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INDIAN ACTUARIAL PROFESSION
Serving the Cause of Public Interest

THE MAGAZINE OF THE INSTITUTE OF ACTUARIES OF INDIA

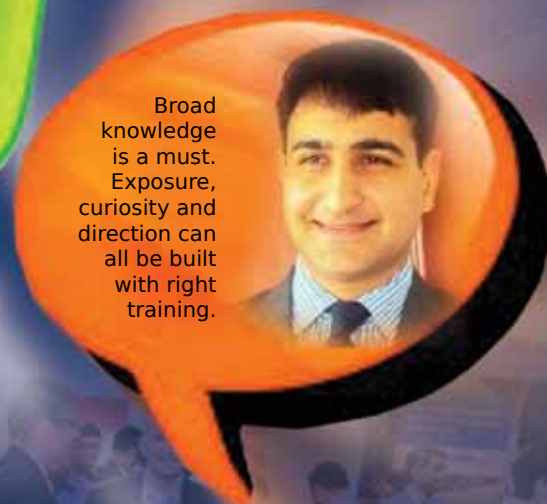
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Technical expertise is a must but it's also important to be able to use that skill by communicating well.



Broad knowledge is a must. Exposure, curiosity and direction can all be built with right training.

Look Inside...

- **Introducing:
Sumit Seth & Frank McInerney – speakers
@ GCA Student Event**
- **2014 AGFA & 16th GCA Participant's Survey**

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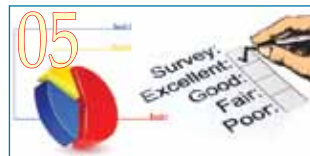
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K SUBRAHMANYAM

I hope all those who attended the GCA benefited from sessions. Some appear to be disappointed. We will try to address the issues that were brought to our notice. We would like to make the next GCA more interesting to the students, as the major participation is from student delegates.

I noticed that there are a good number of students who are short of pass in one subject to become fellow members. When these students passed all the exams, somehow they find it difficult to pass the SA subject. They may be lacking some skill to pass the exam. Perhaps, the main issue would be to manage the time. What we generally notice is that students do not attempt to understand the question before they start answering. The golden rule is: **Read the question.** Re-read the question. Understand what answer the examiner expects. Suppose the question

asks you to define, simply define. Do not explain. Suppose the question asks you to explain, explain with an example. List means list, do not elaborate. In 'Discuss' questions, examiner expects you to state pros and cons, and your decision. There is no substitute for hard studies. A good planning will help you to pass the exams. I hope these students will pass in the May 2014 exams, and become fellow members. I wish them good luck.

It is also noticed that there is no association of appointed actuaries. Such association will be helpful to the appointed actuaries, if they meet frequently (at least once in six months), as they can discuss the common problems in the insurance industry, and find solutions. Life appointed actuaries can discuss problems in life insurance area; the general insurance AAs, in general insurance area. Similarly health insurance guys can do so in health insurance area.

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

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MANY HAPPY RETURNS OF THE DAY

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

APRIL 2014

A BALASUBRAMANIAN

SAMPAD N BHATTACHARYA

SAMBASIVA I RAO

M U UPADHYAYA

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

2014 AGFA & 16TH GCA PARTICIPANTS SURVEY-TAKEAWAYS

by Vinod Kumar

I. INTRODUCTION

"The idea that the harder you work, the better you're going to be is just garbage. The greatest improvement is made by the man or woman who works most intelligently."

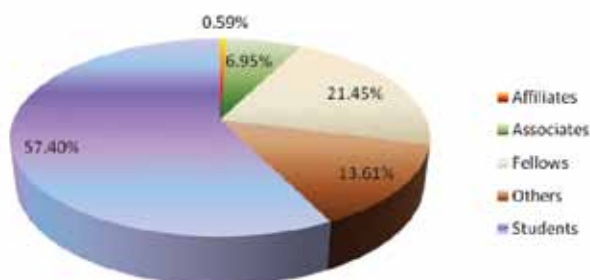
- Bill Bowerman

By conducting a survey on the 2014 AGFA & 16th GCA, Organisers of the event have targeted more intelligent thoughts from all the participants, as a lot of hard work has already been put in. We have come a long way by organising such a global event 16 years in succession and we aspire to maintain it as a true "Global" event in the years to come. The most important factor lead to the thundering success of this year's event is the enthusiastic participation by members within and outside the Actuarial community both from India and abroad.

Registration for the event has shown a good turn out this time as well with a count of 737 members from both India and abroad representing 125 Institutions/ companies. The registration count at the venue, however, has finally shown 697, remaining 40 have either not registered at the counter on event days or not turned up to the venue at all. There were participation from 16 foreign countries; 677 members registered on the first day of the event, 20 fresh registrations on the second day.

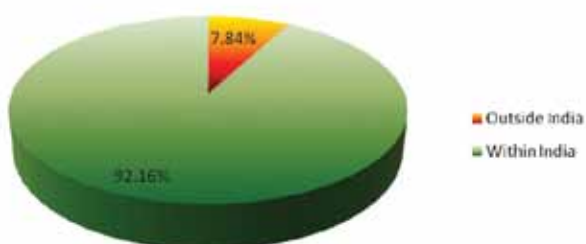
There were 145 fellows, 4 affiliates and 47 Associates among participants; rest from students and non-members.

Membership categories of participants



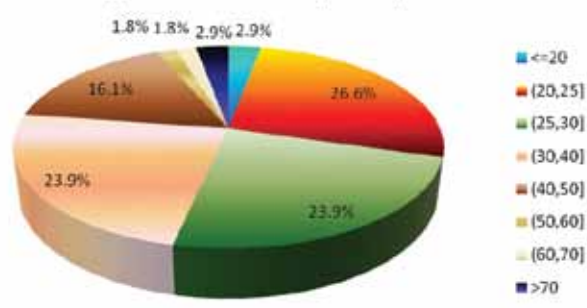
7.85% of members participated were from abroad, irrespective of citizenship, out of which more participation from Singapore and UK.

Participation split from Indian and abroad



Looking at the age distribution of participants, ~53% were from the age group [16,30]; 9 members above age 75 out of which 2 above age 80.

Age distribution of participants



The Survey targeted to reach out to 656 members, whose e-mails were available and valid, excluding all stall attendees. Survey carried 19 questions and rolled out on 26th February, 2014 and closed on 10th March, 2014. Beside questions related anything to the conference, extra spaces were provided to participants for expressing their opinions/views wherever appropriate. It was quite encouraging to see participants of the survey making use of this space and expressing their personal views beyond options available. Few mails bounced, few opted out and submissions from 132 members which fairly represented a cross section of all participants. Contents of the survey are submitted below with minimum editing to the extent of spell checks and removing duplicates, incomplete and meaningless comments. All questions in the survey were made optional allowing freedom to opt out of questions which are not applicable/ interested. It would be quite interesting to all of us to take a ride through the survey outcome.

The survey report would fall too short to be complete without expressions of appreciation to all survey participants. Thanks to all survey participants for all their excellent job done by providing observations, comments, feedbacks, and intelligent suggestions. Those who could not make it this time will have another chance after our mega event 17th GCA & 2015 AGFA next year.

II. THE SURVEY- TAKE AWAYS

The below format is arranged as the questions & options, Number of respondents, summary of responses/ graphs, comments from the respondents.

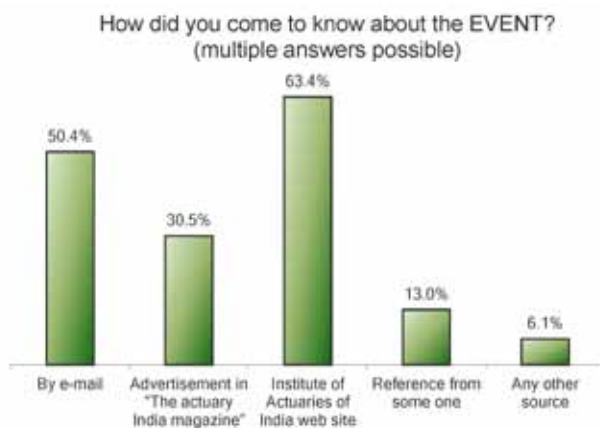
1. Please fill in your details: Responded by 132 participants

Name (Not mandatory):	
E-mail (Not Mandatory):	
Telephone number (Not mandatory):	
Country of residence (Mandatory):	
Member of an Actuarial body (Mandatory) (Answer Yes/No):	

2. How did you come to know about the EVENT- Multiple answers possible- Responded by 131 participants

Information source	Count
By e-mail	66
Advertisement in "The actuary India magazine"	40
Institute of Actuaries of India web site	83
Reference from some one	17
Any other source	7

On average, each participant acknowledged information with regard to the event reached to them from 1.57 sources; Prominently from IAI website and by e-mail. A look at the source percentage as under:



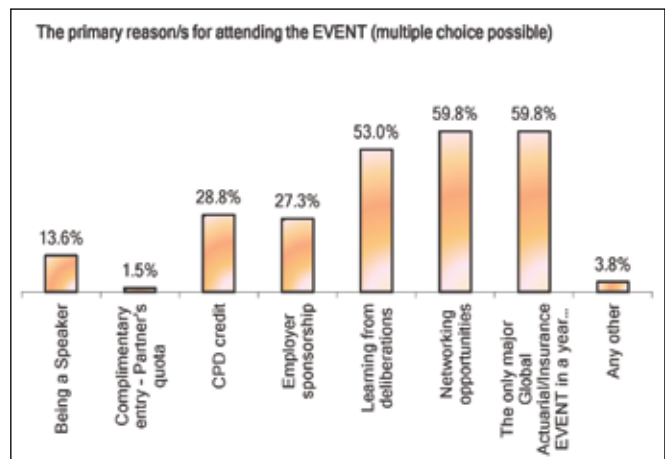
Specific comments / reference by survey participants on "Any other source":

Relationship with IAI
From Company Head office
I knew it as I'm a member of the organizing committee
Annual event -keeps track
Mentioned by colleagues
Invited by IAI
Sri Lanka Actuarial Association

3. The primary reason/s for attending the EVENT (multiple choice possible)- Responded by 132 participants

Choices	Counts
Being a Speaker	18
Complimentary entry - Partner's quota	2
CPD credit	38
Employer Sponsorship	36
Learning from deliberations	70
Networking opportunities	79
The only major Global Actuarial/Insurance EVENT in a year in India	79
Any other	5

The purpose indicator is 2.48 by counting the total responses as 327 by all 132 respondents, which means, on average, participant has 2.48 purposes for attending the conference in which Networking opportunities, learning from deliberations and attending as the major global event of actuaries appear prominent.



