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Serving the Cause of Public Interest

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OPERATIONAL RISK MANAGEMENT

HEALTH INSURANCE

Pensions



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Title: TUNING THE IFRS ADAPTATION



Author: BHAVNA VERMA & VANDANA BALUNI
Title: CONCURRENT SESSIONS ON LIFE INSURANCE



Author: SONJAI KUMAR
Title: APPLICATION OF STRESS TESTING



Author: TANUSHREE GUPTA & ROCHAK GARG
Title: 7th Capacity Building Workshop on GLM Pricing Techniques & Excess of Loss PRICING

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CLAIMS RESERVING

Mumbai, 11th - 12th May 2017

10.00 a.m. - 5.00 p.m.

Program

Reserving Context

Stakeholders and management implications
Products particularities and conditioning factors for reserving

Work Preparation and Methodologies

Reading data and building the Run-Off triangles
Types of data and yardsticks for claims origin year
Triangles results, accounting reserves and reserves balance

Deterministic Classes of Methods: Estimation using Excel

Grossing-Up, Link Ratios, Average Costs, Cape Cod, Bornhuetter-Ferguson
Shall we work with the Chain-Ladder?
Reserves discount, inflation and Solvency II economic reserves

Stochastic Methods

Volatility of estimates, fair value and Solvency II risk margins
Stochastic methods beyond Chain-Ladder

About the Workshop

The workshop's scope is to lead the participants to learn and master the analysis of claims reserving:

- Understand the features and restrictions of claims reserving
- Get knowledge on reserving methods advantages and disadvantages
- Calculate claims reserves using Excel for all the methods
- Understand the concepts of stochastic methods and its main methods
- Get knowledge on Solvency II approach to claims reserves

The workshop will have 12 hours with a strong practical component and a permanent tutorship. Its participants will develop all the methods using **Excel** with their **Laptops**. They may do it alone or in groups of two or three people.

This workshop on Claims Reserving is also available as private in-house event. For this alternative contact us: infoMumbai@actuarial.pt, www.actuarial.pt.

More Information

More information may be obtained through infoMumbai@actuarial.pt or 91 22 6179 3841

About ACTUARIAL Group

ACTUARIAL Group Mumbai is a representative office of ACTUARIAL Group Dubai which belongs to ACTUARIAL Group Portugal (Grupo Actuarial) and inherited the same line of businesses related to insurance industry (Insurance and Actuarial Consulting, Insurance and Actuarial Software and Training).

Grupo ACTUARIAL is certified by DGERT, the Portuguese certifier entity on education quality.

This event is a joint venture of ACTUARIAL Group Mumbai and the Lisbon office.

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

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

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From the Desk of

the President

– Mr. Sanjeeb Kumar

Last month I touched upon the topic of extending the role of the actuarial profession in the wider areas where I mentioned a separate four-member Committee was set up to explore the opportunities for actuarial students and qualified actuaries in wider fields beyond traditional fields of product pricing, valuation, actuarial reporting etc. In this column, my focus is to communicate with you on Risk Management.

Enterprise Risk Management is still an evolving area where actuaries have a significant role to play because actuaries deal in risk management in a major part of their education and work. Many insurance markets in the world are moving towards risk-based capital which provide opportunities for actuaries to practice in the risk management and add value to their companies/ clients by advising them on the means and ways of optimal capital management. I foresee, sooner or later, the Insurance industry in India will also switch to some form of risk based capital regime. This will create a lot of opportunities for the actuaries in insurance companies as well as in consulting. The Wider Fields Committee of the Institute is also exploring the opportunities for our

actuaries and actuarial students in risk management areas beyond insurance industry.

The risk-based capital regime where capital is a function of the risk and a better management of risk, directly helps in optimizing the capital usage and hence the return on capital. As the risks have correlations with other risks and where negative correlation, a diversification of risks provides benefits of capital savings. So writing diversified product portfolio and managing of risks is a beneficial scenario for companies to enhance their return on capital. There are many other tools in the risk management which help in improving the Return On Capital Employed (ROCE).

The Institute convened **5th seminar on “Enterprise Risk Management (ERM)”** on 10th March 2017 to discuss and share the best practices and how the role of risk management can be strengthened in the industry. The ERM seminar also discussed the key areas under Corporate Governance and risk management framework, the role of risk function in the solvency-II regime and evolving role of risk function within the insurance industry.

