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Serving the Cause of Public Interest



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CONTACT US

#231, #232 Access Lower Parel,
Level 2, Upper Level, Kamala House,
Senapati Bapat Marg, Kamala City
Mumbai 400013, India

Tel +91 22 6179 3841 / +91 22 6179 3842
infoMumbai@actuarial.pt

www.actuarial.pt

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"A noble man's thoughts will never go in vain. -Mahatma Gandhi."
"I hold every person a debtor to his profession, from the which as men of course do seek to receive countenance and profit, so ought they of duty to endeavour themselves by way of amends to help and ornament thereunto - Francis Bacon"

MESSAGE FROM THE PRESIDENT

Mr. Sanjeeb Kumar 4

EDUCATION & TRAINING

Classroom Coaching - Initiatives of IAI 5

MESSAGE FROM THE CHIEF EDITOR

Mr. Sunil Sharma 6

EVENT REPORT

5th Capacity Building Seminar on Employee Benefits & 13th Current Issues Seminar on Retirement Benefits by Mr. Kartikey Kandoi 7

Economic Capital Pricing in Life Insurance by Mr. Rajiv Mukharjee 14

FEATURES

Dynamics of General Insurance in Mauritius by Ms. Rashi Manek 19

A valuable proposition by Ms. Joanne Buckle & Ms. Neha Taneja 23

STUDENT COLUMN

Section 45 : Let's tackle it out by Mr. Palash Shah 27

EXAMINATION UPDATE

Academic Excellence Award 29

List of students scoring highest marks 30

Prizes and Awards 31

COUNTRY REPORT

New Zealand by Mr. John Smith 32

ANNOUNCEMENT

Young Actuaries Programme 33

CAREER CORNER

Universal Sampo 17

PWC 34

Mercer 35

CHIEF EDITOR

Sunil Sharma

Email: sunil.sharma@kotak.com

EDITOR

Dinesh Khansili

Email: dineshkhansili111@gmail.com

Nauman Cheema
Pakistan

Email: info@naumanassociates.com

Kedar Mulgund
Canada

Email: kedar.mulgund@sunlife.com

T Bruce Porteous
United Kingdom

Email: bruce_porteous@standardlife.com

Vijay Balgobin
Mauritius

Email: vijay.balgobin@sicom.intnet.mu

COUNTRY REPORTERS

Rajesh S
Singapore

Email: prasannarajesh30198@yahoo.co.in

Devadeep Gupta
Hongkong

Email: devadeep.gupta@prudential.com.hk

John Smith
New Zealand
Email: johns@fidelitylife.co.nz

Frank Munro
Srilanka
Email: Frank.Munro@aia.com

Krishen Sukdev
South Africa
Email: krishen.sukdev@gpaa.gov.za

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Message from the President



"It's not enough to be busy, so are ants. The question is, what are we busy about?"

Above is a famous quote by Henry David Thoreau, a famous poet, philosopher and Journalist born in 1817. The question makes lot of relevance all times on every individual who are busy in their day to day life, and for Actuaries in India it is always the right time to ask this question oneself.

The life is turning a full one year for me as President of our esteemed profession. While looking back, I would ask myself the same question above. It has been realized that, two year tenure in the President's office is indeed a long time if the profession sets its long term goals and objectives and the President carry the baton from a predecessor. Unfortunately, the President is required to invest a lot of time on short term goals, temporary issues and objectives and is busy in finding and implementing temporary solutions. We are all busy most times in one work or the other, but the

above question sounds loud again. What are we busy about? Are we setting priorities for our time right? Better to keep asking this question to yourself regularly to avoid BIG regrets in future when you have already lost your precise time.

I keep reminding myself and to many senior actuaries that the leadership and the senior actuaries of the actuarial profession owe the responsibility to our younger members including students to help them grow technically, professionally so that sooner than later they take up the roles and responsibilities and upkeep the growth and standards of our profession. The Institute has been seriously working on in this direction and keeping in mind this important and ever relevant objective. One of the key areas we are currently working to design the training programs for our students so as to enhance their employability and technical & professional competence. For other members and senior students we have conducted 2 workshops on Economic Capital based life insurance pricing during

last one month. In October, we are conducting 2 capacity building programs on Embedded/ Appraisal Values. Couple of more programs in GI and Health Care Insurance is at design stage. Besides capacity building seminars, skill development programs focusing the need of our junior actuarial students are also occupying a key place in our activities. We have high potential, highly skilled talents in our profession who can design and deliver training programs to others. Many of you have seen that our new office in Navi Mumbai has good infrastructure facilities for conducting any such programs within the Institute office itself.

The profession is in need of lot of volunteers in order to take it to the next level, be it a professional development or skill development. Our members can be busy with the profession as a member of any of our advisory groups or as a member of the pool of resources. It finally matters, when we ask ourselves the question, what were we busy about?

On our professional standards front, the Council has approved two new Actuarial Practice Standards - APS 27 for Employee Benefits area and APS 33 for Peer Review of Appointed Actuary's work in General and Health Insurance/ Reinsurance. I am sure these standards will help further strengthening the services being provided by our members to their clients in these two areas.

Finally actuarial exams are starting soon, good luck to all our students writing the exams.

COACHING

Initiatives of IAI

Sr. No.	Coaching Subject	From	To	Faculty Member/s
1	CT1- Financial Mathematics	18/07/2017	21/07/2017	Mr. Vinod Kumar Kuttierath
2	CT5- General Insurance, Life and Other contingencies	25/07/2017	29/07/2017	Mr. Vinod Kumar Kuttierath
3	ST1-Health and Care Insurance	18/08/2017	20/08/2017	Ms. Sapna Malhotra, Ms. Jyothi Vaidhya
4	ST2- Life Insurance	29/08/2017	31/08/2017	Mr. Bikash Choudhary, Ms. Anuradha Lal & Ms. Nancy Gupta
5	CT4- Models	29/08/2017	1/9/2017	Mr. Vinod Kumar Kuttierath
6	CA1- Actuarial Risk Management	31/08/2017	2/9/2017	Mr. Sanjeeb Kumar, Mr. Subhendu Bal & Mr. Bikash Choudhary
7	SA2- Life Insurance	5/9/2017	7/9/2017	Mr. Sai D Srinivas & Mr. Rajeev Kumar



Message from the Chief Editor



Last month has been really devastating globally due to natural disasters. The climate change seems to be showing up its colours everywhere. There is a scientific research by University of Bonn which shows that east coast of USA is slowly sinking into sea. According to this study, the states of Virginia, North Carolina, and South Carolina are most at risk. Cities such as Miami on the East Coast of the USA are being affected by flooding more and more frequently.

Recently, Hurricane Harvey, as a tropical storm dropped 40-52 inches of rainfall in southeast Texas and southwest Louisiana. In Houston it drenched Harris County in over 4.5 trn litre of water in just about 100 hours.

But it's not only limited to USA. This monsoon floods have claimed the lives of over 1,100 people in India, Nepal and Bangladesh. Further, millions of people have been left homeless by the deadly monsoon

floods. Clearly across the globe, the government and people are grappling with the threat from the flood. Dealing with flood ultimately would mean dealing with climate change and global warming.

Due to global warming, warmer Sea evaporates faster, further, warm air can hold more vapours of water. When this condenses in the weather system, it bolsters violent storms and intensity of floods.

Due to climate change, flooding events are increasing in frequency and severity. In many cases, populations are significantly under insured or uninsured, and the industry is working to fill this protection gap. Floods are insurable and actuaries need to be at the forefront to address this issue.

As per the Sigma reports published by Swiss Re, there have been 353 disaster events in 2015 out of which 198 were natural catastrophes. It estimates that more than 26,000

people lost their lives or went missing in these disasters.

Unfortunately, most of loses that occurs dues to floods are not insured. This provides an opportunity for actuaries to work for the cause of public interest. In November, 2012 American Academy of Actuaries, Casualty Actuarial Society, Canadian Institute of Actuaries and Society of Actuaries constituted a committee to determine the impact of Climate change on insurance risk and the global community. It may be an interesting read for members and see how could we use the committee report in Indian environment. The report can be downloaded from

<https://www.soa.org/Files/Research/Projects/research-2012-climate-change-report.pdf>

With this message I would like to sign off for now.

5th Capacity Building Seminar on Employee Benefits & 13th Current Issues Seminar on Retirement Benefits

Organized by: The Advisory Group on Pension, Other Employee Benefits and Social Security, IAI

Venue: Hotel Sea Princess, Mumbai

Date: 10th and 11th August, 2017

The Seminar on Retirement Benefits was held in Mumbai over two days. It was a change from the usual two separate one day programs and combined into a two day discussion in order to facilitate wider discussions on various critical issues / challenges that are being faced by the Industry.

Session 1: Context, Background and Overview of the Principles of the new APS

Speaker: Ms. Preeti Chandrasekar, India business Leader - Retirement, Health and Benefits, Mercer



Ms. Preeti started her presentation by narrating that new APS is principal based. The existing standards don't cover new accounting standard Ind AS 19 which is in line with IFRS. Therefore there is a need to relook at the existing standards and come up with one consolidated practice standard. She discussed how various existing GNs/APSs merged into one single APS:

Day 1

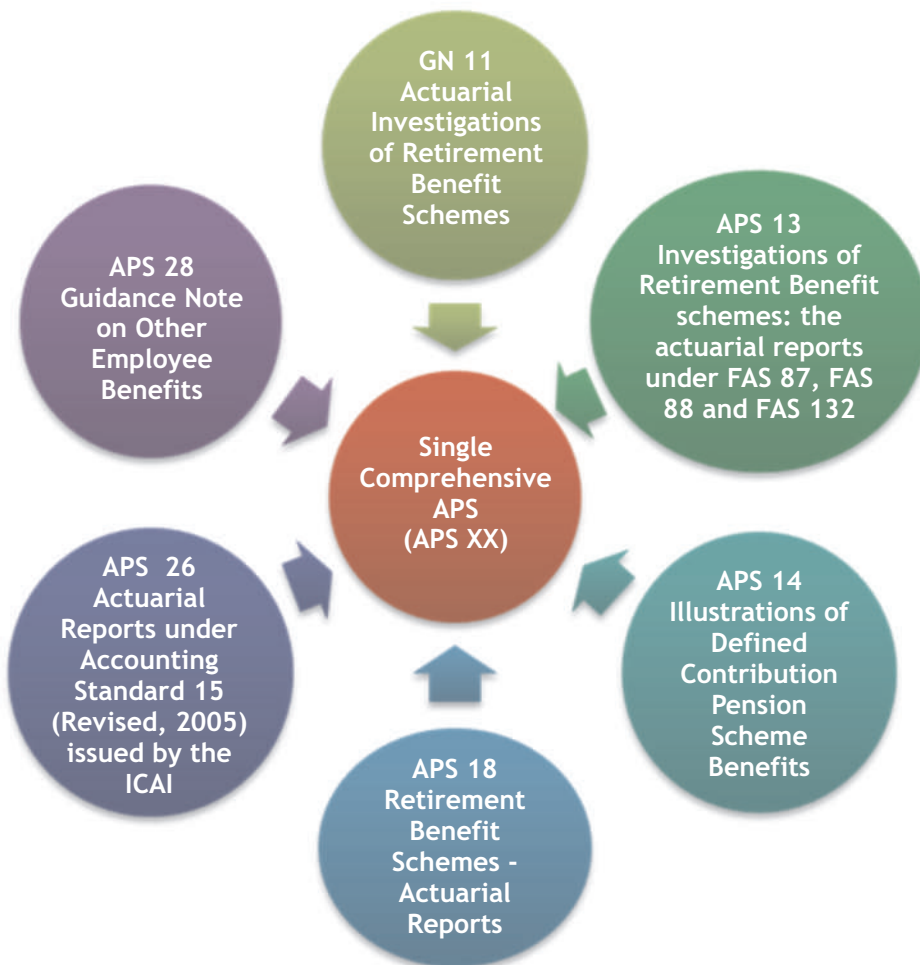
5th Capacity Building Seminar
on 10th August, 2017

Welcome and Inaugural Address

Speaker: Mr. AD Gupta Consulting Actuary and Chairperson of Advisory Group on Pension, Other Employee Benefits and Social Security (AGPEBSS)



Mr. Gupta welcomed all participants and spoke about the theme of the seminar and gave a brief of agenda. He highlighted industry updates in employee benefits and various initiatives undertaken by advisory group mainly with regards to New APS on Employee Benefits.





