planning a country-wide customer awareness campaign through a television commercial titled – 'Policeman' to fight the problem of mis-selling and spurious calls made to consumers from fake and unauthorised representatives.

In order to enable access and management of various financial assets in one place, financial regulators including RBI, IRDA, Securities and Exchange Board of India (SEBI) are working on creating a common account aggregation facility. Such a facility is intended to provide consumers with a common platform for financial assets such as bank account, stocks, insurance policy, mutual funds, etc.

The online channel continues to find favor with its low cost proposition. While the price war in online term has intensified with new players such as Edelweiss Tokio Life Insurance (ETLI) and the LIC entering the segment, Aegon Religare Life and HDFC Life Insurance have introduced ULIPs with low fund management charges via the online medium. After the IRDA releasing its revised guidelines with regard to repositories and dematerialisation, insurers may also offer discount in premiums in respect of those policies maintained only in the electronic form.

On the distribution front, IndusInd Bank is reportedly in the process of concluding its bancassurance partnership with Aviva Life to facilitate a new partnership with Birla Sun Life Insurance.

Online aggregator PolicyBazaar is reportedly raising additional funding of Rs3 billion led by PremjiInvest and new investor Steadview Capital. The fund-raising, which also includes participation

from existing investors Tiger Global and Ribbit Capital reportedly values the company at Rs. 12 billion post the investment.

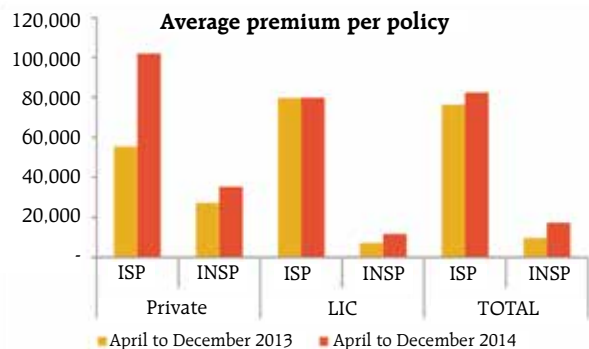
Even as the industry has been calling for a separate tax exemption limit for life

insurance, the Union Budget 2015 only increased the limit for health insurance premium contributions (from Rs.15,000 to Rs. 25,000) and the sub-limit for contribution to pension funds within Section 80C from Rs. 100,000 to the full

Rs150,000. Service tax hike from 12.36% to 14% will increase insurance premiums for customers, among other services.

The graph below shows the change in ticket size for new business.

Average premium per policy



ISP = Individual single premium

INSP = Individual non-single premium

On an industry level, ticket size increased by 79% for new regular premium business, with a 30% increase for private insurers and 62% increase for the LIC.

Private insurers also saw a sharp increase in average premium per policy for new single premium business, of around 84%.

ABOUT THE AUTHOR



Mr. Vivek Jalan

Director-Risk Consulting India
Towers Watson.

vivek.jalan@Towerswatson.com

Life is like riding a bicycle.
To keep your balance, you must
keep moving.
— Albert Einstein



Notice for Subscription Fees for the Financial Year 2015-16

- A) **Due date:** 1st April 2015.
- B) **The subscription rates:** with effect from 1st April 2013:

Class of Membership	Fees in Indian Rupees (INRs)
Fellows and Affiliates	5,000
Associates	1,500
Students	750
For Fellows, Affiliates and Associates above age 60 as on 1 st April, 2015, and not gainfully employed in profession or practice or medically unfit to be gainfully employed in profession or practice.	750
Life membership (optional) who are more than 60 years as on 1 st April, 2015	Ten times the normal annual subscription as mentioned above.
Members more than 75 years of age as at 1 st April, 2015	NO annual subscription
Change of Category within a subscription year	Will attract full subscription fees for new category

Note: These rates are applicable to all members regardless of their country of residence.