There were 6 specific responses leading to 3 unique comments as under:

Specific comments/ reference by survey participants under "Any other" option

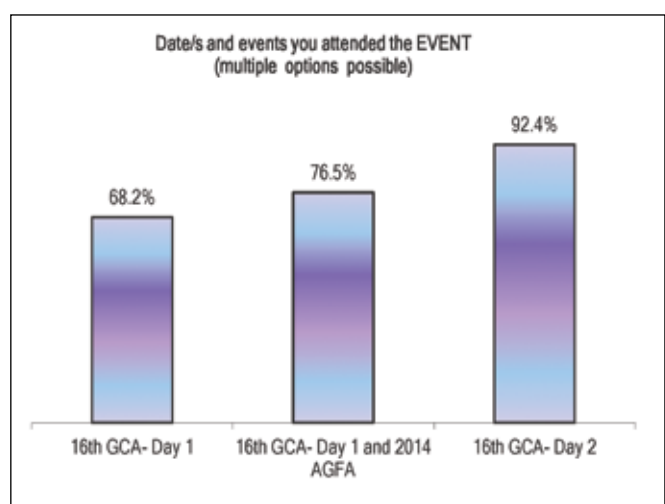
To receive qualifying certificate/ award for toppers
To get a job opportunity
More exposure

4. Date/s you attended the EVENT (please click all dates that you attended)

Responded by 132 participants

Day	Attended by	as % of survey participants
16th GCA- Day 1	90	68.20%
16th GCA- Day 1 and AGFA 2014	101	76.50%
16th GCA- Day 2	122	92.40%

Referring to the registration count as 491 on the second day does not agree fully with the above count shown from the survey participants, leading to a possibility of more attendance on the day-2 than day-1, skipping the second day registration process.



Rate the following:

5. The EVENT website and Admin support through the website- Rating scale from 6 to 1 , 6 being the highest

Responded by 131 participants

Summary of weighted average of each of the items rated by the participants

Items	Average rating	Response count
The Website?	4.78	129
Details of Speakers displayed on the website	4.78	129
How smooth was the online payment process for registration?	4.98	120
If you booked hotel room through the site, how smooth was the process?	4.05	42

Specific responses by 17 participants:

Not tried for online payment

The hotel was terrible. I was given a dirty room! No upgrade - just a move to another (non-smoking) floor.

Not booked the hotel.

I did not stay in any hotel; I stayed in a LIC guest house which is situated at a far distance from the conference venue. Gala function could be done in the night previous to the day 1. I have enjoyed a lot in this conference.

The services at the hotel were pathetic. Hotel staff was not co-operative. The Check-in was not available even until 5 PM though the mentioned time was 3 PM. Reception services were like as if it's a 2 start low budget hotel. Very bad experience.

Great

Payment options were too limited for overseas attendees

Nice

Two points: (1) Please network to your Ministry of Foreign Affairs so that they understand about this kind of activities and so its participants. (2) Make online payment method with somewhat versatile credit cards.

Website needs updation. Photographs of the Presenters while Presenting be mailed to them. Upload Photographs of the Event, session wise. Website still seeking Registration for 16th GCA is certainly outdated

Session and speaker details were displayed too late - should be up on the website much in advance. Website user interface could also vastly improve.

Online registration should allow all types of credit cards

The website link for GCA was not working initially for few days.

Closing date of 10th had been brought forward to February 4th.

Some parts of Q5 is not applicable to me but do not have a n/a option

I had a lot of difficulty in registering through the website, to the extent that I missed the early bird fees and had to pay the full fees.

It took a lot of time for Renaissance to respond to confirm the booking. The second recommendation i.e. The Beatles did not respond at all!

6. Cover notes on the website from the perspective of being of use to you: Rating scale from 6 to 1, 6 being the highest

Responded by 113 participants

Summary of weighted average of each of the items rated by the participants

Cover note	Rating average	Response count
Economic & Demographic trends	4.55	96
Enterprise & Risk Management	4.54	91
Life Insurance	4.71	92
General Insurance	4.57	91
Micro Insurance	4.19	77
Pensions, Employee Benefits & Social Security	4.51	84
Health Insurance	4.51	81

Specific responses by 4 participants:

I am a student member of IAI and I attended the general insurance lecture. But as I am very new to the field, I wasn't able to perfectly understand their point of view. So I prefer not to rate rather than rating something wrong

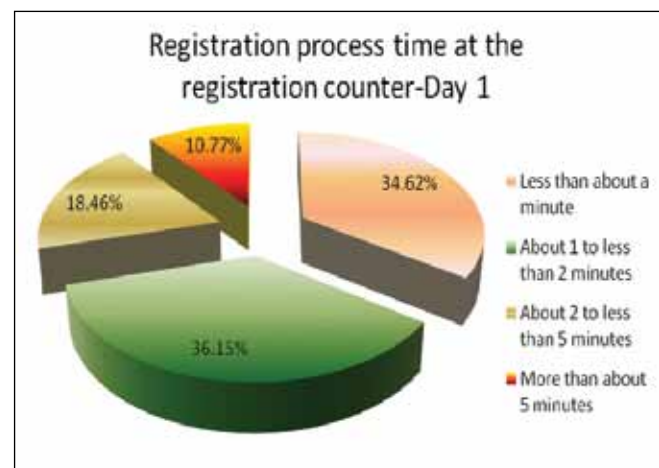
I did not find any research papers on which the speakers would be talking ... so it seems as though there was no specific academic papers to present and so the presentations were pretty poor quality relative to other actuarial conferences in other countries.

Did not go through them

Time Control for the plenary sessions needs to be better managed

7. Registration process time at the registration counter- Responded by 130 participants

On day 1, ~71% registration has done within 2 minutes, and the proportion increased to ~90% on day 2. However, there were 14 cases responded as the time taken more than 5 minutes. If we consider the representation from survey participants as an indication, the total number of members who might have waited at the counter for more than 5 minutes for registration could be ~75.



8. Rate the following- Services and Venue- Responded by 130 participants

Rating scale from 6 to 1, 6 being the highest

Summary of weighted average of each of the items rated by the participants

Service	Average rating
Efficiency of help desk	5.15
Overall ambience at the venue - Hotel Grand Hyatt	5.02
Convenience of access to venue	4.64
Networking facilities	4.71
Food & Beverages	4.31
Space availability for movement- Halls and Corridors	4.78
Networking opportunities: space/privacy	4.59
Ease of locating & movement from one Session Hall to another	4.98

The efficiency of help desk is worth to analyse further. Around 83% of the respondents rated the help desk in 5 and above category, however, 13% rated the help desk 4 and only 4 rated below 4

Rating Scale							
	6	5	4	3	2	1	Response Count
No. of respondents	46	56	16	4	1	0	123
Percentage of respondents	37.40%	45.53%	13.01%	3.25%	0.81%	0.00%	100.00%

Specific responses by participants:

The admin of the event was top notch. Only room for improvement was the name tags. Names MUST be printed on BOTH sides in LARGE font in order to be able to identify delegates without obviously struggling to read their name on the name tag (which was flipped over about 50% of the time, showing the details of the event programme!!!).

Hotel staff was rude and unprofessional, they were clearly unprepared to handle an event of this scale

I would prefer less wastage of bottle water by encouraging people to use water fountains with bio-degradable cups.

Management was perfect. And am happy that I didn't miss this event.

Nice if employer/company's name could be printed on name badges

GCA was successful and I had good opportunities of interacting with all the concerned.

Networking facilities at the venue were terrible. Area where lunch was served was too crowded and people were unable to have conversations. You should consider separating lines for lunch and place where attendees can eat and talk. Quality of food was also bad - needs to improve vastly.

Delay in getting a room

The food part was poorly managed. As soon as the bell rings they stopped serving food abruptly without even considering the fact that people are yet to start or finish their lunch. Lunch breaks are the time when lots of people visit the stalls and when will the people managing the stall will get to have food? Also there were long queue for coffee during the first break on day 1. By the time people reached closer to the vending machine, the bell rang and they stopped serving.

The food could have been better. Vegetarian options in the food were quite few. Also the buffet area was too small leading to overcrowding.

9. Please rate the following-2014 AGFA-Responded by 111 participants

Rating scale from 6 to 1, 6 being the highest

Summary of weighted average of each of the items rated by the participants

Item	Average rating
The program structure	4.69
Timings of sessions	4.45
Compeering	4.51
Ambience and Seating	5.06
Dance events	4.63
Comedy event	4.68
Maths stars awards	4.75
Presentation of Associate, Fellowship awards	4.90
Family videos	4.73
Presentation of Subject related awards	4.87
Light and Sound effects	4.62

Specific responses by 8 participants:

Disappointing that so many people left part way through the awards. Probably need to re-order so the majority are still there at the end - and shorten so people are more prepared to stay.

Please send copies of the family videos to me by e-mail or otherwise.

The Maths Star Awards session appears to be slightly "out of place". Is GCA the right place for this? It appears to be more of a publicity stunt. The foreign attendees must be loving this as they get to see the "real", "poor" and "hungry" Indians. Why not do such philanthropic job separately (outside of GCA)?

Sound was very loud. I wondered how the old people could handle it. Rest was all fine.