Existing GNs/ APSs

- **APS 12**
Investigation of Retirement Benefits - Choice of Actuarial Assumptions for the Actuarial Valuations Required under AS 15
- **APS 15**
Pension Fund Terminology
- **APS 20**
Actuarial Practice for Social Security Programmes
- **GN 29**
Valuation of Interest Rate Guarantees on Exempt Provident Funds

New GNs/ APSs

- **APS 12**
~~Investigation of Retirement Benefits - Choice of Actuarial Assumptions for the Actuarial Valuations Required under AS 15~~
- **APS 15**
Pension Fund Terminology
- **APS 20**
Actuarial Practice for Social Security Programmes
- **GN 29**
Valuation of Interest Rate Guarantees on Exempt Provident Funds

She discussed practical aspects of APS and how it should be complied by actuaries. She discussed about valuation assumptions and reporting requirements.

Discussion was done on how and to what extent to comment on reasonableness of assumptions. Even though assumptions are decided by management, we as actuary should check and comment on reasonableness of assumption and if assumptions are significantly different than expected it should be appropriately disclosed.

Session 2: Discussion on Technical Application Section of the new APS

Speaker: Ms. Chitra Jayasimha, Actuary and Practice Leader, Retirement and benefits Aon Hewitt Consulting



Ms. Chitra discussed technical aspects of new APS. She discussed

about nuances APS in relation to Data, Assumptions and Benefit Scheme. Benefit scheme is a mandatory part of report, as this will ensure transparency and bring more clarity to stakeholders.

APS has given list of what should be disclosed in report for various actuarial valuations of employee benefits, but this is not an exhaustive list and member should consider other relevant aspect as appropriate.

She told that in future Institute may come up with appendix to this APS which will specifically discuss about Pension valuation schemes and valuation approach in detail.

One practical case study was discussed among 4 groups of participants to have a fruitful

discussion on pension valuation approach. It was discussed how to perform a fresh valuation, analysis of pension valuation results and impact of index linked increase in pension cash flows.

Discussion on APS was summarized by Mr. A. D. Gupta; he gave emphasis on application of Dearness Relief in pension valuation.

Session 3: ESOPs and Other Deferred Compensation - Emerging Trends

Speaker: Mr. Mayur Ankolekar, Consulting Actuary, Ankolekar & Co

As one of the main agenda of current issues seminar was ESOP,



Mr. Mayur set the tone for ESOP session by briefing about ESOPs and practical aspect about this. He also discussed various types of deferred compensation plans popular in market now days.

ESOPs can be used as customized tool to incentivize employees at various levels. Earlier companies were required to recognize intrinsic value as expense for ESOPs but now under Ind AS 102 which is in line with International standard IFRS 2, they have to recognize fair value. As per Ind AS 102 fair value has to be calculated by Option pricing model which can be Black Scholes model or Binomial model.

He discussed how ESOPs should be valued what should be the frequency of valuation for fair value based on different types of ESOPs.

Deferred cash payment or deferred cash payment linked to a company value proxy (example multiple of profit or EBITDA) should be valued as per Ind AS 19 using PUCM method. Cost should be recognized over the vesting period of the cash payout, with adjustments for employee withdrawal rate, forfeiture and service and performance conditions.

He also discussed advance cash reward which is paid with condition of refund on exit before vesting.

While he was discussing on assumptions, to explain use of

proportionality principal while making any actuarial model; he narrated a short story of a king, sadhu and his kamandal to better understand practical aspect of situation.

Session 4: ESOPs: Introduction and Discussion on Ind AS 102 Share Based Payments

Speaker: Mr. Jenil Shah, Partner, Kapadia Actuaries & Consultants

The prime agenda of this session was to create an awareness regarding ESOP valuations and to provide all the necessary details about ESOP valuations so that more and more practicing actuaries can work in this domain.

For ESOP valuation one has to follow regulatory guidelines as per Ind AS 102, Share Based payment and SEBI 2014 guidelines.



Mr. Jenil discussed in detail what all factors should be considered for fair valuation of options and how to select assumptions. He also explained how Vesting Conditions should be allowed for in performing ESOP valuations. Market condition is allowed while determining fair value whereas non market condition and service condition is to be considered while determining number of options to be granted. The Speaker also demonstrated the accounting

treatment with the help of an example.

In case of cash settled share based payments, fair value is remeasured at each reporting date and treated as liability in accounts till it is settled. He also explained share based payments with cash alternative which should be valued as compound financial instruments.

He gave a sample of what all information's should be included in disclosure for ESOPs in line with Ind AS 102.

His session was to be followed by another session on ESOP in which ESOP would be discussed in detail with practical example.

Session 5: Practical example and insights into valuation and reporting of ESOPs

Speaker: Mr. Khushwant Pahwa, Founder and Consulting Actuary, KPAC (Actuaries and Consultants)

Guide: Mr. KK Wadhwa, Consulting Actuary



Mr. Khushwant explained the calculation of fair value of option for a listed company using Black Scholes model and demonstrated that the ESOP valuation is actually very simple compared to other employee benefits valuations. He shared some of the resources related to ESOP Valuations.



He discussed one of practical example with numbers using Black Scholes Model, this was very helpful for all participants to understand calculation of ESOP. The option price calculated by Black-Scholes model was very close compared with the actual option prices mentioned on NSE. He also shown one online tool to use Black Scholes Model. He demonstrated how to check volatility.

The Speaker also discussed an example of Accounting Treatment of Equity Settled Share Based Payment Transaction. Various scenarios were discussed to analyze impact of actual attrition rate.

ESOP Report should contain:

- Description of plan
- ESOP movement during the year
- Description of method / assumptions used to estimate the fair value of option
- Weighted-average fair values and remaining contractual life of options
- Weighted-average exercise prices of options
- Other key information on fair value of options
- Expense to be recognized in P&L statement

Discussion was also made on how to perform ESOP valuation of private companies and he discussed how to determine fair value.

Summary of ESOP Sessions: Session clarifies the process of carrying out ESOP valuations. The participants will be having a starting point with respect to ESOP valuations and now they can built their expertise further. All the relevant reference material related to ESOP valuations was provided by the organization committee. Hopefully, we will see many more actuaries entering into this domain incoming future.

Day 2

Current Issues in Employee Benefit (CIRB) on 11th August, 2017

Session 1: Increase in gratuity ceiling to INR 20 Lacs: Impacts and Considerations

Speaker: Mr. R Arunachalam, Consulting Actuary



For employees to whom 7th pay commission is applied, gratuity ceiling is already increased to INR 20 lacs w.e.f. 01.01.2016; for private sector employees it is likely to increase soon once get parliamentary approval.

He discussed how to attribute additional cost due to increase in ceiling. He discussed with a help of an example in which if there is no ceiling on benefit, ceiling of 10 lacs and ceiling of 20 lacs.

In case of AS 15 past service cost will be recognised in Profit & Loss based on vested (immediate) or Non vested (amortization), though it is most likely that ceiling of 10 lacs will increase for vested employees. In case of Ind AS 19, it will be charged to Profit & Loss immediately.

This is a plan amendment, current service cost and net interest cost should be recalculated based on

Defined benefit obligation and assumptions at time of plan amendment as per para 99 of Ind AS 19.

Queries on application of prior period item disclosure and further bifurcation of increased cost were discussed.

Session 2: Evidence on funding, fund mandates and investment risks of Indian DB schemes.

Speaker: Mr. Mayur Ankolekar, Consulting Actuary, Ankolekar & Co

This was a research paper which was prepared by Mr. Mayur which mainly focus on funding, investment risk and returns for defined benefit liabilities. He took a sample of NSE 50 companies for their last 3 years funding level, funding method (self-managed/ insurer managed).

In case of Ind AS 19, actuarial gain loss on plan assets are charged in OCI, so this reduces volatility of Profit & Loss, so this can be taken as an advantage to take investment risk.

In case of self-managed fund, trust has to follow income tax rule's investment pattern which have maximum investment in Government securities. Companies who want to take more investment risk they can invest through insurer managed fund wherein they can decide ratio of equity and debt.

He demonstrated by way of Mann-Whitney U test and Chi-Squared Test:

- Funding ratios are not reflective of the riskiness of the underlying investment strategies.
- The funding ratio is independent of investment risk-taking and choice of fund manager.

- The risk taken by a fund is not determined by fund manager choice.

Over the last 3 years funding level has increased, insurer managed funds has increased as companies are inclined to take more risk in wake of higher investment returns. As fund size is higher they tend to keep some flexibility to invest themselves.

Session 3: Panel discussion on Challenges and Learnings in implementation of Ind AS 19

Moderator: Mr. Kulin Patel, Consulting Actuary

Actuary on Panel: Mr. Arpan Thanawala, Partner, Thanawala Consultancy Services

CFO / Finance Controller on Panel:

- Mr. Devesh Shah, General Manager, Accounting & Reporting at Bayer Crop Science Limited
- Mr. Kailas Kulkarni, Accenture

Auditor on Panel: Mr. Paresh Clerk, Bansi S. Mehta Chartered Accountant

Mr. Kulin introduced all panel members and kick started the discussion with focus around issues of Ind AS implementation and more specifically Ind AS 19.

Deliverables under Ind AS 19 have changed as this requires extra disclosures in terms of cash flow projection, sensitivity of assumption, duration, management comments on funding strategies and ALM etc.

Mr. Paresh stressed on auditors should check and examine valuation assumption and employee data, for valuation results they generally tend to rely on actuary's expertise. Actuarial gain/loss can be used as guide to check appropriateness of assumptions.

Mr. Devesh told that they generally have meeting of Finance Team, HR team, Actuaries to understand and decide valuation assumptions, valuation results are validated and understood by finance team and HR team to maintain data confidentiality.

Discussion was made on leave

seminars or meetings for auditors to better understand aspects of actuarial valuations.

Session 4: GST implementation: Challenges & issues for Service Providers

Speaker:

- CA Chandan Gupta, FCA, Practising Chartered Accountant
- CA Jayesh Pandit, M/s K.A. Pandit (Actuaries and Consultants)



As GST is a new and common topic for all professionals, **Mr. Chandan** suggested for not to have specific presentation, but to have a interactive session.

He discussed various practical aspects of GST Registration process, rules regarding registered dealers - unregistered dealers. He also explained rule under GST for export of services, services to SEZ units, how to file bond, letter of undertaking and process of same.