- C) **Failure to make payment:** The payment should be made online on or before 30th June 2015 failing which membership will lapse resulting in to removal of name from the register of the Institute.
- D) **Mode of payment :** Online or by Demand Draft. For details visit IAI website at www.actuariesindia.org.
- E) **Reinstatement of Membership:** Reinstatement can be requested in accordance with the following terms and conditions.

i) **Members whose subscription is outstanding only for year 2015-16:**

- If the request for reinstatement is received within three months (i.e. on or before 30th September) of his/her ceasing to be a member (after 30th June), the payment of the annual subscription plus a penalty of 25% thereon,
- If the request for reinstatement is received after three months (i.e after 30th September) of his ceasing to be a member, he/she has to pay existing annual subscription, in addition to penalty of 50% of the annual subscription.

ii) **Members whose subscription is outstanding for more than one year:**

Where subscription is in arrears for more than one year, reinstatement will be made on payment of 1.5 times of current year applicable subscription fees for the number of years where subscription is in arrears in addition to the current year subscription fee.

Note:

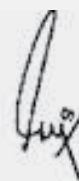
For Students And Associate

Members whose membership is outstanding for more than ten years can do reinstatement of membership offline only.

For Fellows And Affiliates

Members whose membership is outstanding for more than one year can do reinstatement of membership offline only.

- F) **Help:** Kindly contact Ms. Prajakta Bhosle at actsoc@actuariesindia.org or at 022-67843333 for further details on reinstatement of membership or any other matter relating to annual subscription.



Gururaj Nayak

Head - Operations

Puzzle No 231:

Which four-digit number is equal to its first digit to the power of its second digit, multiplied by its third digit to the power of its fourth digit?

Puzzle No 232:

Divide the following figure into four identical parts, with each part comprising whole squares only. Each of the four parts should also contain one X and one O,

though not necessarily in the same relative positions.

	X			X	O
		O		X	
				X	
		O	O		

Answers to Puzzles:

Puzzle No 227:

$-1/2 + \sqrt{3}/2i$ & $-1/2 - \sqrt{3}/2i$

Puzzle No 228:

All the digits of this number are in alphabetical order.

Correct solutions were received from:

Puzzle No 227:

1. Graham Lyons

Puzzle No 228:

1. Neeraj Devliyal
2. Shilpi Jain
3. Graham Lyons
4. Forum Shah
5. Akanshya Bapat
6. C. R. Narasimha Sai



shilpa_vm@hotmail.com

**Submit your article at
library@actuariesindia.org**

We invite articles from the members and non members with subject area being issues related to actuarial field, developments in the field and other related topics which are beneficial for the students of the institute.

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

SUDOKU

SUDOKU No. 30 for the month of March 2015

SUDOKU

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

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.29 published in the Month of February 2015

SOLUTION

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



ई सी जी सी लिमिटेड
(भारत सरकार का उपक्रम)
रिक्ति : नियुक्त बीमांकक

ई सी जी सी लि.

(पूर्व का भारतीय निर्यात ऋण गारंटी निगम लि.)

ECGC Ltd.

(Formerly Export Credit Guarantee Corporation of India Ltd.)

(भारत सरकार का उद्यम)

(A Government of India Enterprise)

ई सी जी सी, भारत सरकार के पूर्ण स्वामित्व वाले एक प्रमुख निर्यात ऋण बीमा संगठन में मुंबई में एक "नियुक्त बीमांकक" तत्काल आवश्यकता है।

3-5 वर्षों के लिए करार के आधार पर पूर्णकालिक रोजगार "नियुक्त बीमांकक" के पद के लिए निवासी भारतीय नागरिकों से आवेदन आमंत्रित किए जाते हैं।

अहर्ता, अनुभव व आयु सीमा : उम्मीदवार को बीमांकन मामलों को संभालने के लिए निम्नलिखित अहर्ता तथा अहर्ता पश्चात अनुभव होना अनिवार्य है। उम्मीदवार

1. भारत का नागरिक हो
2. भारतीय बीमांकन सोसायटी का सदस्य हो व IRDA के विनियम 3 के उप विनियम 2 (नियुक्त बीमांकक अधिनियम 2000) में उल्लिखित सभी आवश्यकताओं की पूर्ति करता हो
3. 60 वर्षों (दिनांक 01.01.2015 तक) से कम आयु को प्राथमिकता।
4. न्यूनतम 5 वर्षों का अहर्ता पश्चात अनुभव। साधारण बीमा उद्योग में अनुभव वाले उम्मीदवारों को वरीयता दी जाएगी।