Sessions invariably extended beyond time limit because of which people could not attend sessions scheduled later. Dance events were the same and repetitive. Maths stars awards weren't well explained - children came on stage and then were asked to come back later. Photography at the venue was also bad - camera flash was constant and disturbed attendees during the session.

As per My suggestion IAI should also give certificates to CT Series toppers as well as Students passing 3 Exams in one sitting.

The sound effect was very poor. People seated towards the ends hardly heard the talks.

The overall programme was outstanding.

10. Please rate the following-16th GCA (Day 1 & Day 2) Sessions-Responded by 160 participants

Rating scale from 6 to 1, 6 being the highest

Summary of weighted average of each of the items rated by the participants

Plenary Session	Rating average
S1- Inaugural	4.83
S2- Session A: The Changing Role of the Actuary- Ramping up our Relevance	4.83
S2- Session B: Introduction to Panel Discussion on Insurance & Pension	4.70
S2- Session B: Greed, Fear, Complacency, Confusion, Remorse and Pride	4.71
S2- Session B: Retirement Benefits	4.56
S2- Session B: Problems in the General Insurance Industry in the current situation	4.73
S2- Session B: Re-insurance	4.76
S5- Update on Life Insurance in AP region and Solvency II	4.45
S5- Prospects of Indian Economy & Financial Services Industry-Investment & Banking	4.75
S6- Need for co-ordination between Actuaries and Chartered Accountants	4.88
S6- Five game changes for Insurance Industry	4.88
S6- Introduction and winding up	4.76

Specific responses by 5 participants:

In most of the sessions at least one presentation will be simply reading of slides which can be avoided because same presentation is already available in website and given in soft copy.

No academic papers were presented - the talks were all basically garbage - no new ideas came out ... only existing knowledge.

Don't remember the exact contents of all the presentations, but all the presentations were around the same topic and it became repetitive after the first half day.

Some More activities related to Students should be there, like opportunities in Actuary and discussion which is fruitful to students.

A summary/highlights at the end of each session with distinct bullet points can augment the presentation

11. Question related to ranking of speakers in plenary session, which requires confidentiality and results not meant for publishing

12. Please select concurrent sessions attended by you(multiple choice possible)-Responded by 108 participants

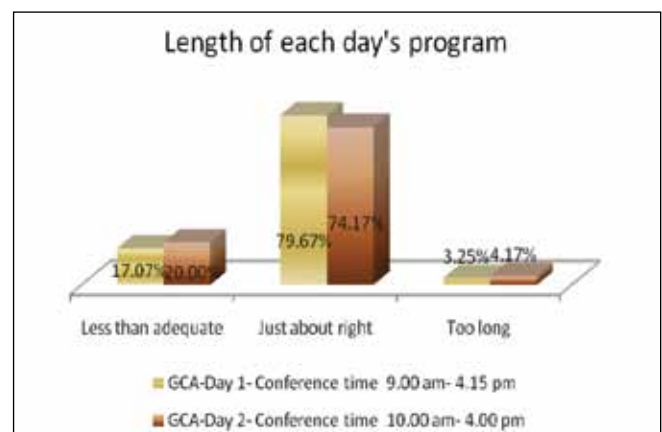
Days/ Sessions	Health & Reinsurance	Pension, other Employee Benefits and Social Security	Life Insurance	General Insurance	Total respondents
Day-1 Session-1	23.13%	17.91%	33.58%	25.37%	134
Day-1 Session-2	18.42%	18.42%	36.84%	26.32%	114
Day-1 Session-3	13.48%	17.98%	41.57%	26.97%	89
Day-2 Session-1	12.35%	18.52%	38.27%	30.86%	81
Day-2 Session-2	12.31%	15.38%	38.46%	33.85%	65
Day-2 Session-3	16.33%	14.29%	28.57%	40.82%	49

A decreasing trend of participation in sessions observed on moving from day-1 to day-2 and also from session-1 to session-3. The exception was General Insurance where the participation increased on day 2. Out of all concurrent sessions, Life Insurance and General Insurance sessions attracted bigger participation..

13. Question related to ranking speakers in concurrent sessions, which requires confidentiality and results not meant for publishing

14. GCA-Day 1- Conference time 9.00 am- 6.30 pm GCA-Day 2- Conference time 9.00 am- 6.45 pm Do you think length of each of the day's program was?

No. of participants- 123



15. Length of Concurrent sessions- (Multiple choices possible)

No. Of participants- 109

Concurrent session	Just about right	More time required	Longer than required	Total responses
C1: Health Care Insurance	33	3	2	38
C2: Pension and Employee Benefits	32	9	3	44
C3: Life Insurance	48	18	1	67
C4: General Insurance	37	20	3	60

There were 209 responses considering multiple choices from all 109 respondents and General Insurance appears to have insufficient time than other sessions. Overall, ~ 22% of attendees of concurrent sessions appear to agree that sessions require more time.

16. Please rate 16th GCA-overall- No. Of participants- 121

Rating Scale	6	5	4	3	2	1	Rating Average
Count	29	56	26	8	2	0	4.84
Percentage	23.97%	46.28%	21.49%	6.61%	1.65%	0.0%	

70% of survey participants believe that Overall GCA was quite good. ~21.49% feels it was OK. 8% of survey participants still believe that there is a large scope for improvement in organising the conference which is significant if the survey participants' proportion expressed their views magnified to the count of total attendees of the conference. i.e., ~ 56 participants of the conference might rate the event 3 or below.

Specific responses by participants:

Food was not good

Time keeping wasn't great - probably need to be stricter, or timetable longer breaks.

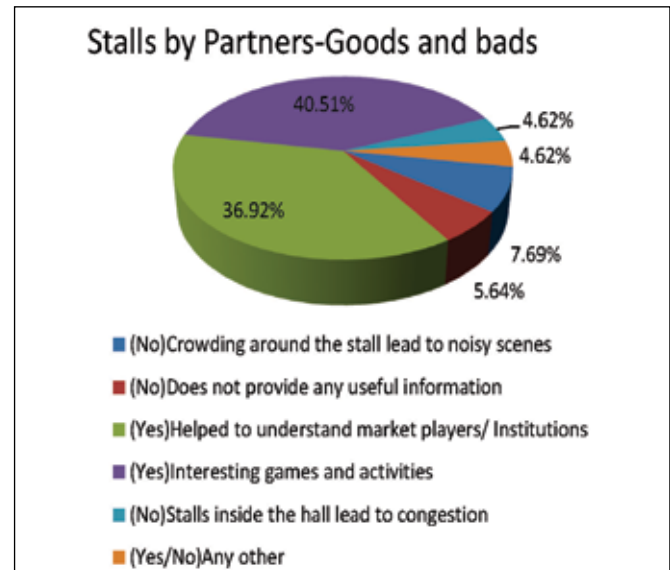
Thank you for all your hard work!!

Speakers should come with more preparation and understand the importance of the time given to them by the Institute.

Random call from the crowd could make it more exciting

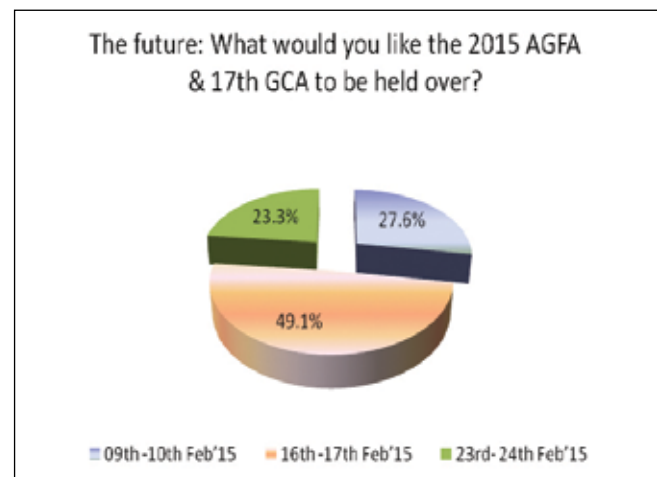
This was the first time I attended the event and I liked being there. The arrangements were good. However, I felt the eating area could have been bigger given the number of participants. Overall it was a wonderful experience and would definitely like to attend in future.

17. Do you think stalls by partners were of interest to you? No. Of participants- 102



18. What would you like the 2015 AGFA & 17th GCA to be held over? No. Of participants- 155

Majority of participants prefer the 2015 AGFA & 17th GCA to be held during 16th-18th Feb'14.



About the Author



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What I would like to do is to leave behind a sustainable entity of a set of companies that operate in an exemplary manner in terms of ethics, values and continue what our ancestors left behind.

- Ratan Tata

19 Comments/Suggestions for the 2015 AGFA & the 17th GCA- No. Of participants- 39

Considering the question being given optional to participants, responses from 39 participants is observed as overwhelming!!



The accommodation part was very poorly managed by Renaissance. All the people who had their booking were not allotted the rooms since morning. Though as per policy check in time was around 3 generally they would provide the rooms by 9 AM. The worst part was that even by 3 PM the rooms were not available. We were allocated rooms only by 5 PM that too after having harsh discussions with the management. Going forward at least for this event we need to negotiate to have different check in and check out timings. Might be 9 AM?

The time for presentation / discussion should be increased significantly. If that means only 1 or 2 topics be discussed in a day, so be it. But they should be deliberated / discussed in detail. The format may also be changed - e.g. a 'debate' would be much better than 'presentations' followed by 1 or 2 questions.

I prefer 3 day GCA over 2 days. It was not even 2 days but less than 1.5 days, hence got very less time to interact with people and visit their stalls. It would be good if you can make it again a 3 day event

There should be a session for student member relating to the future of the profession.

To invite suggestions from potential attendees on what topics they would like to be covered

There should be more stalls and games.