Discussion was done around how GST



valuation whether it to be classified as other long term or post employment as recognition principal differs. Generally leave is other long term benefit as there is leave utilization. In case of leave being other long term benefit, disclosure to notes to accounts are not required as per para 158 to Ind AS 19.

It was suggested by Mr. Paresh for having more learning sessions by way of



is applied in case of branch in different states, application of Reverse charge rules, and transitional provision for Service tax to GST.

Session was very well useful for participants as it clarified various issues faced in GST implementation.

Session 5: Flexible Benefits

Speaker: Ms. Chitra Jayasimha, Actuary and Practice Leader, Retirement and benefits, Aon Hewitt Consulting

Ms. Chitra presented one model on flexible benefits prepared by AON Hewitt.

Different types of employees have different needs, for example young employees want to have Work-life balance & financial incentives, middle age employees more interested in family care and children education, whereas old employees might be interested in retirement saving and health plans.

Employees like to join companies with flexible working arrangements and which provide flexible benefits with a menu option. Employees are willing to make additional voluntary contribution to get access to certain additional benefits.

Flexible benefits can be provided by providing lower but adequate amount of core benefit and remaining cost is transferred to employees flex credit account. Choice can be given to employees to sell some of their leave balances in compensation to flexi credit. Based on this credit employee may choose for health check up plan or health insurance plan based on his needs.

Ms. Chitra nicely explained this flexi benefit with one practical example

how one can select out of choices available and utilize flexi credit. She also discussed various benefits offered in India and whether there is opportunity to flex.

Session 6: Innovation in Area of Employee Benefits

Speaker: Mr. D. K. Pandit, Consulting Actuary, M/s KA Pandit (Actuaries and Consultants)

Mr. Jayesh Pandit, M/s KA Pandit (Actuaries and Consultants)



Mr. D.K. Pandit discussed various types of employees like contract-regular, public-private, organized-unorganized, self employed, home servant etc. As per current financial standards one should get between 100 per day in village to 1000 per person in metro city.

For various pradhanmantri yojnas actuarial services can be useful for valuation and proper management. New pension scheme needs more popularity so more people can get benefited by this.

Mr. Jayesh Pandit spoke about current trending employee benefits which are generally valued by actuaries like Gratuity, leave, pension, PRMB, Long Service etc. He given example of various employee benefits where cost is incurred in

future for services rendered by employees in past, generally accounting for these benefits done by management, they should also be actuarially valued.

He gave example of benefits where ICAI has opinioned to perform actuarial valuation which were earlier provided by companies, one of the example was Electricity security deposit.

He discussed various benefits where actuarial involvement should be sought.

He also explained how actuaries can be useful for designing scheme, making cost estimates at various options, so management decide final scheme. Regular valuation of benefits to make accounting provision.

Session 7: Valuation of companies outside India carried out by practicing actuaries in India: Challenges, considerations and experiences

Speaker: Mr. Hemanshu Jain, Consulting Actuary, Mercer



In times of globalization and widespread use of IFRS across countries give us opportunity take valuation assignment of foreign companies. Generally benefit schemes are common in nature and availability of limited local actuarial



professionals opens up avenues for us.

Mr. Hemanshu explained how we should perform actuarial valuation of foreign companies and various challenges faced in doing this.

He discussed how variation in benefits across countries and across companies should be taken care in actuarial valuation.

We can verify our understanding of benefit scheme by matching benefits paid during the year with plan rules

and also matching plan rules to benefits paid.

He discussed how to select Discount rate for valuations and possible source to select rate.

Mortality/ morbidity rates should be appropriate to local demographics of that country. Reference can be made from <http://mort.soa.org/> or some of listed company's financials of that country.

We should disclose detailed description of benefit

understanding, approach used in discount rate selection, summary of membership data. Active communication with client and auditor is very important to understand benefit, assumptions.

Mr. G.N. Agarwal summarized the seminar and given vote of thanks to all speakers and participants. He thanked IAI staff and hotel management for making event a big success.



Suggestions/ going forward: Need for SA4 India specific study material which can benefit students as well as members. Additional core reading can be made and updated on timely basis, which may be used as comprehensive guide to APS. Need for Appendix to new APS for Pension. Expected date of New APS's implementation from 01.01.2018. In case of government companies where 7th CPC rule applies, for gratuity valuations, institute should come up with assumption when 50% rise in DA is expected to reach. In future it is likely that actuarial reports will be subject to peer review in order to ensure APS is complied with.

About the Author

Mr. Kartikey Kandoi



kartikeykandoi@yahoo.in

“Kartikey is a Chartered Accountant and Actuary (FIAI) and working in M/s K. A. Pandit in area of Employee benefits and Pensions valuations.”



Economic Capital Pricing in Life Insurance

Organized by: Institute of Actuaries of India

Venue: Fortune Select Exotica, Navi Mumbai

Date: 11th August, 2017

The seminar on Economic Capital Pricing in Life Insurance was held in the Fortune Select Exotica in Navi Mumbai. A good number above fifty actuarial personnel from diversified actuarial and investment area participated. The sessions during the day were interactive, theory coupled with exercises on Excel based models and one to one interactions were modus operandi used for understanding the key technical concepts.

The day started with a short inaugural address by **Mr. Dinesh Chandra Khansili**, Executive Director, IAI. He welcomed all the participants. He introduced the faculty comprising of **Mr. Sanjeeb Kumar**, President IAI, **Mr. Devinder Kumar**, and **Ms. Neha Singh**. Devinder and Neha are currently working with Aviva India.



Post the welcome address **Mr. Sanjeeb Kumar**, formally opened the proceedings.

All the sessions were conducted by the above faculty with in between contribution from the Participants. At one point of time Souvik Jash, Actuary came forward to contribute to the discussions.

The initial Session gave an Over view of Balance Sheets and Economic Capital and was concentrated on Traditional vs Economic Balance Sheet ("BS"), Best Estimate Liability ("BEL") And

1. **Economic Capital (EC)** - Components and calculations and the agenda for the day was laid out through a power point presentation.



Session Highlights

The concept of the economic balance sheet was introduced. This was done so as to make a bridge between the traditional ways of thinking to a new regime which is the economic capital regime so that the basic concepts become clearer to the audience for later discussions. All the items of the traditional Balance Sheet e.g. book value of assets, statutory liabilities, Required Solvency Margin and Free surplus were compared with their equivalent in the Economic Balance sheet. Economic Capital is based on market value of assets, BEL, Risk Margin (RM), and Free Surplus (FS). The faculty explained the concepts of the BEL and how it is calculated. The relation to Solvency II was also briefly touched upon.

The faculty explained the queries raised by the participants e.g. what is Own Funds, how BEL can be calculated as per local regulations? What is the driving force for creating an Economic BS?

The emphasis was that driving force for constructing an economic BS is to capture all the risks in the BS, which a traditional BS does in an implicit manner or it does not factor in all the risks and it is easier to communicate other than actuarial people.

The session then moved to the concept of Economic capital (EC) and how to calculate that. The major risks e.g. Market, Insurance, and Operational risks were explained including hedgeable and non hedgeable risks. Several queries on the risk free rate were adequately raised.

The discussions were hectic when a general understanding that Government issued bonds (e.g. 10year G Sec) are risk free. A major reinvestment risk and duration mismatch risk concept could



successfully addressed the query. The discussion moved whether swap rates be used instead? How can Actuaries avoid asset liability mismatch (AL) risk?

EIOPA definition of Risk free rate curve was shared. Readers may get the definition easily in different media. A simple EC calculation with the market value balance sheet method under several scenarios was discussed along with risk structure in a life insurance company and then the session broke for smoking cup of tea for the participants where the topics covered were enthusiastically discussed by the participants and the faculty members.

Post tea Session was on Product pricing cashflows covering following topics

1. Traditional basis vs Economic Basis-key differences
2. Traditional vs Economic Capital pricing -A practical example
3. Calculation of EC for each risk via shocks

Session Highlights

The discussion on EC was carried over from the first session. Risks faced while pricing a product were discussed as above including lapse and catastrophe risk. The faculty addressed a query on industry benchmark for lapse rate .It was discussed that there is no such benchmark as yet. Each company will set its own best estimate rates. The faculty discussed how different companies having different risk profiles, non hedgeable risks and how to deal with them. Different components of mortality risks viz level, trend and volatility were discussed. Stresses for risk quantification as per Solvency II regime was discussed. The need for extensive data for calibrating the interest rate risks was also touched upon and lack of such data in the Indian market was emphasised leading to the dependency on global data. Such data could be provided by the reinsurers.

An excel based exercise was given to make the concepts clearer. Excel



model showing the calculation of interest, expense, mortality, lapse and Cat risks were discussed one by one. The models showed the various assumptions and lucidly showed the calculations of EC for each risk and also the Solvency Capital Requirement (SCR) for each risk. (This being a seminar with practical exercises so each participant had a laptop wherein the models were transferred by the faculty). The faculty went around the floor to answer any query that the participants had. The models covered the input assumptions and the basic cashflows in the base and stressed scenarios. An easy to understand model goes a long way in making complex concepts understandable.

The concepts of risk margin and cost of capital were explained. The weighted average cost of capital (WACC) was discussed.

The session then broke for lunch.

Post lunch the nature of modelling Cat risk, Expense risk and Interest risk was discussed. One idea was that, it is better to hedge Cat risk using some specialist reinsurance cover. But that creates counterparty risks so one should do a cost benefit analysis and then decide. Mortality and Cat risk can be modelled together or separately depending how the company wants to view the impact. For Lapse risk the maximum EC of lapse down, lapse up and mass lapse risk is to be taken. One query was whether mass lapse can be seen an equivalent to Cat risk in lapse and whether it should be taken as an additive risk or a multiplicative risk. It was discussed company can model looking at the risk profile and what can be the impact.

For interest rate risk the discussion threw out the idea that if it is hedgeable then one should hedge it

else one should go for hedging this. For long term contracts there is a reinvestment risk which needs to be hedged. One can use rolling swap contracts but then there is counterparty risk and swap market in India is neither deep nor liquid. Out of all the risks interest rate risk is one of the most difficult to hedge and various methods might be used to cover it.

Session - Aggregation of EC within and across risk modules

When all the risks are identified and calibrated then the risks are aggregated to achieve diversification benefit. The faculty pointed out that actuaries can create lot of value to the company by increasing diversification benefit. The benefits of risk identification and diversification are mainly that - it creates less bottom line surprises and lesser solvency risks.

The aggregation is done using a correlation matrix. The correlation matrix for Solvency II standard formula calculation was discussed. On the query that how the values in the correlation matrix were derived, the faculty (with inputs from Souvik Jash) replied that it was done using the distribution models to calibrate the risks to calculate the correlation factors. The aggregation was done in first three steps of the model for Morbidity, Mortality, Expense, Lapse, Cat and market risks using correlation matrices. Operational risk was added separately post the above to arrive at the base post diversification SCR. In step four Risk margin was calculated as the present value of Cost of Capital (CoC) using a 6% per annum charge. This is as per Solvency II prescription. For local markets this may need to be recalibrated.

Session - Metrics for pricing

1. Cashflows for Economic profit
2. Economic Value of New Business (VNB)
3. Economic Value added (EVA)

Post tea break, the session continued with the metrics to be used for Pricing. The metric of economic gross VNB is defined as negative of Market value of Liabilities (MVL) at the point of sale and is equal to - (BEL+Risk Margin). A simple excel model showing the cashflows for economic profit was discussed. The adjustment for tax was discussed. Tax can be calculated on local basis and can be applied on Gross economic profit less CoC.