नियुक्त बीमांकक के कर्तव्य व दायित्व IRDA (नियुक्त बीमांकक) विनियमन 2000 के विनियम 8 के अनुसार होंगे।

नियुक्ति पूर्णकालिक रोजगार के आधार पर होगी। नियुक्त बीमांकक रोजगार की अवधि के दौरान अन्य किसी संगठन के कोई व्यवसायिक परामर्श/कार्य नहीं कर सकता।

पारिश्रमिक साधारण बीमा उद्योग में प्रचलित स्तर के आधार पर होगा। उम्मीदवार अपनी अपेक्षाएँ दर्शाएँ।

दिनांक 15 अप्रैल 2015 तक अथवा उससे पहले नवीनतम फोटोग्राफ के साथ स्वयं सत्यापित सभी आवश्यक प्रमाणपत्रों के साथ, IRDA, (नियुक्त बीमांकक) विनियमन 2000 के फॉर्म IRDA-AA-1 (नियुक्त बीमांकक के विवरण) के अनुरूप आवेदन, लिफाफे की बाईं ओर ऊपरी कोने में "ई सी जी सी नियुक्त बीमांकक" लिख कर निम्नलिखित पते पर भेजें अथवा hrd@ecgc.in पर मेल करें।

म.प्र.(मा.सं.वि), ई सी जी सी लिमिटेड, 'निर्मल', 5 वीं मंज़िल, नरीमन पॉइंट, मुंबई 400021

सामान्य निर्देश :-

- क) निगम के पास, साक्षात्कार के लिए बुलाये जाने वाले उम्मीदवारों की संख्या पर प्रतिबंध का अधिकार सुरक्षित है।
- ख) सभी मामलों में निगम का निर्णय अंतिम व बाध्यकारी होगा।
- ग) भर्ती की किसी भी चरण में यदि यह पाया गया कि उम्मीदवार ने योग्यता मानदंड पूरा नहीं किया है तथा / अथवा गलत / झूठी / अपूर्ण जानकारी प्रस्तुत की है अथवा कोई वास्तविक तथ्य को छिपाया है तो उनकी उम्मीदवारी रद्द कर दी जाएगी। यदि नियुक्ति के पश्चात इन कमियों को नोट किया जाये तो उनकी सेवाएँ समाप्त कर दी जाएंगी। इस पद के लिए आवेदन करने के पहले उम्मीदवार को यह सुनिश्चित करना होगा कि वे इस विज्ञापन में उल्लिखित योग्यता व अन्य मानदंडों को पूरा करते हों। उम्मीदवारों की योग्यता, किस चरण में योग्यता की जांच की जानी चाहिए, चयन, साक्षात्कार के उद्देश्य से प्रस्तुत किए जाने वाले दस्तावेज़ तथा भर्ती से संबंधित अन्य मामलों के संबंध में निगम का निर्णय अंतिम होगा।
- घ) निगम किसी भी प्रकार का पत्राचार अथवा व्यक्तिगत पूछताछ के उत्तर नहीं देगा। किसी भी प्रकार की सिफ़ारिश उम्मीदवार को अयोग्य बना देगी।

म.प्र.(मा.सं.वि)

'निर्मल', 5वीं मंज़िल, 241/242, बैकबे रिकलेमेशन, नरीमन पॉइंट, मुंबई - 400 021. भारत. फोन : 6659 0700-709 फैक्स : 6659 0766 / 6659 0755
'Nirmal', 5th Floor, 241/242, Backbay Reclamation, Nariman Point, Mumbai - 400 021. INDIA. Tel.: 6659 0700-709 Fax: 6659 0766 / 6659 0755

पंजीकृत कार्यालय : एक्सप्रेस टॉवर, 10वीं मंज़िल, नरीमन पॉइंट, मुंबई - 400 021. भारत. फोन : 6659 0500-509 फैक्स : 6659 0517 सी आरईएन : U74999MH1957G0010918

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