Little more questioning session at the end of each discussion should be good. Questioning session was too short and/or none for many sessions

And second (and has been mentioned before) is the title 'Global conference of actuaries' really appropriate? This was a title that originated prior to the private sector opening up, when most attendees were visitors from overseas. Now almost all attendees are from India. Food for thought. Other comments:

3 day GCAs are better.

Invite more stalls from partners and there should be provision for more activities, like health check-up in 16th GCA alongside sessions. Also invite more actuaries from abroad.

Is this an INSURANCE conference or an ACTUARIAL conference. My sense is that life insurance sessions are getting more 'general' in nature, as opposed to being 'actuarial'. Important to ensure that content is appropriate for the audience and for CPD credits.

What about having the Life Insurance Group of IoAI to present a session on what they have been doing in past year and what they have as work in progress? (same for other working groups) Overall though an EXCELLENT event in a good and practical location. It is by far the best networking event in the actuarial community in India and long may it continue. It was great to be involved again. Also, well done to the organisers for shortening the event, and for moving the prior Sunday night session to the Monday night.

Identify speakers / paper presenters who can carry out a thorough analysis of the subject matter and then make a presentation.

Could we see more participation and papers from students, or recently qualified actuaries

There should be at least one session for members and students interaction so that there will be more exposure.

Keep up the good work

It was well organized, overall.

Make it a 3 day event as was 15th GCA.

It was Good.

Members could be invited for some performances in the AGFA.



ADOPTION OF ACTUARIAL PRINCIPLES IN DAILY LIVES

Actuaries all over the world have to face many public misconceptions about the type of work they do.

They are considered to be dealing only with numbers, far removed from realities of life, crystal gazers, interested in "black box" computations, and so on. Are the basic principles which the actuaries use in their work so abstract that they have no usefulness in daily life? Not at all! It will be interesting to enunciate some of these principles and see how they can be effectively adopted by individuals, politicians, businessmen, social workers and many others to enrich lives – their own as well those of others.

1. Basic Concepts Inherent in Actuarial Work

It may be difficult to condense the basic concepts that govern the work done by actuaries. But, the following could be considered as illustrative:

- Have a complete understanding of the problem on hand.
- Choose an appropriate time horizon for computations.
- Establish the parameters relevant to the calculations on hand.
- Establish the anticipated levels for the relevant parameters.
- Maintain margins for adverse deviations in the anticipated levels.
- Compare values of cash flows as of a common date.
- Perform asset – liability cash flow testing.
- Perform scenario testing.
- Accept accountability for one's actions and decisions.
- Maintain professional standards.

It will be interesting to see how these concepts can be very valuable in our daily lives.

2. Having a Complete Understanding of the Problem

Before undertaking any task, an actuary needs to understand the purpose of the exercise. It could be new product pricing, valuation, scenario testing, capital adequacy testing, pension plan valuation, and so on. The purpose will then determine the further steps to be taken.

In daily lives, when one tries to address a problem, one has to have a complete

understanding of that problem – the various issues that are involved, their interactions, etc. Without such full understanding, any solutions are likely to be half-baked and may not be able to resolve the problem.

3. Choosing an Appropriate Time Horizon for Computations

In dealing with any computation, the actuary has to establish the time horizon appropriate for that computation. Thus, in pricing new products, the time horizon for one year term products will be very short; for products such as whole life or life annuities, it will be very long (as much as 30 or 40 years). For pension plan valuations, the time horizon could be as long as 50 years. The time horizon can assume many values in between. How does it translate into daily life? We are faced with evaluating different options in making decisions – such as undertaking a new venture, choosing an educational path, deciding a career path, and so on. In all such situations, we need to establish the appropriate time horizon for making comparisons. For example, while deciding whether or not to undertake higher education, one will need to compare the future earning potentials for the different paths. The time horizon may span over the entire working career of the person. If someone were to base the decision by comparing the earnings potential over five or ten years, one could easily arrive at a wrong conclusion.

4. Establishing Relevant Parameters

In the daily work of a life actuary, different computations require consideration of different parameters – such as mortality, disability, recovery from disability, policy terminations, expenses, inflation, interest, taxation, legislative requirements, and so on. While some of the parameters will be common to most products, others will be product specific. It will be necessary to make sure that appropriate parameters are identified and built into the calculations.

What does it mean in our daily lives? What actuaries call "parameters" can be translated into "unknowns", "uncertainties" or "risks". Consider

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any event management – such as arranging a wedding, a party or a convention, etc. For successful management, one has to fully visualize the entire event and identify the unknowns or risks involved and set up plans to deal with them. Without such analysis, one may encounter many "unexpected" problems and can hardly expect to have a successful event.

5. Establishing Anticipated Levels of the Parameters

Once the actuary has identified the parameters to be considered, the anticipated or the "best estimate" levels have to be established. These have to be appropriate for the circumstances of the insurer and the relevant product. Ideally, the actuary will try to use the company's own experience. If this is not available, outside experience may have to be used and modified to reflect the company's situation.

How can we build this in our daily lives? While analyzing any issue, we first have to identify the risk factors involved. Then they have to be quantified. Let us say that we have to drop someone at the airport. The objective is to reach the airport on time. We will need to consider the mode of travel, how much time it will generally take, traffic situation, etc. If we had not undertaken the travel ourselves in the past, we will need to use someone else's experience and make adjustments. Without such analysis, getting to the airport could be a "hit or miss" exercise.

6. Maintaining Margins for Adverse Deviations

This is a very important aspect of the actuary's work. Once the estimated levels have been established, the actuary has to retain Margins for Adverse Deviations to allow for the possibility that the estimates may

be incorrect or could deteriorate. In absence of such margins, the possibility of not meeting the objective increases significantly. Maintaining these margins does not provide full guarantees; but provides a reasonable protection against adversities. The size of the margin depends on the degree of confidence the actuary has in the best estimate levels – whether the actuary was able to use the company's own experience or had to rely on someone else's estimates and also on how far in the future the event is likely to take place. This generates the classic "expanding funnel of doubt". What does this mean in practice? Consider the situation when a parent is trying to provide for his/her child's education. The parent has to consider various factors - the discipline in which the child has an interest, the educational institution, period of study, tuition fees, living expenses, and so on. Once the "best estimates" have been prepared, it will be advisable for the parent to maintain Margins for Adverse Deviations to estimate the total cost. The size of these margins will depend on the degree of confidence the parent has in the estimates. Without this exercise, the parent may not be sure if the objective can be achieved.

7. Comparing Values of Cash Flows at a Common Date

This is an important concept in all actuarial calculations. For new product pricing, the actuary will perform all calculations as at the commencement of a policy (viz. at time zero). He/she will calculate all the cash in-flows through future premium receipts and all the cash out-flows consisting of benefits, expenses, taxes, etc. The values of these cash flows will be effectively discounted to a chosen point in time. For some products, a different point of time may be chosen. For deferred annuities, the point chosen could be the time when the annuity payments begin.

How does this help in practice? A company may want to introduce a wellness program for its employees. For this, the company will be expected to incur significant costs and will be expecting to derive benefits through improved productivity and reduced absenteeism. The company may want to use different points in time for comparison. If the time chosen is 10

years from the start of the program, it will need to accumulate past cash flows and discount future cash flows. Not to do this could produce wrong results.

8. Performing Asset – Liability Cash Flow Testing

In the olden days, almost all the calculations (new product pricing, valuation, etc.) were performed by discounting future receipts and payments by a specified rate of interest (could be a step rate). In modern times, with extreme volatility of interest rates, the actuary has to look at the future asset and liability cash flows and assess the impact of changes in interest rates and other market changes. This results in quantifying the effect of mismatch between the two sets of cash flows.

Does this help in practice? It sure does. Consider an individual having a combination of a stream of future income and a significant portfolio of assets and has to meet future commitments that may include support for parents, providing for children's education, and so on. This individual will need to lay out the future cash flows (both "in" and "out") to assess the mismatch and figure out the likely impact of changing economic conditions. This will enable the individual to realign the portfolio to minimize the risk of changing economic conditions. Such an analysis may even be able to alert the individual if he/she needs to take out an insurance policy to fill in any gaps.

9. Performing Scenario Testing

This aspect of the actuary's work is becoming increasingly important. In undertaking this exercise, the actuary plays a "what if" game. There are a number of parameters that affect the health of the insurance company. The actuary works out the financial impact of serious worsening of the different parameters and, after considering the effect of any likely compensating action taken by the company, decides if it is likely to seriously damage the financial health of the company.

What does this mean in practice? A lot. We all make all kinds of plans for the future. Subconsciously, we ask ourselves the question – "what if something goes wrong" and prepare a Plan B for implementation. This analysis can be made on a more scientific basis taking into account the different risk factors. The extent

of this analysis will obviously depend on the complexity of the activity. A proper analysis will prepare the individual to deal with adversities and provide a reasonable assurance that the task on hand will succeed.

10. Accepting Accountability for one's Actions and Decisions

When an actuary performs work in a professional capacity as an "Actuary", he/she is required to provide certification for the accuracy and appropriateness of the work done. In doing so, the actuary is standing behind his/her work and accepts the responsibility for the work.

How important is this aspect in our daily lives? Very much so. We come across many situations when individuals, companies, political leaders and others decline to accept accountabilities for their actions that cause damage – financial or otherwise. We come across situations of "passing the buck". This principle requires you to make sure that the buck stops with you and do not blame others for your actions.

11. Maintaining Professional Standards

Actuaries, as professionals, are subjected to standards set out by their professional bodies. These standards cover areas such as how the actuary performs his/her work, maintaining independence in providing opinions, protecting the interests of the public (policyholders, pension plan members, etc.), etc. An actuary who does not comply with the standards is likely to be subjected to disciplinary action by the professional body.

This aspect of actuarial principles represents integrity. It is perhaps the most valuable principle in day to day life. This envisages ethical behavior to be followed in everything you do. If more people were to adopt this principle, the world will be a much better place!