The next metric that was discussed was Economic Value added (EVA) which is defined as change in Own funds (before capital movement) net of the Weighted average Cost of Capital * Solvency Capital Requirement (SCR). The weighted average cost of capital is the opportunity cost borne by the shareholders to hold solvency capital. The return is the weighted average of return earned on the equity and the debt portfolio of the shareholder's fund. A slide showing the differences in traditional pricing basis and economic pricing basis was also shared.

A slide showing the same results for traditional VNB was also shared and discussed. Two metrics are NB EVA/present value of SCR and NB EVA/Annual premium equivalent was considered. A simple excel calculation was shared to clarify the concept. Some discussion on how two companies will be viewed under the Risk Based Capital (RBC) regimes which will effect pricing was also took place.

It was discussed how to treat Participating products and annuity



contracts. One query which came up was if the company increases its exposure to equity will the SCR go up? was answered by the faculty

Mr. Dinesh Khansili, ED, IAI, proposed vote of thanks to the faculty and to all the participants for an enthusiastic participation. As a mark of appreciation on behalf of the Institute mementoes were presented to the faculty. Thus ended a well conducted seminar.

Note: For a fuller understanding of the all the technical terms and definitions covered in this report interested readers can look up the power point presentation "Economic Capital Pricing " in the Institute's website.

About the Author

Mr. Rajiv Mukherjee



rajivmukherjee21@gmail.com

"Rajiv Mukherjee is working as Vice President- Actuarial with ICICI Pru life Insurance in Mumbai leading the Statutory Valuation and Solvency II team."



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

**ASHA J JOSHI
& N AGARWAL
N C DAS
V K VYDIANATHAN**



Universal Sampo
General Insurance Co. Ltd.
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- Fulfill other requirements regulatory reports as and when required by Authority Conducting experience analysis such as Claim Analysis, Expense Analysis and Investment analysis. Participate in various management meetings as member of different committees. Pricing of new product and revision of existing products.
- Finalizing technical reports and ensuring that F&U guidelines are adopted as per extant regulations. Suggest top management on various issues such as price adequacy, solvency ratio etc.

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Feedback of 5th Capacity Building Seminar on Employee Benefits & 13th Current Issues Seminar on Retirement Benefits and Economic Capital Pricing in Life Insurance

Seminar: 5th Capacity Building Seminar on Employee Benefits

Date: 10th August, 2017

Venue: Hotel Sea Princess, Mumbai

- ❖ There are non-traditional areas related to employee Benefits costs where we can put our hands. Loyalty Bonus (Banking Industry) discount coupon (retail) to separated employer can be discussed
- ❖ Some topics on insured funded scheme can be added
- ❖ Global trends on employee benefits. Longevity of Pensioners. Health Insurance/ care products/ solutions to ageing populations can be included
- ❖ Workshop style structure. Payment of Bonus Act, Different Pension Schemes Comparison. Ex Govt, Bank & Others
- ❖ Workshop on ESOPs should be conducted covering one real life example from general, administration data collection, actuarial models, report preparation covering all AS-102 relevant points in it including recognition measurement and disclosures as per accounting standard
- ❖ As many consulting actuaries interact with their clients, apart from technical (actuarial) expertise, actuaries should have good soft skills and communication skills (both written & oral communication) Institute can conduct workshop on soft skills (behavioral skills, dressing skills, etc) and communication skills (email writing, report writing, oral communication with client etc. for practicing actuaries.
- ❖ If possible reference material should be sent at least three to four days prior to the seminar so that members can take out time to read and come with queries which will enhance their as well as other members knowledge.
- ❖ Focus should be on risks/ solution relating to aging / retiring populations

Seminar: 13th Current Issues Seminar on Retirement Benefits

Date: 11th August, 2017

Venue: Hotel Sea Princess, Mumbai

- ❖ Half day seminar on GST is required
- ❖ Wider Topic with respect to applicable taxes covering employee benefits in India
- ❖ Ind AS 104 & 109 for future event
- ❖ Marketing aspects of Employee Benefits in compliance of accounting standards. Large no of educational Institute (Private School) & Co-op Banks do not appear to be complying with Account std requirement.
- ❖ The seminar should be conducted in October to February.

Seminar: Economic Capital Pricing in Life Insurance

Date: 11th August, 2017 **Venue:** Hotel Fortune Select Exotica, Vashi, Navi Mumbai

Total Attendees: 54

Should the seminar include wider topics and if yes, what should be those?

- ❖ Yes, we covered term plan, other plans should be covered & overall impact on BS should be there.
- ❖ Valuation, Increase in EVA, Construction of Balance Sheet, Reinsurance, Derivatives, BEL, RM, SCR / RCR, Market Value of Assets
- ❖ Including par products as an example
- ❖ Yes, similarly other technical topics for technical understanding and discussion like RBC
- ❖ May be an advanced version on some selected topics can be done.

Other comments/ suggestions, if any for future event, this will decide future course of action.

- ❖ Kindly share the stuff/ material to the participants beforehand so that the session can be more interactive.
- ❖ We can estimate people from other field also like banks, investment teams, NSFC, etc.
- ❖ Location should be in Mumbai. Navi Mumbai should be avoided as location.
- ❖ Just a suggestion - The seminar started at 9:00 am most of us left home at 7 / 7.15. Please include Breakfast as start.
- ❖ Keep such interactive "workshop" often.
- ❖ Would like to attend sessions on reinsurance, derivatives, etc.
- ❖ At the end, less time spent on last slides, could have spent more time on the end topics.

Dynamics of General Insurance in Mauritius

The Insurance Industry in Mauritius



Mauritius has one of the most developed insurance industries in Africa thanks to a relatively high level of income, macroeconomic stability, an established financial sector, a business-friendly investment climate, and good economic policy making. Currently, the total number of insurers in the market are 24 out of which 9 are Life Insurers where 3 companies have a closed life fund and 14 are General Insurers where 1 company has 'incidental' business. Over the years, the insurance industry has become a flourishing business. Insurance products and services were previously viewed as a means to minimize risk factors but are now also viewed as investment vehicles for the young generation.

The industry makes extensive use of reinsurance facilities and is free from such premiums, products, investments, and reinsurance controls that have bedevilled the insurance markets of so many developing countries around the world. Non-life business is well organized. Large industrial and commercial risks are reinsured with top international companies, while motor insurance, which is the largest class of business with 39% of total non-life premiums, does not suffer from very high loss ratios or unduly long delays in settlement unless disputed. There is no minimum

requirement for investment in government securities. Investment in overseas assets is limited to 25% of total assets, except for foreign life companies and general insurance business which are not allowed to invest in overseas assets.

The insurance sector is highly concentrated in General insurance. The three largest groups have about 64% of total assets. Despite the high level of concentration, the insurance industry appears to be competitive, operating with efficiency and reasonable profitability. Large and medium-size companies have strong reserves, appropriate reinsurance arrangements, and profitability. However, several of the smaller companies have weak financial ratios and suffer from long delays in settling claims.

Regulatory Supervision



Insurance regulation and supervision was entrusted to the Controller of Insurance which was later replaced by the Financial Services Commission (FSC) in 2001. Since its creation, the FSC has taken steps to improve the regulatory framework and strengthen supervision.

In 2005, the FSC implemented the Insurance Act which detailed procedures, roles and responsibilities with respect to:

- ♦ Licensing of Insurance Business
- ♦ Solvency Requirements

- ♦ Regulation of Business of Insurer
- ♦ Auditors, Actuaries, Account and Returns
- ♦ Transfer and Amalgamation
- ♦ Insolvency and Winding up
- ♦ Other Insurance Professionals
- ♦ Protection of Policyholders
- ♦ Inspection and Investigation
- ♦ Administrator and Conservator
- ♦ Termination of License
- ♦ Sanctions and due process
- ♦ Miscellaneous

The current regulatory framework contains many features. These include the absence of tariff and product controls, the reliance on solvency monitoring, the extensive use of international reinsurance facilities and the use of international accounting standards and internationally acceptable actuarial methods.

However, the framework can be further strengthened by incorporating regulations on corporate governance, internal controls and risk management and aligning them with the emerging international norms and this is what the FSC is looking to gradually implement.

A minimum capital required for setting up an insurance company is MUR 25 Million (INR 47.86 Million). There is at present a basic formula risk-based capital requirement translating from the admissibility of assets.

The setting of technical reserves is subject to calculation in accordance with internationally approved methods as guided in the Insurance Act, 2005. The methods used, and any changes in them, must be disclosed to the FSC. Most companies maintain strong reserves and



provisions, even though the regulator does not vet the assumptions used by actuaries regarding loss experience, interest rates, and mortality.

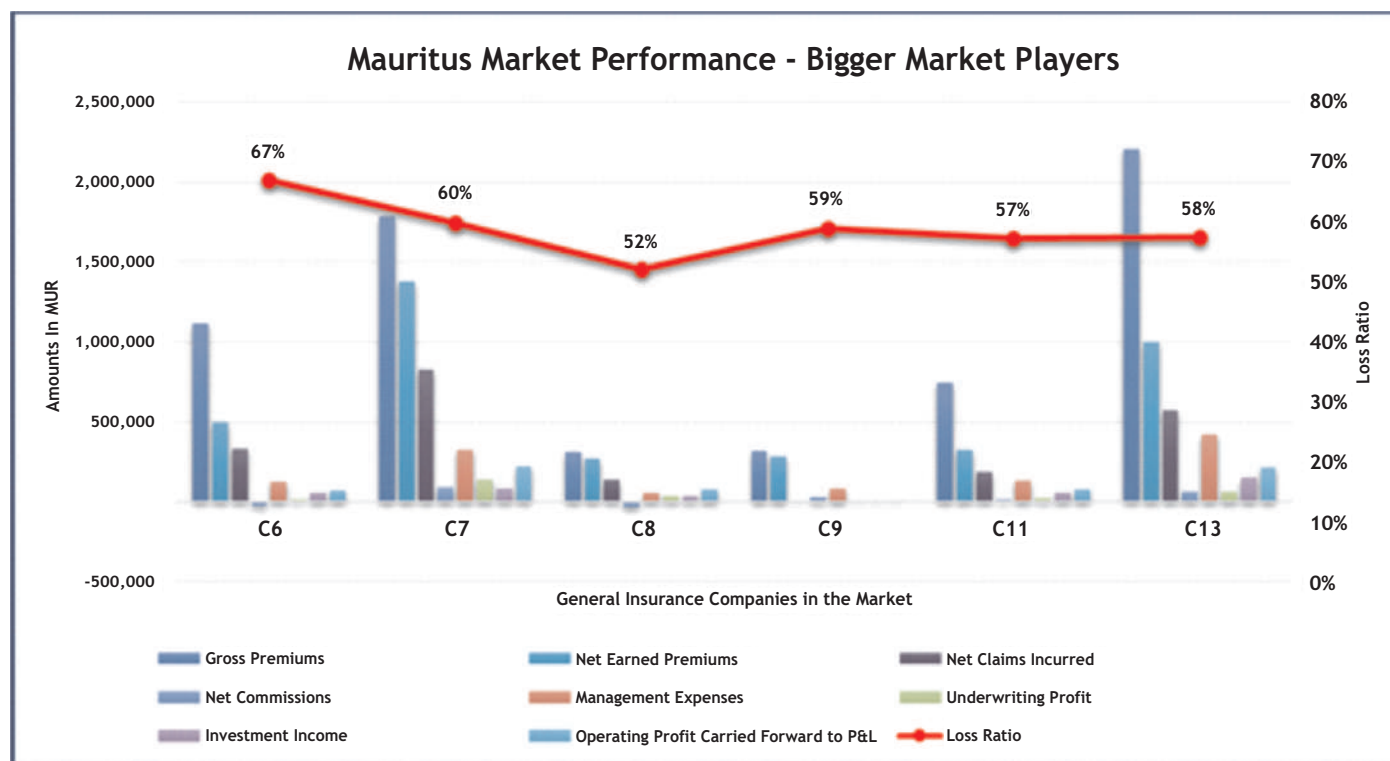
Reinsurance arrangements are reviewed by the FSC. It has incorporated inadmissibility on the capital for reinsurance recoveries outstanding for various periods to curb the practise of long standing credit. There is a requirement for compulsory cession of 5 percent of premiums risks to the Statutory Reinsurer, which is Africa Re, but otherwise companies are free to make their own reinsurance arrangements as long as the companies are rated higher than B+.