Many challenges and opportunities

were discussed during the seminar, the floor was opened with some food for thought whether the Risk Function is considered as cost center or a profit center, policeman versus critical friend, crisis managers versus risk manager and whether risk function is an obstruction to work or raising right risk challenges for Companies to achieve the business objectives.

The need was also felt that the Institute should hold more seminars/ training programs in the Risk management. The Risk Management Advisory Group discussed this aspect and decided to have number of programs in the area of financial as well as operational risk management in FY 2017-18. Please keep visiting periodically the website for announcement of programs.

Further, I would encourage the students and young qualified actuaries to spend more time and continuously strengthen their knowledge and experience in this emerging field. I am confident that this field will have tremendous growth opportunities for actuaries during next couple of decades.

Keep interacting and writing. ■



From the Desk of

Chief Editor

– Mr. Sunil Sharma

We are already in last month of financial year 2016-17 and most of you must be busy with analysing the outcome of experience analysis to set up the valuation basis for the Valuation as at 31st March. Thank you for sparing time for reading this during this busy time.

Well, the current financial year has been the most action packed financial year. A massive and bold change brought by the current Government was to bring the transparency in financial transactions and make Indian Economy a less cash economy which shall have long term impact on economy. This has proved to be beneficial to Insurance Sector as growth figures in following column substantiate it. Demonetisation has been completed by the end of 31st December. The initial fears pronounced by various experts have proved to be wrong for good and there has not been adverse impact on GDP.

During current financial year, the Life Insurance Industry has done pretty well on top lines. For the period ending YTD Jan 2017, the new business APE grew by 21%. (Rs 514 billion against Rs. 423 billion same time last year). Average Premium size for Pvt Life companies has

grown to Rs. 47,000 compared with Rs. 38,000 same times last year showing a 23% growth.

Contrary to growth story on premium and average ticket size, it is worth noting that the number of agents in life insurance industry during the financial year so far has not grown much as expected. For the period ending November 30, 2016, the number of agents have grown merely 1% from 20.16 lacs to 20.44 Lacs (net addition of only 28,152 between April 1 to Nov, 30). Private Insurers have only net additions of 2,150 agents during this period. Thus the Tied agency force is not growing as expected in the Indian Insurance Industry owing to the higher fixed cost and majority of insurers are yet to achieve threshold economies of scale. Compliance with Expense of Management regulations may be a concern for some of the smaller insurers.

The major challenge for insurers in Indian Insurance Industry has been to design a cost effective and efficient distribution channel. While there has been good progress on optimising the costs of the bancassurance channel, optimising the cost of other channels remains an uphill task. Readers might be aware of at least one insurer

moving away from the traditional way of distributing insurance by closing down the tied agency distribution channel. It will be interesting to see how insurers cope up with this challenge in coming years and develop optimal distribution network.

Market players in current financial year have made a significant progress in the area of digitisation and how to ease the on boarding of the customers. By using the tablets for selling insurance is great move toward paperless insurance. This has not only reduced the cost of issuance but also reduced the time of issuance of policies significantly and meet or perhaps exceed the expectation of the customers.

Insurers have specifically, made number of efforts to improve the policy and premium persistency. Majority of the companies have made significant improvement in 13th month persistency. This is for sure going to help companies to have a sizeable portfolio in later years and thus much lower per policy maintenance cost.

The general economic and commercial environment in India is going through a change to enter a new era and I am confident that actuarial community in India is geared to ensure smooth transition into new era. ■

12th Seminar on Current Issues in Life Assurance (CILA)



Organized by: The Advisory Group on Life Insurance, IAI

Venue: Hotel Novotel, Mumbai

Date: 20th – 21st February, 2017

The 12th seminar on Current Issues in Life Assurance (CILA) was held in Mumbai over two days. It was a change from the usual one day programme and was done to facilitate wider discussions on various critical issues / challenges that are being faced by the life insurance industry.