One could say that these actuarial principles are no different from commonsense principles. This is very true. These principles require an individual to have a deep understanding of issues, understand the various risks involved, be able to quantify those risks, be cautious in taking actions, understand the financial world around us, remain accountable for one's decisions and actions and maintain integrity. One does not have to be an actuary to put these principles in practice !





The Advisory Group on General Insurance (AGGI) was set up with objective of providing a forum for actuaries working in the General Insurance (GI) industry in India to address issues that directly affect their day-to-day functioning, as well as provide advice to the General Insurance Council on issues it deems appropriate.

Based on the interaction and feedback from actuaries and the senior management of the GI industry in India, AGGI is of the opinion that though the involvement of actuaries have increased in the GI Industry, the full potential of actuarial offerings is not being currently utilized by the Industry. This is something that AGGI wants to address and improve over the next few years.

The following activities were undertaken with this aim in mind:

In December 2013, AGGI organized a two-day seminar.

Day 1 was the Current Issues in General Insurance Seminar, which was attended by several CEO's, senior leaders, and senior actuaries from GI companies. The topics included:

- Key Note Address by Mr. Ramaprasad, Member (Non-Life), IRDA
- A Panel discussion of CEO's of 3 GI companies, moderated by the Chairperson of the GI Council on the Role of Actuaries in GI Industry

- A presentation by the CEO of ICICI Lombard on Delivering Returns: Value to Shareholders
- A presentation on Analytics in Non-Life by Mr. Raghavan, CEO, IIB
- Presentations on Effective Claims Management and Fraud Analytics

Day 2 was the Capacity Building Seminar which was attended by senior and student actuaries. The topics included Telematics, Catastrophe Modelling, Reinsurance Structuring and Optimization, Reserving and Commercial Lines Pricing.

AGGI was also involved in organizing the GI Breakout session at the Global Conference of Actuaries held in February 2014. This included another CEO panel discussion, a panel discussion of Appointed Actuaries, besides presentation of papers by speakers from around the world.

Besides this, AGGI worked on finalizing GN 32 "Determination of Appraisal Value of a General Insurance Company" and modifications to the Continuing Professional Development and other requirements for the Issuance of Certificate of Practice to Appointed Actuaries of GI companies. The Group also brainstormed and provided potential research topics to the R&D team. For FY 2014-15, AGGI plans to undertake the following activities:

- Conduct two seminars - Current Issues in General Insurance and Actuarial Capacity Building, tentatively in

August/September, 2015.

Work with the R&D group on research projects relevant to GI. Our suggested topics include:

- o Industry Loss Development Factors for long-tailed and short-tailed products
- o Develop loss costs for Rashtriya Swasthya Bima Yojana exposures and identify critical rating factors that affects the pricing

Undertake a project on determining the claim frequencies and severities for Motor Third Party business. AGGI plans to make this a collaborative effort with involvement of IIB for the Industry data and contribution from others who are experts in this Line of Business

Conduct survey within the GI Senior Leadership to obtain feedback on what the actuaries currently do and how it can be improved.

On a longer term basis, the AGGI strives to work closely with the IRDA, the General Insurance Council GI actuaries to enhance the actuarial contribution in the management of GI companies by providing support on robust reserving, pricing & capital modelling techniques, product innovation, compliance, and overall risk management. This will improve the profitability of the GI companies and help increase the penetration level of the Industry.



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IDBI Federal Life Insurance is one of the fastest growing life insurance companies in India. We have achieved break even in just 5 years of incorporation. The secret of this success is our constant endeavor to create innovative financial solutions that create value for our customers and help them realize their dreams.

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We invite applications for following positions:

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Candidates should have -

- 8 - 12 years of work experience in a life insurance company
- Cleared 8 - 12 actuarial papers

Actuarial Trainees (Pricing / Valuation / Reporting) -

The candidate will be responsible for assisting pricing actuary in launch activities including review of benefit illustrations, systems testing and negotiations with re-insurers.

Key responsibilities will also include contributing in group quotations, group products pricing, business planning, regulatory reporting, experience analysis, analysing new business and embedded value calculations.

Candidates should have -

- 6 months - 2 years of work experience in a life insurance company
- Cleared 2 - 4 actuarial papers

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INSURANCE OF TERRORISM RISKS IN INDIA

Introduction

The whole world watched in disbelief on 11th September 2001 as the iconic Twin Towers of the World Trade Centre in New York and the Pentagon building in Virginia, US were struck by commercial airplanes which a group of terrorists had hijacked. This unprecedented and horrendous attack killed many individuals and caused enormous economic losses.

These attacks caused many changes globally, one of them being exclusion of terrorist attacks as a potential peril in insurance contracts by insurance and reinsurance companies. They also demonstrated the pivotal role that insurance plays in providing financial security to people and their property.

Pre 9/11 Scenario

Prior to September 11, 2001, the Insurers provided terrorism coverage to their customers essentially free of charge because the chance of property damage from terrorist acts was considered remote. Insurance companies considered the risk so low that they did not price potential losses from terrorist activity separately from the standard property policy. In fact, in India also, the terrorism cover was inbuilt along with Riot, Strike & Malicious Damage cover under the fire policy.

Post 9/11 Scenario

The tragic event brought to light that expenses related to terrorist attacks affect overall national economies, let alone insurance companies. Faced with continued uncertainties about the frequency and magnitude of future attacks, insurers and reinsurers across the world began to reassess this risk. For a while terrorism coverage was scarce. Reinsurers were unwilling to reinsure policies in urban areas perceived to be vulnerable to such attacks. Primary insurers filed requests with their regulatory authorities for permission to exclude terrorism coverage from their commercial policies.

Creation of the Pool in India

In the wake of these terrorist attacks, the Indian insurers too had the choice of either echoing the non-availability of terrorism cover or organizing it internally. Acting as responsible corporations, they decided to be self-reliant and all non-life insurers joined hands in April 2002 and established the **Indian Market Terrorism Risk Insurance Pool (IMTRIP)**.

Pool Specifics:

1. Structure

- Effective 1st April, 2002, the Pool is administered by General Insurance Corporation of India (GIC Re) under Regulation 8 of the Insurance Regulatory Development Authority (General Insurance - Reinsurance) Regulations, 2000.
- It is an elective pool and there is no direct government participation, i.e. participation in the Terrorism Pool is voluntary, but almost all general insurers participate, except for specialized Health Insurance companies, Export Credit Guarantee Corporation of India Limited (ECGC) and Agriculture Insurance Corporation of India Limited.
- The territorial scope of the Pool is restricted to India.
- The Pool Underwriting Committee

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determines the premium rates, terms of the cover, deductibles and conditions for terrorism risk.

- GIC Re acts as the Pool Manager, and also contributes capacity to the Pool. It takes 1% of the total premium as its management and administration expenses.
- The Pool takes reinsurance protection on Excess of Loss basis from GIC Re. For coverage beyond the Pool's capacity, insurers seek facultative reinsurance support from the international market.
- The total premium charged for the terrorism cover is ceded to the Pool after deducting 2% as service charges for the company that has brought in the risk.
- The Pool essentially enables the Pool members to write terrorism risks on an individual basis using the combined capacity of all Pool members plus GIC Re. So the pool mechanism hinges on the reinsurance concept, i.e. the terrorism risk underwritten by one company is reinsured by all the Pool members, in agreed proportions.
- Pool results are shared among the Pool members in same proportion as the capacity provided. The member companies have a share in the loss retention as per agreement signed by each of them.

There is only one thing that makes a dream impossible to achieve;
The fear of failure.

-Paulo Coelho

Currently share of each member company is as below:

SHARE OF MEMBER COMPANIES IN THE INDIAN TERRORISM POOL				
Insurer	2012-13		2013-14	
	Per Risk Capacity (₹crore)	Share (%)	Per Risk Capacity (₹crore)	Share (%)
GIC	160	16	156.50	15.65
National	120	12	120	12
New India	160	16	156.50	15.65
Oriental	120	12	120	12
United India	128	12.8	120	12
Bajaj Allianz	50.25	5.03	50.25	5.03
Cholamandalam	20	2	20	2
Future Generali	10	1	10	1
Government Insurance Fund, Gujarat	10	1	10	1
HDFC ERGO	10	1	10	1
ICICI Lombard	80	8	80	8
IFFCO Tokio	40	4	40	4
Reliance General	20	2	20	2
Royal Sundaram	10	1	10	1
TATA AIG	16	1.6	16	1.6
Universal Sampo	10	1	10	1
Shriram General	10	1	10	1
Bharti AXA	10	1	10	1
Raheja QBE	0.75	0.08	0.75	0.08
SBI General	5	0.5	5	0.5
L&T General	10	1	10	1
Liberty Videocon*	--	--	10	1
Magma HDI*	--	--	5	0.5
TOTAL	1,000	100	1,000	100

Source: IRDA Annual Report 2012-13

*Commenced Operations in 2012-13

II. Coverage

Under the existing version of the Terrorism Pool Agreement, the pool is effective for only certain classes of risk.

Coverage

The classes of insurance presently covered by the Pool are all terrorism insurance covers underwritten in:

- Fire
- Engineering (Industrial All Risk, Erection All Risk, Contractor's All Risk, Storage-cum-Erection, Marine-cum-Erection, Contractor's All Risks, Civil Engineering Completed Risks, Construction Plant & Machinery, Electronic Equipment Insurance)
- Property section of Miscellaneous policies like Jeweller's Block

- On-shore assets of Oil & Natural Gas Commission Package Policy/ Port Package policies, Stock Floater Policies, & on-shore drilling rig equipment
- Advance Loss Of Profits Cover in conjunction with above policies.