Insurance supervision has been invigorated especially following the creation of the FSC. Weak companies are being put on the "watch" list, till they recover. On-site inspections have been resumed. Filing of audited accounts and financial statements must be made within three months after the end of each company's financial year.

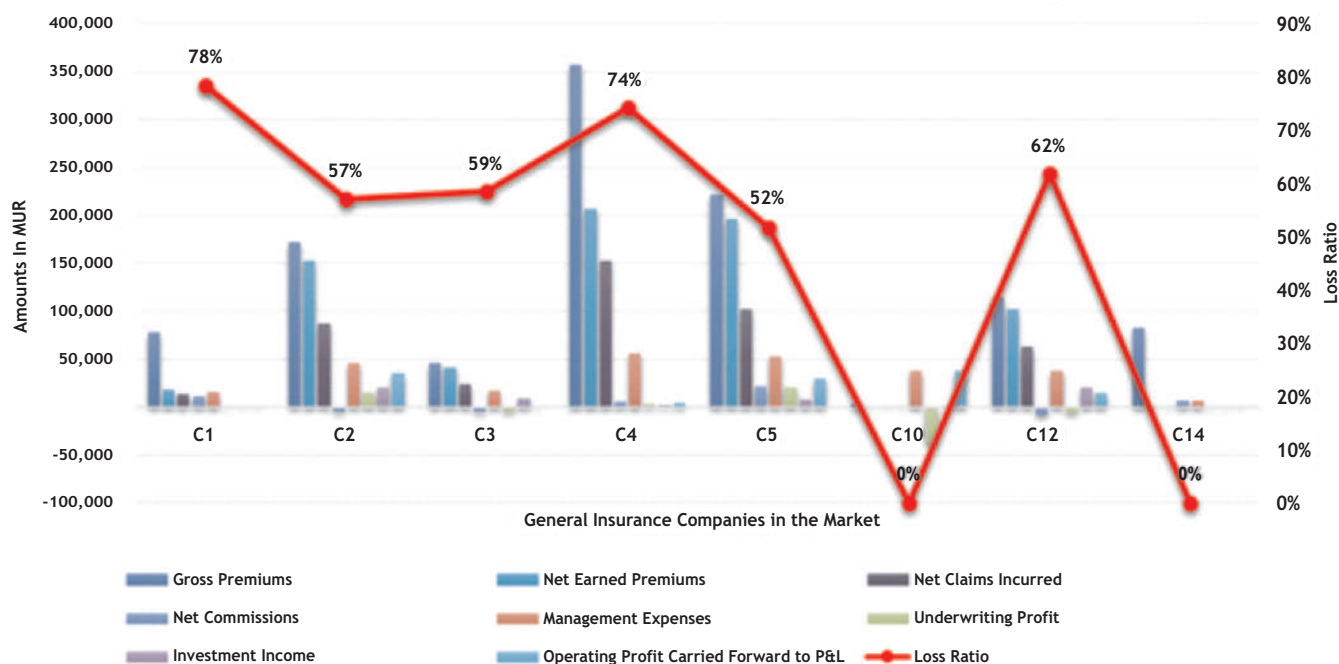
Market Overview

The insurance market in Mauritius is asymmetrical such that the Insurance Sector is dominated by the French sugar mill owners who influence the market via group holdings having various businesses driving the

economy. The 3 French/White insurance companies have a market share of about 69% in the General Insurance business. Thereafter, the former Government owned Company which was privatised in 1988, has a market share of about 10% while the rest of the 8 companies are left to fend for the remaining 21% of the market share. This is leading to undercutting in the market and premiums that are being charged are resisting the actuarial pricing as rates are decided with customer retention as the driving factor rather than sound pricing. The FSC is in the know of this pricing practice and is taking a series of remedial steps. The market scenario is illustrated as under:



Mauritius Market Performance - Smaller Market Players



Regulatory Scenario before Insurance (Risk Management) Rules 2016

Till the issuance of the new Insurance (Risk Management) Rules 2016, the regulatory submissions required for a General insurance Company were:

- ♦ A Financial Condition Report once a year which had detailed information about the Business and External Environment, Objectives and Strategies, Performance Overview, Operating/ other income and expenses, Assets, Technical Provisions, Risk Profile, Risk Management System, Capital Management and Conclusions and Recommendations. This includes the IBNR number and no separate report is required to be submitted.
- ♦ Insurance Returns to be submitted to the regulator which include the Balance Sheet, Revenue Accounts, Solvency and other important details as asked for by the

regulator.

- ♦ Financial Statements of the Company.

The FSC in their penchant to drive efficiency have started an online portal for submissions of the Insurance Returns and Actuarial Reports to ensure that all submissions are received on time and in the requisite format.

Insurance (Risk Management) Rules 2016 - Mauritius for General Insurance Business



Risk Management is the forecasting and evaluation of financial risks together with the identification of

procedures to avoid or minimize their impact. The FSC has boosted the regulatory supervision framework by adding the Insurance (Risk Management) Rules 2016 to the existing Insurance Act framework of submitting Financial Condition Reports with various Insurance Returns for all insurance companies. These rules are applicable for regulatory submissions after 1st July 2017 although the regulator expects all companies to maintain Risk Registers 1st January 2017 onwards.

Now, after publishing the new rules, the additional submissions to be undertaken by the insurers are:

- ♦ Risk Appetite Statement
- ♦ Own Risk and Solvency Assessment (ORSA) - Stress Scenarios and Capital Target
- ♦ Own Risk and Solvency Assessment (ORSA) - Capital Management Plan
- ♦ Stress Tests of Liabilities

In lieu of the new rules, all General Insurance companies are required to



have a dedicated Risk Management team which is to be supervised by a Chief Risk Officer (CRO) who would be in charge of facilitating all of the submissions along with the Actuary.

Because of the implementation of the new rules, the additions that have to be done to the operations of the Company via the Risk Management Framework are:

- ♦ A Risk Appetite Statement
- ♦ A Risk Management Strategy
- ♦ A 3 year rolling forward Business Plan including Solvency projections
- ♦ An ORSA
- ♦ The Liquidity Policy of the Company
- ♦ A designated Risk Management Function headed by the CRO and reporting to the Board.
- ♦ A description of the responsibilities, roles and reporting lines within the insurer for the management of material risks

It is expected that the new rules will boost the quality of operations within the insurance sector. It is primarily expected to work as a tool to reduce the volatility in earnings and capital, improve credit ratings, improve internal functions, ensure greater regulatory compliance and drive higher policyholder and shareholder value.



It is noted that, Insurers that adopted Enterprise Risk Management have managed to consistently lower volatility in their key value driver i.e., return on capital and surplus. This is a result of the benefits of being able to measure risk in portfolios, decide on hedging techniques, determine adequate levels of capital and thereby adjust strategies in the face of new information. This enables the ERM practicing insurers to track volatility in their portfolios and find ways of minimising it, hence their ability to deliver consistently stable portfolios in the face of adverse market conditions. Hence, the adoption of ERM by insurance companies has enabled them to reduce risk and add

value to both shareholders and policyholders. The FSC wanted the market in Mauritius to understand the importance of this function and improve value. In the final analysis, as with all the regulators, FSC could revoke a license if it is not satisfied that an insurance company operates in accordance with sound insurance principles. Maybe, we could adopt some positives from this regime to increase value for our industry to foster growth and self-supervision along with regulatory guidelines.

Note: All market related statistics are taken from the "Annual Statistical Bulletin - 2016" published by the FSC.

Thank you



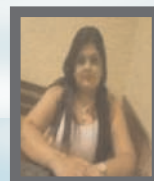
About the Author

Ms. Rashi Manek



rashi@ka-pandit.com

"Rashi is an Associate member of the Institute of Actuaries of India and currently works as Actuarial Manager in K.A. Pandit Consultants & Actuaries."



A valuable proposition

When underwriting an IPMI policy, key pricing and experience rating considerations must be made. Joanne Buckle and Neha Taneja share their experience.

Group private medical insurance (PMI) protects employers and their employees against the costs of medical care. Traditional domestic PMI products operate in the country of residence, limiting the beneficiary to receive treatment in that country. However, with increased globalisation, many companies today need to provide uninterrupted health cover for employees with significant international long-term travel requirements. International PMI (IPMI) provides much broader coverage, with cover in locations outside of the beneficiary's home country, giving seamless access to comprehensive healthcare services across the globe.

IPMI may often be confused with travel insurance, which is usually a short-term policy designed for holidaymakers or travellers on short business trips to cover cancellations, loss of personal belongings and emergency medical treatment. An IPMI policy is targeted at employees who have long-term travel outside of their home country. It typically provides cover for comprehensive medical treatment including medical evacuation and repatriation.

The global IPMI industry for expatriates and students was worth approximately US\$13 billion in gross written premiums in 2015 and is expected to grow to US\$20 billion by 2019, according to Finaccord's latest research. This translates to an annual growth rate of about 11%. Taken from Pacific Prime's Cost of International Health Insurance Report 2016, below is a list of the top 10 insurers that together total approximately 70% of

the total number of plans sold worldwide:

1. Aetna International
2. AXA international
3. IntegraGlobal
4. ALC Global Health
5. BUPA Global
6. Now Health International
7. Allianz Worldwide Care
8. William Russell
9. Cigna Worldwide
10. InterGlobal (now Aetna International)

The market has become very competitive, containing many smaller and regional insurers, as well as large global insurers. As a result, profit margins, which have been generous traditionally, have come under increasing pressure. If domestic insurers want to expand into IPMI profitably, they must be able to price group policies appropriately, taking into account a number of increasingly challenging issues.

This feature article looks at the current global market spread and size of the IPMI market and discusses some of the key considerations for pricing and experience rating a group IPMI policy.

Pricing considerations

Dealing with multiple geographies, changing regulations, various health systems, diverse demographics and movement of the insured population results in a number of additional complexities when compared with rating a traditional PMI policy. Here are some of the key factors IPMI providers need to consider:

- **Local data limitations:** The wealth of data that a traditional health insurer holds on domestic PMI policies is usually insufficient for

pricing an IPMI product, because:

- ♦ IPMI policies usually offer a more much comprehensive benefit package.
- ♦ Differences in the socioeconomic profile of the target market, resulting in markedly different benefit features and claims experience.
- ♦ Distinct claiming patterns due to the international nature of the benefits.
- ♦ Variation in utilisation patterns by country and nationality.
- ♦ Portability offered under an IPMI policy allows full access to benefits wherever the employees are and it is difficult to predict where different services will be consumed.

Obtaining reliable and relevant data with a desired level of granularity can be challenging, making it difficult to get any credible results on which to base sound conclusions.

▪ Geographical area of coverage:

This is considered one of the key rating factors for an IPMI policy as claims costs can vary significantly between countries. For example, most insurers provide separate cover for 'worldwide excluding US' and 'worldwide including US,' because healthcare costs are typically much more expensive in the United States than anywhere else in the world. Most insurers would classify countries into different regions/levels/zones that have broadly similar costs and healthcare systems for more accurate rating. However, constructing such classifications is difficult because:

- ♦ Limited claims experience for some countries and lack of data for others make the classification statistically less sound.
- ♦ Even countries with similar costs



may have different types and quality of healthcare services, disease trends and state healthcare systems, which can make it difficult to group countries into particular zones. For example, insurers may experience lower claims ratios in countries with well-functioning state healthcare systems which allow access for temporary residents. The rules on whether an overseas national is eligible to access the local state healthcare system are complex and vary by destination country, as well as nationality. In addition, the likelihood that an employee will access state coverage depends on the quality of the state healthcare system, as well as the nationality and cultural preferences of the employee.

- ♦ Volatility in exchange rates can result in the pricing zone relativities becoming rapidly obsolete.

All of these factors are likely to have a significant impact on the claims frequencies and costs. As a result, trying to price cover accurately for a multinational company with employees residing in multiple countries across the globe is quite a task.

▪ International medical inflation:

While most insurers have established mechanisms to control domestic medical inflation, cost controls for IPMI are relatively difficult. In general, insurers have struggled to generate enough business volume for negotiated contracts or deep discounts. Therefore, the traditional methods for steering utilisation, such as networks, co-pays and utilisation management, are less useful. With growing volumes, especially in the major hubs, provider network management is becoming critical to get the best prices. Increased use of case management and expert second opinion to review and offer a change

of diagnosis or treatment is also helping minimise unnecessary treatments and, hence, costs. The cost containment strategies adopted by insurers should, however, give due consideration to employee satisfaction and take care not to compromise the quality of cover or service provided.

▪ **Regulatory reforms:** Regulation is a key consideration and an area of increasing complexity for the entire market. The demand for medical treatment is growing and, with mounting pressure on the state systems, there are likely to be stringent healthcare laws in many jurisdictions. Insurers have to make sure their products are compliant with differing regulations in each country. Rules on underwriting and pre-existing conditions designed for domestic markets can have a severe impact on pricing for IPMI—often unintentionally. Some examples of recent regulatory changes that have had significant impact on the market are:

- ♦ Dubai Health Authority Reform has implemented mandatory health insurance coverage for all residents. While aimed at ensuring employees have sufficient domestic medical insurance so that they are not a burden on the state system, the regulations have had a significant impact on IPMI—resulting in some insurers withdrawing plans and many others having to adjust the coverage and premiums to comply with these reforms.
- ♦ China Insurance Regulatory Commission (CIRC) has issued more restrictions to curb the growing trend of mainland individuals purchasing coverage in Hong Kong by enforcing the prohibition of sale and marketing of Hong Kong insurance products in the mainland.

The changing local regulatory landscape often makes it hard for an IPMI insurer to build a robust and scalable pricing model that will work in multiple jurisdictions, which leads to increasing administration expenses.

▪ Economic uncertainty:

Challenging economic conditions and significant swings in exchange rates result in the historical data being less relevant to future experience. For example, the falling value of sterling post-Brexit has changed relative global claims costs and hence profits for some IPMI insurers.

▪ **Target market:** The target market is continuously evolving with focus gradually shifting from the West to the business hubs in Asia and the Middle East. The market is also seeing a growing demand from high net worth individuals for comprehensive health insurance plans with modular benefit designs. Millennials are also likely to be a viable target market due to their desire to live and work abroad. These shifts in target markets could impact future product designs and hence pricing of these policies. It is, therefore, important to keep track of emerging markets in order to maintain desired sales and profitability.

▪ Innovative product design:

Changes in the target market have led to different expectations from the IPMI product in terms of having access and coverage. The aforementioned regulatory changes and increasing competition require insurers to work continuously towards the development of more innovative and improved products that are also locally compliant. Developing a hybrid product between domestic and international healthcare policies designed to suit target locations might be the answer. Offering a modular design allows the



companies and the brokers to cherry-pick the benefits to suit their needs and budgets. This may, however, increase the risk of anti-selection. Also, there has been an increased focus on value-added propositions and wellness benefits but it is often difficult to scale and provide them globally.

▪ **Nationalities:** The target market for this product tends to include a cohort of people with different nationalities residing in different parts of the world. Nationalities have often been observed to have an impact on the propensity of claiming, which could significantly affect the claims experience if not accurately reflected in the rating exercise.

However, it is often difficult to get credible numbers at this level of detail.

Experience rating

As business volumes are growing, insurers are building up claims and exposure data for their IPMI business. For larger groups, the insurer can then use the group's claims experience to estimate a more accurate price by experience rating. Experience rating is the process by which a group's historical claims experience is reflected in the future rating calculations. This can be done prospectively, by projecting the future claims costs using historical claims experience, or retrospectively, by providing a 'profit'

share to the employer based on the claims experience during that period.

The experience rating exercise assumes that the past experience gives a reasonable expectation of the future, while making allowance for factors such as statistical fluctuations, trends, changes in exposure mix, turnover and benefit changes that could result in future claims costs that vary from the historical experience.

Some of the issues that we have observed during IPMI experience rating exercises are shown in Figure 1.

Figure 1: Issues of IPMI Experience Rating

Issues	Definition	Problem Area
Credibility	Credibility thresholds assigned to a particular group's experience for the calculation of final rates are usually based on the number of members covered under the scheme. The bigger the group, the higher the credibility assigned to the group's experience. This idea is based on a principle that the statistical variation in expected claims cost tends to decrease as the group size increases. In the event of non-availability of historical group data, or if data is considered to be below the minimum threshold, manual rates are used.	The product features and the international nature of the policy introduce a lot of heterogeneity in membership profiles and claims experience. The data is, therefore, more susceptible to higher statistical variation. Hence, we expect the credibility thresholds for IPMI business to be much higher than domestic business, but this is not always reflected in local business practice.
Large claims pooling	Large claims pooling is a system designed to help stabilise premium fluctuations in smaller groups. Large claims over a stated amount are charged to a pool contributed to by many small groups that belong to and share in that pool. The smaller the group, the lower the thresholds for pooling level. Larger groups will have much higher thresholds for large claims pooling.	Large claims could result in excessive rate increases driving away good business, impacting business volumes and overall profitability. Isolating the large claims and charging them separately to the pool not only helps defray the large claims, but also protect the groups against catastrophic rate increases and insurers against high lapse rates. However, for commercial reasons, not all insurers adhere to the discipline of pooling the large claims over the entire portfolio.
Data	There is always a trade-off between the volume and relevance of data that can be used for experience rating.	Data that is too old is likely to be less relevant for projecting future experience. It has been observed that the predictive value of experience data decreases over time due to changes in trends, reduced correlation of the costs between one period and the next and changing demographics. The problem with using very recent data is that it may not



		be fully developed, which introduces further uncertainty to the estimates. A compromise therefore needs to be made between using old and recent data to make sure that the data set used is not only credible but also relevant and reasonably developed to minimise volatility when developing the rates.
Trends	It is necessary to allow for appropriate trends in the claims frequencies and costs to more accurately project the future experience of the group.	Heterogeneity in the underlying data may result in undesirable random variation being captured in the trends developed from the past claims experience. It is therefore important to validate these trends objectively with a reasonable view of the future.

One of the major problems we observe in IPMI business is the lack of emphasis on robust experience rating exercises. Often group size is not given due consideration when assigning credibility to the group's experience. Basing the rates on data with higher statistical variation could result in significant under or over-estimation of the premiums with consequent loss of business or loss of margin. Also, margins for large groups in particular are being cut and products largely commoditised in a highly competitive market. This leads to behaviour such as inconsistent use of large claims pooling charges, removal of years of poor experience or large claims as 'anomalies' and inconsistent use of trend and benefit factors.

Successful application of group experience rating requires considerable actuarial and underwriting judgement, combined with a robust model and a strong, auditable process with high levels of discipline and governance.

Constant evolution

We are now entering a phase where IPMI has gradually moved from being a 'luxury product' to a 'must have' as international lifestyles continue to expand and evolve. However, cross-border healthcare is a complex issue. Insurers therefore need to have the global expertise to provide plans that

function well in multiple markets yet provide the flexibility to allow for localised customs and practices.

To be able to develop and price a product that covers globally and delivers locally, the insurer, while giving due consideration to client desires, needs to keep a close watch on global and regional developments in the market. It needs to continually evolve the benefit offerings to meet changing business needs and landscapes. As world healthcare standards continue to rise and the range of treatment options available continues to increase, unit costs and utilisation will continue to increase. The insurer can limit the impact of rising costs through robust streamlined cross-border claims systems, global network

management negotiations and strict anti-fraud measures, thus offering a valuable proposition to employers.

Sustainable premiums and cost containment are critical concerns for the longevity of this market. Achieving a balance between pricing and suitability of coverage and benefits, keeping in mind regulatory requirements, is the core challenge at the moment. Insurers will have to get pricing right and look to distinguish themselves from the competition through innovation and the inclusion of value-added benefits and services to stand out from the crowd. For those that can build a robust and scalable service model offering high levels of value to the customer, the potential margins are significant.

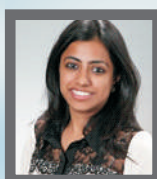
About the Authors

Ms. Joanne Buckle



Joanne.Buckle@milliman.com

"Joanne Buckle is a consulting actuary and she heads the actuarial team at Milliman in London."



Ms. Neha Taneja



taneja.neha.17@gmail.com

"Neha Taneja is an associate actuary at Milliman in London."



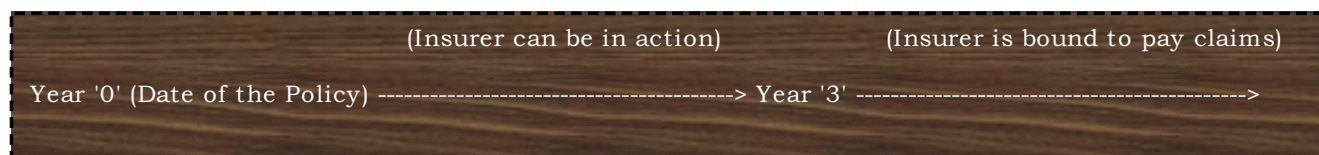
Section 45 : Let's tackle it out

In a contract, two parties are involved in general, Promisor and Promisee, and the contract is enforced by respective laws. Here in any insurance contracts certain laws are required to be followed by any of the parties involved. Here we will talk about the most discussed section, Section 45 of The Insurance Laws (Amendment) Act, 2015. First of all we will try to understand what this section is all about and why it is said to be the most arguable.