Exclusions

The classes excluded are:

- Motor, Personal Accident, Liability, Cash-in-Transit, Bankers' Indemnity, Health, etc.
- Risks other than property in Fire & Engineering class
- Any loss arising out of Nuclear, Biological Chemical & Radiological Attacks

Add-on Covers

With effect from 1st April, 2014, the below two add-on covers are included under the Terrorism Pool Coverage:

- (1) Start up Expenses
- (2) Alternate Accommodation

III. Limits on Losses:

The maximum loss limit under Terrorism cover at the inception of the pool was Rs. 200 Crore for any one risk at one compound. With effect from 1st April, 2014, the limit has become Rs. 1500 crores. The Pool covers Material Damage Loss and Advance Loss of Profits. The revised Limit of Liability for ALOP is upto 750 crores while the combined liability limit for Material Damage and ALOP is upto 1500 crores per location. The add-on covers also fall under this limit.

The details of changes in the limits are as below:

In Crores

With Effect from	Pool Limit
1 st April, 2002	200
1 st April, 2004	300
1 st April, 2005	500
1 st April, 2006	600
1 st April, 2008	750
1 st April, 2012	1000
1 st April, 2014	1500

Here, one risk is defined as one compound at one location. The catch is that, it is one compound which is subject to this limit and not each business/ shop which is present there. So a mall that houses several branded shops, the maximum liability for the whole compound will be Rs. 1500 crores (Material Damage + ALOP/ LOP) and will have to be shared between all policyholders/shops in that compound, even if they have individually bought Rs. 1500 crores of cover. And if the aggregate loss that occurs at one compound is more than the limit, the claim payable for each risk will be reduced in proportion to their sum insured. If there were a terror strike in any such mall, a shop operating there would receive only fraction of the cover that it has bought. The maximum

amount that would be compensated to all of them combined would be Rs. 1500 crores.

Deductible:

The terrorism cover has a deductible which varies by the nature of the risk, as below:

Nature of Risk	Deductible (as a % of claim/ loss amount)	Minimum Limit	Maximum Limit
Residential	1% of claim amount	INR 10,000/-	INR 5 lacs
Non Industrial Risk	1% of claim amount	INR 25,000/-	INR 10 lacs
Industrial Risk	5% of claim amount	INR 1,00,000/-	INR 2.5 crores

Source: IRDA Terrorism Pool Circular dated 7th March, 2014

IV. Premium Rates:

Premium rates for terrorism cover were revised upwards in April 2009 after enormous losses from the Mumbai terrorist attack event of 26th November 2008. The rates had reduced w.e.f. 1st April, 2012 and have changed further w.e.f 1st April, 2014.

TERRORISM INSURANCE PREMIUM RATES IN INDIA				
S. No	Total Sum Insured(TSI) Per location (MD+LOP/ALOP)	Risk Category	Premium Rate Per mille*	Loss Limit per location/ compound (MD+LOP/ ALOP)
1	Upto INR 500 crores	Residential	0.08	TSI
		Non Industrial	0.15	
		Industrial	0.23	
2	Over INR 500 crores and upto INR 1,000 crores	On first INR 500 crores as per (1) above PLUS on balance Sum Insured as under		TSI
		Residential	0.08	
		Non Industrial	0.15	
		Industrial	0.20	
3	Over INR 1,000 crores and upto INR 1,500 crores	On first INR 1000 crores as per (2) above PLUS on balance Sum Insured as under		TSI
		Residential	0.08	
		Non Industrial	0.12	
		Industrial	0.20	
4	Over INR 1,500 crores and upto INR 2,500 crores	On first INR 1,500 crores as per (3) above PLUS on balance Sum Insured as under		INR 1,500 crores
		Residential	0.05	
		Non Industrial	0.12	
		Industrial	0.15	
5	Over INR 2,500 crores and upto INR 5,000 crores	On first INR 2,500 crores as per (4) above PLUS on balance Sum Insured as under		INR 1,500 crores
		Residential	0.05	
		Non Industrial	0.10	
		Industrial	0.10	
6	Over INR 5,000 crores and upto INR 10,000 crores	On first INR 5,000 crores as per (5) above PLUS on balance Sum Insured as under		INR 1,500 crores
		Residential	0.05	
		Non Industrial	0.08	
		Industrial	0.08	
7	Over INR 10,000 crores	On first INR 10,000 crores as per (6) above PLUS on balance Sum Insured as under		INR 1,500 crores
		Residential	0.05	
		Non Industrial	0.06	
		Industrial	0.06	

*Per-mille (‰): Per-mille or per-mil means parts per thousand. (One per-mille is equal to 1/1000 fraction: 1‰ = 1/1000 = 0.001)

MD – Material damage, LOP – Loss of Profits, ALOP – Advance Loss of Profits
Source: IRDA Terrorism Pool Circular dated 7th March, 2014

The Premium Rates above include the cost incurred towards Brokerage/ Agency Commission up to 5% on terrorism premium for business procured through Brokers/ Agents.

The Pool has seen rapidly increasing premium income.

In Crores

Year	Pool's Premium Income	Claims Paid by the pool
2009-10	306	214
2010-11	388.7	76.18
2011-12	457.7	41.5
2012-13	482.5	6.73

Source: IRDA Annual Reports

Terrorism Pool: Challenges

- There is no government support in India, unlike in various other countries, where government supports either directly or indirectly. Indian terrorism insurance market at present is in its nascent stage and requires government support.
- Since Insurance coverage only up to a specified amount can be allowed by the underwriting companies, with the terrorist activities on the rise, the Pool may not suffice the need. In fact, India is ranking 13th among the 18 countries categorized as 'extreme risk' for Terrorist Attacks by Maplecroft Terrorism Risk Index, 2013.
- Even though the terrorism insurance business shows an upward trend, the clientele is small and limited to mainly big players and corporate houses of the country. The reach needs to increase so that the very concept of insurance, i.e. sharing the losses of few amongst many, holds good and so as to avoid geographical concentration.
- Premium rate for terrorism cover depends only on Sum Insured and Risk category, location is not taken into account. While some places are more prone to risk of terrorist attacks, they ought to pay a higher premium

than the others. This again poses a challenge for the insurers to develop their business in economically less developed areas.

- Terrorism Claims arising from other lines of insurance like personal accident, life insurance, health insurance, public liability etc. are not covered by the Terrorism Pool. The impact of any claims arising in these classes of insurance will be absorbed by the respective companies who cover it.

Terrorism Risk: What problems does it pose?

Terrorism affects human life and destroys businesses. It causes huge economic losses, and cripples insurance companies. The repercussions are so strong that certain industries like Aviation and Tourism are affected for years to come. It also leads to an increase in Defence expenditure to counter terrorism which puts a strain on other productive sectors.

Terrorism risk is very different from other risks typically insured, as

- It is impossible to determine the probable number of events (frequency) likely to result in claims and the maximum cost of these events (severity).
- The acts of terrorism are intentional.
- No one knows what the worst case scenario might be.
- Terrorism losses are also likely to be concentrated geographically, since terrorism is usually targeted to produce a significant economic or psychological impact.
- Terrorism losses are never random. They are carefully planned and often coordinated.
- Accumulation of risk also poses a problem.

These are undesirable features of an insurance risk, and challenge the effective pricing of terrorism cover.

The 26/11 Attacks

When the iconic hotels of Mumbai turned into a battleground for 3 days,

India was shaken to the core. The streets of Mumbai were plunged into sheer chaos. The grotesque images still haunt the country. Losses amounted to hundreds of crores and nearly 172 innocent lives were lost. That day will be etched forever in Indian history as the one which scarred the entire nation's psyche.

The pool has settled all losses arising out of 26/11 attacks event for a total amount of Rs. 377 Crores. Insurers have reported a marked increase in the demand for terrorism cover following these attacks.

Terrorism Pool in Other Countries

Various other countries operate terrorism pools in similar fashion or have loss sharing arrangements in place to provide cover for terrorism risks, with most of them having been established after the New York World Trade Centre attacks in 2001. Some countries like Spain and UK have had such an arrangement in place since 1954 and 1993 respectively.

In almost all countries, the pool is created by insurance companies with at least one reinsurance company providing support and is generally in a Public-Private Partnership model. Government generally provides support, except for some countries like Austria, Switzerland or Russia. In some countries, Government even provides a backstop cover which may be capped, as in the US, or Belgium or be unlimited, as in the UK, or France.

Each pool operates differently from the other and has its own defined coverage, specifications and rules. For example, while terrorism cover is provided only with Property Damage and Business Interruption policies in countries like France and Germany, in the Netherlands and Belgium, it is even provided for personal risks, including life and health.

Conclusion

With terrorism on rise, Terrorism Pool has become inevitable. 26/11 Mumbai terrorist attack was a testing time for the Pool and settlement of the claims arising out of this incident by the Pool is a testimony to its claim paying ability. The Pool will continue to grow and provide the much-needed certainty and

assurance to the insurance companies and commercial buyers alike.

Sources:

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- v> Issues in Terrorism Risk Management By A Srujan 10th Global Conference of Actuaries
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- viii> Terrorism coverage schemes – A comparative table World Forum of Catastrophe Programmes Terrorism Risk: A Continuing Threat Impacts for Property/Casualty Insurers, SEPTEMBER 2012 Insurance Information Institute By Robert P. Hartwig, Ph.D., CPCU, Claire Wilkinson
- ix> Structuring Global Insurance Programmes For Terrorism And Political Violence By Piers Gregory and Clive Hassett October 2012
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Raunak Jha in Conversation with Mr. Sumit Seth and Mr. Frank McInerney !

Background: Growing competition and expanding actuarial roles have posed added difficulty over and above the voluminous course of technical work handled by young actuarial members. The excerpts from conversation between Ms. Raunak Jha (Editor of Actuary India Magazine) and Mr. Sumit Seth and Mr. Frank McInerney (Speakers of Students' Event function at recently held Global Conference of Actuaries in Mumbai) are covered in this write-up where they discussed the areas where our actuarial students' need to concentrate and how they can bridge this professional gap right at the beginning of their career which otherwise could prove to be a hindrance later on.

Introduction of participants:

Mr. Sumit Seth is the founding member of Forum in India (a consulting and training organization). As a consultant/ executive coach he helps organization in the areas of sales efforts, customer experience practice and leadership development at all



levels to boost business performance through people. Beyond his professional realms Sumit is also a physiotherapist working with cancer patients.