In exact words of Section 45, "No policy of life insurance shall be called in question on any ground whatsoever after the expiry of three years from the date of the policy, that is, from the date of issuance of the policy or the date of commencement of the policy or the date of revival of the policy or the date of the rider to the policy, whichever is later." So we can say that,

The date of the policy = Max {the date of issuance of the policy, the date of commencement of the policy, the date of revival of the policy, the date of the rider to the policy}

So if we consider the date of policy as the starting point, that is, year '0', then we can surely say that the period of exact three years from this date, is completely in the favour of insurers but once these three years get completed the game will completely be in the hands of insured.



We can say that following facts will come in front of us after referring this section:

1. It will be almost impossible for any life insurer to repudiate any claim after the completion of three years.
2. Genuine policyholders will not face any problems at the time of claiming the policy.
3. Increment in the level of risk to the insurers.
4. Increment in fraudulent claims.
5. Improvement in the claim settlement ratio.

So basically it is very much welcomable amendment from side of policyholders but may not for the insurers. We can say that it is definitely an opportunity to the fraudsters and threat to the insurers but by using or improving the strength of the organization, insurer can easily handle it out. Now if we analyse it further we will come to know that the ultimate burden of it will be on the shoulders of the policyholders only. Now the question will arise, How?

Premium Increases:

The thumb rule of any insurance contract is "Passing the risk whatever arises in addition to the policyholders only". We can say that the same rule will apply over here as we know because of this three years ' rule there is a chance of increment in the fraudulent claims and it is raising the level of risk. If the risk increases the ultimate burden will be on the shoulders of policyholders as a result of increased premiums.

Section 45 -> Increment in the chances of occurrence of fraudulent claims -> Increment in level of risk -> Increment in Premium-> Ultimate burden on all the policyholders

It is not just like that the problem gets solved just by increasing premium but for tackling Section 45 some other solutions are also there.

How to tackle Section 45 (Convert threat to Opportunity):

Section 45 is definitely attracting fraudulent claims but we have seen the first solution to this, that is, Increment in Premium, now we will take a look at other ways by which insurers can tackle it out:

1. **Whistle Blowing Mechanism:** Here we can say that the structure in the organization is required to be developed in such a way so that one can "blow-a-whistle" for any wrong doings happening internally. With the help of this we can stop any occurrence of internal frauds. By providing proper platform for this we can easily generate benefits out of



it. The organizational structure must be developed in such a way so that one can easily work for this purpose. We may include outsiders to this mechanism if we feel that this will help us in the reducing the fraudulent claims.

2. **Be Proactive rather than Reactive:** Traditionally when the claim arises insurers start investigating the claim but the time is changed now they must catch the fraudsters by using some out-of-the-box techniques during these three years periods. They must develop a tool by using certain parameters. If any of the policyholders doesn't fit in it, they must investigate him/her during these three years' period. So basically first three years will be very crucial for any insurer to investigate.
3. **Stringent the Underwriting:** By making underwriting procedure more difficult and stringent one can easily catch fraudsters at very initial stage and insurers can save themselves from the fraudulent claims. We can say that this will help any insurer in the development of good amount of bunch of genuine policyholders in any insurance product. This is the best tool for any insurer to catch fraudsters at very much initial stage.

Previously insurer catches fraudsters mostly at the time when claim arises but now they have to work at all the stages very accurately.

- By using "Stringent Underwriting", insurer can catch fraudsters at initial stage.
- By using "Whistle Blowing Mechanism" and "Proactive strategies", insurer can catch fraudsters during the three years' period.
- By using "Increment in Premium", insurer can settle out the additional level of risk.

If we compare two insurers, Say insurer A and B, A is using all these tools collectively and B is using only "Increment in Premium" then undoubtedly this mechanism is going to be the competitive advantage for Insurer A because A will be capable enough to charge less premium than B.

We all know that any business involves the political and legal risks. We cannot control our external environment but by using proper tools we can definitely generate benefits out of it and convert the risk into the opportunity by making it our competitive advantage.



About the Author

Mr. Palash Shah



palash.shah@iib.gov.in

“Palash is a Student Member of IAI.”



Academic Excellence Award

Prizes and Award

Academic Excellence

Based on the highest marks secured in the examinations held during the year 2016 following Academic Excellence Awards were awarded during the Actuarial Awards Evening at the award function held at Champagne Ballroom, Novotel Mumbai, Balraj Sahni Marg, Juhu Beach, Mumbai on 20th February 2017. The Prize consists of Personalized Trophy and cash prize of Rs. 10,000/- each.

Academic Excellence Award for the Calendar Year 2016					
Sr. No.	Academic Excellence	Subject		Name of Winner for April 2016	Name of Winner for September 2016
1	Tata AIA Life Academic Excellence Award	CA1 - Actuarial Risk Management		Raj Kumar Yadav (22537)	Kaushal Jhunjhunwala (28178)
2	RSA Group Corporate Centre Academic Excellence Award	CA2 : Model Documentation Analysis and Reporting		Nancy Gupta (2356) - March 2016	Kartikey Laxmanprasad Kandoi (25424) - October 2016
3	Birla Sun Life Academic Excellence Award	CA3 - Communications	Neha Kamalkumar Podar (10369) - March 2016	Sateesh Narasimha Bhat (1131) - May 2016	Sudipta Bhattacharya (1188) - October 2016
4	Milliman Academic Excellence Award	ST1 - Health and Care Insurance		Vipul Aggarwal (534)	Reetika Jain (2730)
5	Max Life Academic Excellence Award	ST2 - Life Insurance		Shivanjali Mittal (4054)	Alok Gupta (20705)
6	Mercer Consultancy Academic Excellence Award	ST4 - Pensions & Other Employee Benefits		Krupa Jitendra Shah (8681)	Anoop Michael (3955)
7	Jardine Lyod Thompson Academic Excellence Award	ST5 - Finance & Investment - A		Gopalan Varadarajan Subhasree Nigamma (27477)	None Passed
8	Jardine Lyod Thompson Academic Excellence Award	ST6 - Finance & Investment - B		Rushabh Abhinav Shah (10095)	Charanraj Sampathirao (10973)
9	Towers Watson Academic Excellence Award	ST7 - General Insurance: Reserving & Capital Modelling		None Passed	Kunal Kishore Jha (2837)
10	Late Shri Sushil Dev Chatterjee Academic Excellence Award	ST8 - General Insurance : Pricing		Deepanjali Talwar (20032)	Jatin Gupta (23895)
11	LIC of India Academic Excellence Award	SA1 - Health and Care Insurance		Ridhi Gupta (2412)	Prabhash Anand Chaubey (1415)
12	RGA Reinsurance Academic Excellence Award	SA2 - Life Insurance		Ashik Salecha (19793)	Sunil Vishnu Savalkar (329) Aditya Jain (2633)
13	Munich Re India Academic Excellence Award	SA3 - General Insurance		Siddharth Mehra (11794)	Vartika Gupta (2471)
14	K A Pandit Consulting Actuary Memorial Academic Excellence Award	SA4 - Pension & Other Employee Benefits		No Candidate Passed	No Candidate Passed
15	Gen Re Academic Excellence Award	SA6 - Investment		Vijay Arunachalam Mudaliar (4136)	Prasham Mahendra Rambhia (10439)

List of students scoring highest marks

Prize Fund for Student Scored Highest Marks

The Prize fund for highest marks is instituted by contribution given by various donors to Institute of Actuaries of India. This Prize fund has been constituted for student scoring highest marks in April/September exam diet. The Award consists of prize money of Rs 5000/-.

List of Students Scoring Highest Marks for the Calendar year 2016					
Sr. No.	Subject	Subject Name	Name of the Donor	Name and Member ID of the Winner - April 2016	Name and Member ID of the Winner - September 2016
1	CT1	Financial Mathematics	Shri R. Krishnaswamy Memorial Prize Fund	Mayuresh Vinayak Dharap (25267)	Govind Saran Gautam (32731)
2	CT2	Finance And Financial Reporting	Shree Atma Ram, Shri Chhajju Ram and Smt Parvati Devi Memorial Scholarship Endowment	Raj Paresh Sheth (31199)	Udit Agarwal (20285)
3	CT3	Probability And Mathematical Statistics	Shri H V Krishnamurthy Prize Fund	Aditya Manoj Bagdia (30756)	Kunjesh Piyush Parikh (31612)
4	CT4	Models	Shri R. Krishnaswamy Prize Fund	Mansi Dharmesh Shah (30819)	Praveen Sancheti (32075)
5	CT5	General Insurance, Life And Health Contingencies	Smt. Vidhya Wati and Smt. Santosh Kumari Memorial Scholarship Endowment	Aditya Manoj Bagdia (30756)	Tanvi Milan Doshi (31940)
6	CT7	Business Economics	Prof R M Joshi Prize Fund	Aanchal Agarwal (30603)	Megha Jayesh Shah (31746) Tanvi Mimani (33721)
7	CT8	Financial Economics	Prof G S Diwan Centenary Commemoration Prize	Hemant Devidas Rupani (28256)	Divyam Sankharva (29334)
8	CA1	Actuarial Risk Management	The Future Actuary Prize Fund	Raj Kumar Yadav (22537)	Kaushal Jhunjhunwala (28178)
9	CA3	Communications	J R Joshi prize fund	Sateesh Narasimha Bhat (1131) - May 2016	Sudipta Bhattacharya (1188) - October 2016
10	ST1	Health & Care Insurance	G S Diwan 100th Birth Anniversary Memorial Education Fund	Vipul Aggarwal (534)	Reetika Jain (2730)
11	ST2	Life Insurance	Late Shri Janardan Pundalik Nerurkar Prize Fund	Shivanjali Mittal (4054)	Alok Gupta (20705)
12	ST4	Pension & Other Employee Benefits	Shri K A Pandit Memorial Prize Fund	Krupa Jitendra Shah (8681)	Anoop Michael (3955)
13	ST5	Finance And Investment A	Mr. Kamal Kumar Noranglal Podar Prize Fund	Gopalan Varadarajan Subhasree Nigam (27477)	None Passed
14	ST6	Finance And Investment B	Late D Basu Prize Fund	Rushabh Abhinav Shah (10095)	Charanraj Sampathirao (10973)
15	ST7	General Insurance - Reserving And Capital Modelling	Mr. Peter Akers Prize Fund	None Passed	Kunal Kishore Jha (2837)
16	SA1	Health & Care Insurance	G S Diwan 100th Birth Anniversary Memorial Education Fund	Ridhi Gupta (2412)	Prabhesh Anand Chaubey (1415)
17	SA2	Life Insurance	Prof G S Diwan's Memorial Prize Fund	Ashik Salecha (19793)	Sunil Vishnu Savalkar (329) Aditya Jain (2633)
18	SA3	General Insurance	Late Shri K P Sharma Memorial Prize for the Meritorious in General Insurance	Siddharth Mehra (11794)	Vartika Gupta (2471)
19	SA4	Pension & Other Employee Benefits	Canada Life Scholarship Endowment Fund	None Passed	None Passed
20	SA6	Investment	Prof G S Diwan Memorial Scholarship Fund	Vijay Arunachalam Mudaliar (4136)	Prasham Mahendra Rambhia (10439)

Prizes and Awards

ACET (Actuarial Common Entrance Test) Award: There are two awards in this category. The award for May ACET Exam is sponsored from Late A S Gupta Prize fund and Award for October ACET Exam is sponsored from Parikh Parivar Prize fund. The Award consists of Personalized trophy along with cheque of Rs. 10,000/- for student/s scoring highest marks in May and October Examination Diet. If there are more than one candidate scoring highest marks then the prize money is divided equally between each of them.