Mr. Frank McInerney is general manager at Gen Re (Singapore) and looks after Southeast Asia (including India). He is an actuary by profession and worked in Life Insurance for 40 years mainly in direct market and last



20 years in reinsurance. His previous roles have been Appointed Actuary, Chief Pricing Actuary and Reserving Actuary.

Ms. Raunak Jha is a qualified actuary from Institute of Actuaries of India and is currently working as Chief Risk Officer at Cigna TTK Health Insurance Co. Ltd.



Interview Excerpts:



First of all I would like to thank you all for taking out time for this session. Starting with you Sumit, given your experience with coaching and analysis what are the challenges that beginners face while they enter technical careers (such as actuarial)?



Students when they start with their professional career are posed with three main challenges; lack of clarity which leads to low or high engagement levels in the professional career; lack of direction, to bridge the gap between developing competencies to contribute to the field and lack of an Ecosystem to develop competencies which leads to self doubt in youngsters



What's your take on this Frank?



New actuarial student's lack confidence, public speaking

skills, common sense (to go beyond the textbook knowledge), inquiring mind to suggest alternative, ask questions and communication skills which is important to influence people



What are the main factors that lead to poor and effective communication skills among students?



Self Doubt, fear, feeling inadequate and anxiety. If the ecosystem also doesn't provide the necessary support the fear is further fed. Everyone communicates, but scientifically good communicators are those who think aloud.



How these problems could be handled?



"By creating memories of success" – creating memories of success on small things on a daily level by senior management. These memories reinforce

confidence which helps in mitigating self doubt and replaces that fear with confidence.



Frank, what could be a possible solution to the overcome this problem among students?



Luckily communication can be taught.

Analyze where you are going wrong and start work to turn that around. Companies should also invest in communication and other peoples skills. Written and presentation skills are currently included in actuarial course to help students pick up the same. Other advanced skills should also be included such as the skills needed to convince/influence people. Many other professionals require that such as a lawyer – who learns the skills (convince/ argue) to excel in his profession and was

not necessarily born with it.

 **Frank, could you tell us more about the challenges faced by actuaries 40 years ago vs. the challenges faced by students today?**

 Communication was not an issue 40 years ago as it is today. The idea was to excel at analysis, be comprehensive and precise while writing reports. 40 years back the choices were limited and thus less confusing. The only level of interaction faced by actuaries in past was to interact with other actuaries and the language was mainly technical known by both sides however the expanding role of actuaries demands communication with non-actuaries.

 **Sumit, could you tell us more about the challenges you faced when you started your career?**

 My biggest challenge was lack of clarity and proper direction given the infinite directions where the world was heading. As a student, I'd call it- "a sense of quiet desperation".

 **How has actuarial profession changed over the last 40 years (apart from dealing with wider audience and expansion of roles)?**

 Change has been dramatic. Earlier the actuaries dealt with profit life insurance policies and defined benefits pension scheme in UK and Australia. Over the last 150 years, the products we deal have changed. The other physical change is computers which has changed the required skills. Earlier role of an actuary was to make complex transactions simple now the computer deals with those complexities and a number of skills taught to actuaries earlier are now redundant. Actuaries have now moved into other financial

problems in nature which was not a part of actuarial earlier (such as general insurance, health insurance, pricing of electricity).

 **Moving to you Sumit, what worked well for your career?**

 I deal with broad range of industries and in people oriented functions. My leaning was more at a subconscious level that helped me connect the dots. I was able to use all the knowledge learnt in past, connect the dots and relate to the world better.

 **So what do you support, learning everything so as to be able to connect dots or focusing only on what is required?**

 Definitely, be a specialist. That's your identity- as a technical expert. To be able to apply and derive value out of technical expertise comes only if you are able to connect it to the broader context. Human brain isn't selective and what we study should go into our long term memory. And what should go into our long term memory? Well, brain simply picks up everything. Therefore broad knowledge is a must. Exposure, curiosity and direction can all be built with right training.

 **Frank, are actuarial student threatened by lack of these broad skills that Sumit points out? Are we making our actuarial students just experts while the wider audience that they deal with requires them to build these broad skills?**

 Technical expertise is a must but it's also important to be able to use that skill by communicating well. The ideal solution is to have a balanced approach.

 **Frank, what was the biggest challenge you faced as a student**

other than dealing with exam?

 Be able to deliver a striking the right result (sensible result) – a conservative approach to deliver the solution to the actuarial problem. An individual challenge was when I joined an Insurance firm and 80 per cent data was wrong. What do you do with regards to your annual report? Say the company is insolvent? Or clean the data to make things workable?

Solutions are not always simple and taking the easy approach is not always the right approach.

 **Sumit, what had been your biggest professional challenge so far?**

 How to get the right people in the organization and get them to engage. Be passionate about their work. If we can get this right "by creating higher level of engagement" we have the solution. Another client challenge is the ability for customers to realize the solutions provided by any industry.

 **Frank, what do you think are the areas of improvement for Indian actuarial students?**

 As the examination pass rate in India is low, it indicates that the examination level is tougher than it should be and needs to be relooked upon.

Students should look beyond the traditional employers (like life insurance companies), be interested in new development areas, try to contribute in new/original research and write professional papers.

 **I would like to thank you two for sharing your experiences! I am sure our actuarial students would be eagerly waiting for your session and I would not hold you here for long.**

■ ■ ■

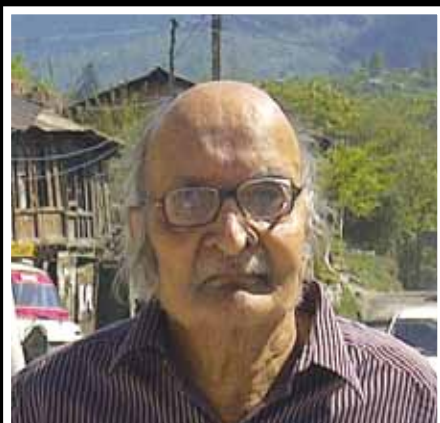


Funny Actuary

A man walks into the actuarial department of an insurance company and sees three actuarial students busily involved in the center of the room. One is holding a long board upright, the second is steadying a chair on a desk upon which the third student is balanced. The third student has one end of a tape measure and the first student has the other. The intruder asks, "What in the world are you doing?" The actuarial students answer, "We're trying to measure this board." The intruder says, "Why not lay it down on the floor and measure it?" The students answer, "We already know how long it is, now we want to see how tall it is."

- by Eric Shipley

OBITUARY



Remembering SHRI R V JOSHI

by
M G DIWAN
and
V RAJAGOPALAN

We came to know with great sorrow about the passing away of Shri R V Joshi, Fellow Member on Thursday, 27 March 2014 at Mumbai, at the age of 79 years.

Shri R V Joshi completed the Fellowship of the UK Actuarial Profession (then Institute of Actuaries, London) in 1964. He was employed with the Life Insurance Corporation of India for over three decades and he retired in 1992. During his long service, he had held a variety of assignments in different offices and functions ranging from new business, group insurance and superannuation schemes, actuarial and marketing. When he retired he was Executive Director (Long Range Planning and Management Services) at the Central Office.

He played an active role in the erstwhile Actuarial Society of India and he made a notable contribution to the Insurance Institute of India by authoring the text book "Mathematical Basis of Life Assurance" along with two other Actuaries. Apart from his passionate interest in actuarial aspects of life insurance business, he was also known for his love for mathematics and classical music. Although he had retired from active work he was in touch with friends and old colleagues.

We pray to the Almighty that may his soul rest in peace and to give strength to the family in their hour of grief.



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THE ACTUARY INDIA – EDITORIAL POLICY

(VER. 2.00/23RD JAN 2011)

Version history; Ver. 1.00/31 01 2004 Ver. 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 programmes 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 contents 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.



If you Born Poor it's not your Mistake,
But if you Die Poor it's your Mistake,

- Bill Gates



NEW ZEALAND

**Change of secretariat**

Fran Jenkins retired in December 2013. She had provided part time secretarial services to the New Zealand Society of Actuaries for over 20 years. The secretarial support function will now be carried out by ONZL a secretariat administrator with offices in Auckland and Wellington.

KiwiSaver

New employees are automatically enrolled in a retirement savings plan called "KiwiSaver" with matching 3% contribution by one's employer and a modest Government contribution.

Contributions are collected via Pay As You Earn tax remitted to Inland Revenue who forward contributions onto authorised KiwiSaver providers. Members are free to select any fund from any of the available schemes and will be put into a default open if they do not make a choice.

Employees have a limited window to opt-out. Existing employees including those that opted out previously as well as children, self-employed and unemployed people can opt-in at any time. Enrolments commenced on 1 July 2008. Funds are available in full at age 65, permanent emigration or death.

Up to the end of February 2014, there were 2,283,909 enrolments of which 333,710 have been closed or opted out. A further 110,941 members are on a contribution holiday. Enrolments represent over half the population of New Zealand.

Members can select an authorised provider, or they are allocated to an employer nominated provider or a default provider if the employer has not nominated a provider. Initially, there were six default providers who would get default enrolments by rotation.

The Government recently conducted a review of the default providers and increased the panel to nine providers

who collectively account for over 95% of funds under management. There are 28 schemes open to the general public and some employer sponsored schemes not open for public enrolment.

It is likely that over time, contribution rates will increase and enrolment will become compulsory. There is currently no requirement to take any part of the fund at age 65 as an annuity, though members can opt to contribute beyond age 65 and to withdraw funds over time as they choose.

Recently, the Chancellor in the UK indicated that compulsory annuities would be scrapped. Thus, any impetus to introduce compulsory annuities in New Zealand will stall.

Insurance regulation

Reserve Bank of New Zealand (RBNZ) is the prudential regulator for insurance. The transition from provisional to full licences was completed in September 2013.

From October 2013, financial strength ratings have been published on the RBNZ website as well as being included in collateral material and notices to new policyholders. Any adverse change to the rating has to be advised to all policyholders, so insurers are motivated to maintain their financial strength.

In November 2013, an updated guide for completion of solvency returns was published. This clarified a number of minor issues with the basic structure remaining unchanged.

In December 2013, a second consultation paper was issued on solvency guarantees. Legal certainty for guarantees will be required. Haircuts will apply where the guarantee is shorter than the duration of underlying assets. The proposed 15% limit on guarantees will be replaced by a risk capital charge based on the credit-rating of the guarantor plus 2% for residual risk. Finally, there will be a transition for pre-June 2013 guarantees.

An industry update in March 2014 stated "It is early days in the implementation of the legislation, and that the supervisory framework and processes to support the business-as-usual supervisory model is a work in progress. Three key messages [for directors] are:

1. The approach will be risk-based, which will see focus of limited resources on those insurers that are large and/or at higher risk of failure,
2. That strong boards and governance are seen as critical to the success of the industry,
3. An early supervisory thematic focus on governance and risk management is expected.

The Reserve Bank will keep the sector informed of developments and seek input along the way."

Future events

A sessional meeting on outstanding claims liabilities for the Accident Compensation and Control Board will be held in Wellington on 15 April.

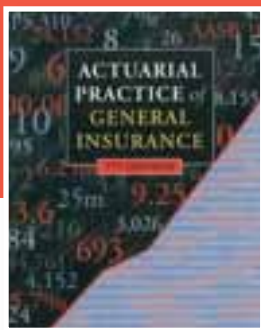
A workshop for Appointed Actuaries will be held in Wellington in May. This will be open to Alternate Actuaries and others who aspire to become Appointed Actuaries.

The biennial conference will be held in Dunedin from 19 to 22 November.

About the Author

john.smith@fidelitylife.co.nz

John Smith is the Appointed Actuary of Fidelity Life the largest New Zealand owned Life Insurer and Secretary of the New Zealand Society of Actuaries.



ACTUARIAL PRACTICE OF GENERAL INSURANCE

D.G. Hart, R.A. Buchanan and B.A. Howe

ACC No : B13068

Status : available at IAI Library

Reviewed by : Sourav Roy

sourav.roy@towerswatson.com

Actuarial Practice of General Insurance, D.G. Hart, R.A. Buchanan and B.A. Howe, Institute of Actuaries of Australia, 5th Edition(1996), 592 pages

A *ctuarial Practice of General Insurance (5th Edition)* written by D.G. Hart, R.A. Buchanan and B.A. Howe is aimed to be a textbook for the students studying the general insurance for their actuarial exams. This book will also prove to be helpful to the actuaries and general insurance practitioners.

The book covers a wide range of topics relevant to the general insurance actuaries and has been written assuming no prior exposure of the reader to the general insurance business. Since this 5th edition of the book written in 1996, both, the techniques used and role played by actuaries have evolved. For example, actuaries are now using sophisticated predictive modeling techniques for premium rating while stochastic modeling is increasingly used for capital assessment and reinsurance purchase decisions. However, the book provides a good introduction to the subject which readers can then build upon. The legislative and regulatory references in the book are focused on Australian market.

The 40 chapters in the book have been divided into 10 broad categories which can be further grouped in three main themes:

- **Nature and operation of general insurance:** First part of the book covering chapters 1-5, introduces readers to the nature of general insurance business. Nature of risks, types of general insurance, its history and impact on social, economic and physical environments is introduced followed by a discussion on the legal framework of the general insurance business in Australia. The non-Australian readers may find some of the legislative and regulatory details not-relevant to their markets; however, the broad contours will prove to be helpful in understanding the legal aspects of insurance business. Operation of insurance business is also covered in some detail including discussions on underwriting, claims and financial management procedures along with information systems.
- **Actuarial techniques in general insurance:** Second part of the book covering chapter 6-16, introduces the statistical basis of the general insurance. In this part, 5 basic principle of general insurance is provided by author illustrated through a story. These principles are further developed in subsequent chapters on statistical distributions of claim frequency, individual claim cost and overall portfolio cost. This is followed by a discussion on risk theory, profit and capital requirement and basic theory of reinsurance. These can form bases for students and practitioners interested in capital modeling. Chapters on experience rating, risk classification, forecasting and premium rating projection provides tools for pricing of general insurance products. Reserving has been covered well in the 'Run-off techniques' chapter.
- **Actuarial practice in general insurance:** Final part of the

book builds on the techniques introduced in the section above associated with actuarial practice in general insurance. Chapters 17-22 on rating and design not only discusses determination of premium but also a number of policy design issues like pricing philosophy, no claim bonus system and experience rating. Chapters 23-27 cover reserving for both outstanding claims and unearned premiums. Readers will also find chapter on reserving philosophy very helpful.

The remainder of the book covers wide range of practice areas like financial control, reinsurance, valuing of insurance companies, compensation scheme, risk management and statutory supervision in Australia. The coverage of these topics however is introductory, which interested readers can develop further.

Overall the book not only manages to cover the actuarial techniques but also provides an insight into the nature of business and working of general insurance companies. Understanding of the business and its working is very essential for actuarial practice in general insurance, as these can help form basis of judgment in actuarial assessment. These understanding will also prove to be an important foundation for actuaries looking to make move into business management. The actuarial students appearing for CT6, ST7, ST8 and SA3 exams will find this book very helpful.

■■■



PUZZLE

Puzzle No. 211: A has thought of a number between 13 and 1300, and B is trying to guess it. Unknown to B, A is not always truthful.

B asks whether the number is below 500.

A lies.

B asks whether the number is a perfect square.

A lies.

B asks whether the number is a perfect cube.

A tells the truth.

B asks whether the second digit is a zero.

A answers.

B then states the number A thought of and, not surprisingly, is wrong. Name A's number.

Puzzle No. 212:

Which value of k , $k > 1$, satisfies the following equation?

$$1/1 + 3/k + 5/k^2 + 7/k^3 + 9/k^4 + \dots = 3k$$

Solutions to puzzles:

Puzzle No. 207:

Thunder. All the other words have three consecutive alphabets.

Puzzle No. 208:

Alan is from New Zealand, Rita is from Britain, Eric is from America and Don is from Indonesia.

All the given names appear in the names of the countries.

Correct solutions were received from:

Puzzle No. 207:

1. Kamlesh Gupta
2. Vishnupriya S.
3. Vamsi Dhar
4. Sonal Khirwal

5. Ajay Kumar Tripathi
6. Nidhi Pandey
7. Sachin Jain
8. Viraj Poojary
9. Mercy Amalraj
10. Graham Lyons
11. Neha Podar

Puzzle No. 208:

1. Kamlesh Gupta
2. Vishnupriya S.
3. Vamsi Dhar
4. Shilpi Jain
5. Jaideep Arora
6. Kailash Mittal
7. Ajay Kumar Tripathi
8. Radha Routhu
9. Ramakant Malpani
10. Ankit Agrawal
11. Sachin Jain
12. Krishit Vimal Shah
13. Venkatesh Konar

14. Viraj Poojary
15. C. R. Rajeswari
16. Himanshu Verma
17. Mercy Amalraj
18. Viral Raythatha
19. Neha Birla
20. Swati Patil
21. Deepa Sankaran
22. Soham Chandra
23. Anuradha Krishnamurthy
24. Shreya Chheda
25. R. K. Sinha
26. Abhijit Naik
27. Graham Lyons
28. Neha Podar
29. Inderjeet Sharma



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SUDOKU

SUDOKU No. 21 for the month of APRIL 2014

SUDOKU MEDIUM

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

HOW TO PLAY

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

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

- Sudoku Puzzle
by Vinod Kumar

Solution of Sudoku Puzzle No.20 published in the Month of March 2014

SOLUTION

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

KIND ATTENTION !

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

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



UPCOMING EVENTS

Workshops by Frank Ashe

Dear All,

There are a number of new statistical and mathematical techniques being used in actuarial mathematics. These are increasingly important in Risk Management. Therefore Education committee of IAI is organizing **Workshops by Frank Ashe** so as to provide specialist educational opportunity to its members, on 2nd, 3rd & 5th May, 2014 in Mumbai, Bangalore & Gurgaon. This workshop gives an introduction to three important techniques for both new and experienced actuaries.

More Information on each of the three workshops is available at:

http://www.actuariesindia.org/subMenu.aspx?id=33&val=Upcoming_Seminars_within_India

Seminar Title (Only for IAI Members)	Event Date	Venue	City
Workshop number 1: Economic Scenario Generators (ESG)	2 nd May, 2014	Hotel Orchid	Mumbai
Workshop number 2: Comprehensive Actuarial Risk Evaluation	3 rd May, 2014	The Chancery	Bengaluru
Workshop number 3: Stochastic Modelling and ALM	5 th May, 2014	Doubletree by Hilton	Gurgaon

21ST INDIA FELLOWSHIP SEMINAR

12th to 14th June, 2014

VENUE : Hotel Sea Princess, Juhu Tara Road,
Juhu Beach, Santacruz (West), Mumbai – 400 049.

REGISTRATION AND CONDITIONS

Login to your account on IAI website and Register latest by 25th April, 2014.

In view of the fact that all participants have to be assigned roles and responsibilities, there will be NO registrations after 25th April, 2014. (Only for IAI Members)



Point of Contact for any query: Quintus@actuariesindia.org

Your
in-depth
knowledge

+

Our
risk
assessment

=

His
quality of life



Who will provide the healthcare that our ageing populations need, and the quality of life they expect? You know the issues better than the back of your own, elegantly ageing hand. And so do we. For example, right now in the US we're working with clients to combine their expert market knowledge with our risk assessment capabilities. The result? Affordable private insurance that will not only provide retirees with comprehensive medical cover for the rest of their lives – but peace of mind for everyone concerned. Especially him. **We're smarter together.**

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