Late A S Gupta Prize for ACET exam held in May 2016

i) Mr. Adrish Ray Chaudhuri (33640)

Parikh Parivar Prize for ACET exam held in October 2016

i) Mr. Ankit Goel (34186)

Principal Financial Group Award - For Associate ship: This Award is for the Students who complete Associate ship within 3 years. They will receive a Gold Medallion worth Rs. 25,000/-. **For the exam conducted during the year 2016, there were no candidates eligible for this award.**

Meena Sidhwani Award for Fellowship: This Award for is the Student who completes fellowship within 4.5 years from the date of joining. The student will receive a Gold Medallion worth Rs. 25,000/-. **For the exam conducted during the year 2016, there were no candidates eligible for this award.**

ST9 - Enterprise Risk Management Academic Excellence Award: ST9 - Enterprise Risk Management Academic Excellence Award includes a cheque of Rs. 25,000/- for the student/s scoring highest marks out of two examination diets (April and September).

1	Hannover Re Academic Excellence Award	ST9 - Enterprise Risk Management	Manoj Malhotra (20024) - September 2016
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Prudential Corporation Asia Academic Excellence Award for the subject SA2 - Life Insurance: Prudential Corporation Asia Academic Excellence Award for the subject SA2 - Life Insurance - This Award is given to the IAI member securing the highest marks in SA2 Subject out of two examination diets (April and September) in a year. Thus there will not be more than one winner per year for the award. The award winner would be entitled to attend the East Asian Actuarial Conference with expenses reimbursed. After attending the EAAC, the member will have to submit a report on the conference in the form prescribed by the IAI; the IAI will publish the report in the Actuary India magazine for the education of its readers.

1	Prudential Corporation Asia Academic Excellence Award	SA2 - Life Insurance	Ashik Salecha (19793) - April 2016
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PUZZLE COLUMN

Puzzle No 263:

See if you can solve the following themed rebuses?

- | | | |
|-------------|----------|---------------------------|
| 1. OF F | 6. C | 8. W C O |
| 2. GEL | NORTH | 9. VOL |
| 3. LLION | 7. LAPSE | 10. TFIL |
| 4. ALERL- | SNEAK | 11. LOUIS XVI & HENRY VII |
| 5. SIEDGEDE | ERROR | |

Hint: All the answers form terminology used in a particular sport

Puzzle No 264:

Certain numbers can be expressed as a function of their own digits, while maintaining the order of the digits. For example $36=3! \times 6$. Can you find the formulation for 71, 119, 720, 733 and 936?

About the Author



Ms. Shilpa Mainekar

shilpa_vm@hotmail.com



New Zealand

Decumulation in retirement

The government pays New Zealand Super to all eligible NZ residents over age 65 (with plans to increase to age 67). The benefit is one-third of the national average wage (more for a single person). There is no means testing.

The second tier of retirement savings is provided by the KiwiSaver scheme (supplemented by a few employer-based schemes). KiwiSaver has an automatic enrolment for new employees (with a voluntary opt-out) and provides a lump-sum at the age of entitlement for NZ Super. The third tier of retirement savings is personal savings.

The NZSA retirement income group prepared a paper on rules of thumb for decumulation⁽¹⁾, designed to help retirees plan how to safely take income from their retirement fund. The paper discusses four alternative rules of thumbs for each year's withdrawal: 6% of opening fund; 4% of fund at retirement; opening fund divided by years to future fixed date; and opening fund divided by life expectancy.

Earthquake claims

A sessional meeting with legal and claim experts in Christchurch on 23 June was telecast to Auckland and Wellington. Property claims arising from a natural disaster are handled differently from routine claims. The volume of work is much larger, so mobilising staff to handle case-load is critical. Repairs to foundations may require structural engineers to assess. Sub-standard repairs by sub-contractors has led to further claims to remediate poor workmanship. Most claims for minor damage fall under the EQC scheme below the insurer's limit. Old policies with unlimited rebuild cost in same geographical location have been replaced with sum insured cover.

Insurance Prudential Supervision

NZSA made a submission on the review

of the Insurance (Prudential Supervision) Act 2010⁽²⁾.

The Society supports the continuation of the mandatory appointment of an Appointed Actuary who prepares an annual Financial Condition Report with content that can be prescribed by the prudential regulator (RBNZ).

More work is needed to assess adequacy of general insurance catastrophe risk with a more stringent hurdle for New Zealand insurers than Australian branches. Clarification has also been requested for policyholder preference in Statutory Funds.

Financial Condition Reports for Life Insurers

An exposure draft for a revised Professional Standard 21 (PS21) "Life Insurers - Financial Condition Report" was circulated to Fellows. Feedback to Life Insurance Practice Committee closed on 14 August. The new standard is scheduled to take effect from 1 January 2018. The changes are amendments to gain greater consistency with the general insurance standard (PS31), changes to the RBNZ solvency standards, formatting and wording on materiality.

New Zealand Society of Actuaries

It is with sadness that we record that

two former Presidents of NZSA died recently - Mark Weaver in June and Murray Hilder in July.

Dinners were held in Auckland on 2 August in Wellington on 3 August with Jenny Lyon President of the Australian Institute as the guest of honour. There was a CPD tour presented by David Morrison in Wellington on 3 August⁽³⁾.

The Society presented awards to Ben Coulter for research, Jenn Dobinson for Young Volunteer achievement, Christine Ormrod for Gold Award and Linda Cardus and Murray Hilder posthumously for Distinguished Service⁽⁴⁾.

Review of retirement income policy

The Retirement commissioner's review of policy⁽⁵⁾ recommended an increase in KiwiSaver contributions, increase in retirement age and resumption of contributions to the New Zealand Superannuation Fund which pre-funds some of the future cost of tier 1 retirement income.

A critique of this policy review was prepared by Michael Chamberlain and Michael Littlewood⁽⁶⁾. They believe that for an economy as a whole, government borrowing to invest in a sovereign wealth fund does not alter the cost of a universal pension benefit.

References:

- (1) <https://actuaries.org.nz/wp-content/uploads/2015/10/NZSA-full-doc.pdf>
- (2) <https://actuaries.org.nz/wp-content/uploads/2017/08/NZSA-IPSA-Review-submission.pdf>
- (3) <https://www.actuaries.asn.au/microsites/2017-cpd-tour>
- (4) <http://mailchi.mp/695d864ea682/nzsa-presidents-newsletter-august-2017>
- (5) <https://www.cffc.org.nz/reviewretirementincomepolicy/>
- (6) <https://alt-review.com/>

About the Author

Mr. John Smith



john.smith@fidelitylife.co.nz

"John Smith is the Appointed Actuary of Fidelity Life the largest New Zealand owned Life Insurer."





Dear Members,

On behalf of the Advisory Group on Life Insurance (AGLI). I am pleased to put forward a new initiative of the AGLI – the '**Young Actuaries Program**'. This program has been identified to encourage Young Actuaries working in the Life Insurance sphere. It will give future stars an opportunity to explore and broaden their perspective in niche technical areas that may either be within or outside their current domains.

Each quarter, one topic will be taken up by AGLI, and the selected applicant/s will be responsible to produce a Concept Paper under the mentorship of a Senior Actuary. The final paper will be presented at an **Actuarial Event**. This event will be open to all members of the profession and will hence serve as an important platform for the Young Actuary to present the paper. We will also provide all the support for the paper to be published in the Actuary India magazine (subject to approval from the publisher of said magazine).

If you are a recently qualified Actuary or short of a few papers (Associate/Fellow) and working in the Life Insurance area, you are invited to apply to this program and be mentored by a Senior Actuary in a topic of your choice, out of the four topics given below.

The following are the topics for the Concept Papers to be published up to the period of June 2018

Topic Options

- Considerations while performing Analysis of Surplus
- Validating ESG (Economic Scenario Generator)
- A practical approach to allocation and apportionment of expenses in Life Insurance Companies
- Key considerations under low interest rates / use of derivatives

Eligibility

Associate or Fellow members with minimum 4 years of work experience in Life Insurance / Reinsurance / Consultancy, and who are below 35 years of age are eligible to apply.

Application process

If you are interested in applying, please send us an **Expression of Interest (EOI)** for the topic of your choice. The EOI must be around 150-200 words, and contain your reasons for applying to the program and why you think the topic is useful to study further. The EOI should come with your **brief biography**.

Timelines and Contacts

The last date for receiving applications is **30th September, 2017**.

All applications are to be addressed to **Vinod** at hoet@actuariesindia.org. Please include '**AGLI – EOI for Young Actuaries' Program**' in the subject line.

If your application is selected by the AGLI, you will be provided with a Senior Actuary to guide you through the process of preparing your Concept Paper.

CPD Hours

Each successful paper presenter will receive CPD credit of **six technical hours** and a complimentary pass to the immediate next **CILA**(Current Issues in Life Assurance) event.

We hope that you will make full use of this opportunity.

Yours sincerely,

B. N. Rangarajan

Chairman

Advisory Group for Life Insurance

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Academic Requirements:

55% aggregate at degree level

90% Maths in class X and XII

80% English in class XII

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Applications close on
Monday 16 October 2017

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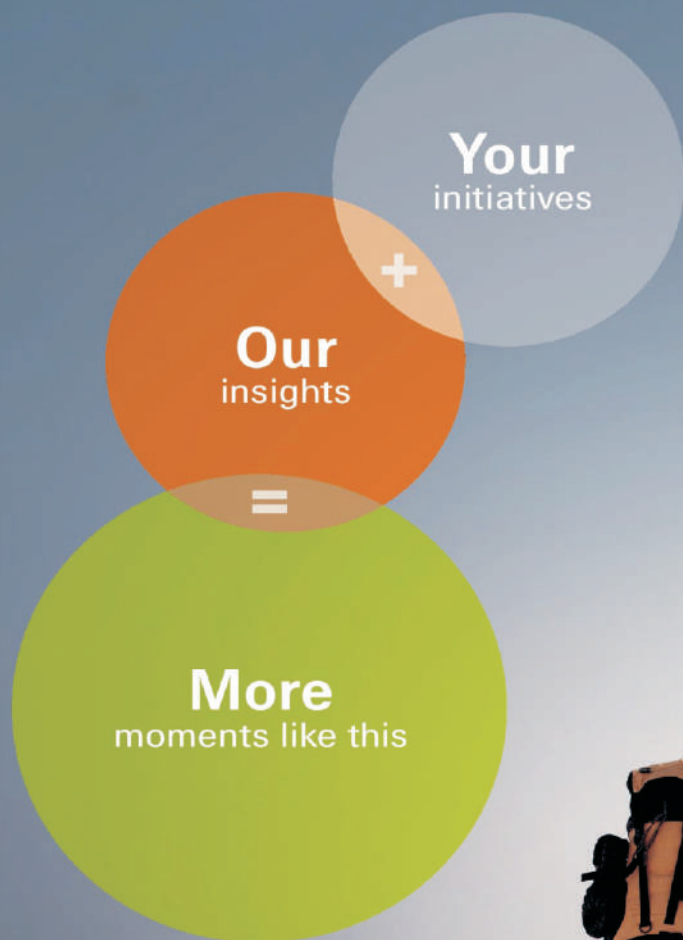
16
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6

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