Welcome and Introduction

Mr. B N Rangarajan, Chairman of the Advisory Group on Life Insurance (AGLI), welcomed all participants and



presenters and spoke about the theme of the seminar and gave a brief of agenda. He started his presentation with various initiatives/activities undertaken by AGLI. The initiatives/activities included holding annual survey on topics of interest to Appointed Actuaries (AA) and Peer reviewers, holding meetings with Insurance Regulatory and Development Authority of India (IRDAI) on various topics to help bring more clarity around various regulations and seek guidance of regulator, introduction of young actuaries programme, development of a portal for AAs and Practicing Actuaries with AGLI and conducting capacity building seminars. Mr. Rangarajan also shared the survey results held on Actuarial Practice Standard (APC) with all the participant. While setting the context for the seminar, Mr. Rangarajan mentioned that the programme is structured with

a purpose, which is a combination of deliberations on the critical issues and discussion on potential solutions of the issues discussed. Also, this was the first time where live voting facility was made available to the participants. He informed that the participants will be asked to vote at the end of each session / topic and the collated responses will be shown immediately on the screen. He assured that the 12th CILA will have takeaways for everyone.

Session 1 - Falling Interest Rates

Speaker - Mr. Kshitij Sharma, Executive Director, EY.

Mr. Kshitij started his presentation with an informal survey to understand the views of participants on future development of interest rates i.e. whether the interest rates are likely to fall or rise or to remain steady over short, medium and long term. Most of the participants responded to the expectation that the interest rate is likely to remain stable in short term but will fall in the medium to long term.

Thereafter, he gave a brief overview of the interest rates in various developed and developing economies with focus on the journey of interest rates in the respective countries over the past 16 years. He explained that the interest rates have been volatile for most of

them and have been both up and down with sharp rise and fall at some point in time.

Thereafter, he discussed the impact of the falling interest rates on various factors like

- Investment strategy (including but not limited to relevance of Asset Liability Management (ALM), use of derivatives, management of current guarantees etc) ;
- products (future product mix, product design etc);
- Operational issues etc.

Mr. Kshitij, thereby, set the context for the following 2 panel discussion.

Panel Discussion - The impact on insurance industry, various matrices and what can we learn from other countries.

Moderator - Mr. Kshitij Sharma, Executive Director, EY.

Panellist

Mr. MSVS Phanesh, Head of Life & Health Valuation Teams, Swiss Re Global Business Services India

Mr. Shailesh Dhuri, ED, Decimal Point

Mr. Shyamsunder Bhat, CIO, Exide Life

Mr. Gopikrishnan Shenoy, CIO, SBI Life



Mr. Sharma commenced the panel discussion with an introduction of all the panel members

Mr. Dhuri threw light on the volatility in the short term interest rates and possible factors affecting the volatility with examples from the overseas market e.g. interest rates in short term vary by taking clues from development in macro-economic factors. He stressed on the various initiatives taken by the government to control inflation and thus expressed that in the medium to long term, interest rates may fall.

Mr. Bhat spoke on the relationship between the interest rate and the target Consumer Price Index (CPI) inflation. He mentioned that since the government has targeted 4% CPI inflation rate and he doesn't expect sharp decline in interest rates from the current levels. He also highlighted that recent upward movement in the bond market was based on the expectations of no sharp decline in interest rates. He also mentioned that we need to consider global geopolitical scenarios like crude oil price, US policies etc. to track movement in interest rates. From life insurance industry perspective, he expressed that the actual fall in interest rate was much less than expected and hence the recent fall in interest rates is better than his own expectations.

Mr. Shenoy gave a perspective on the interest rates movement by comparing it with the prevailing economic scenario in 2006. He highlighted that in 2006, demand was driven by growth in the manufacturing sector and consumption. Whereas, today the growth in demand is primarily driven by consumption. There was lot of output gap in 2006 which is not a major concern today as the production capacity can be easily augmented to meet the demand and hence there is no pressure on inflation. Further, in 2006, the Balance Sheets were not as stretched as they are today. Under

this scenario there is no expectation of sharp rise in interest rates as inflation may not increase.

Answering question on challenges faced by Private Life Insurance Players with falling interest rates Mr. Shenoy explained that we are not at danger as the CPI seems to be bottomed out and may be small tweaks in Participating (par) products will help overcome the problem. Mr. Bhat added on this point and gave details around the increased interaction between actuarial and investment team at Exide Life. He emphasised that larger the traditional products block in the portfolio of an insurance company it's critical to have enhanced interaction between these two functions. He further explained the importance of duration and cashflow matching under non-par and par products. The cashflow matching is likely to ensure liabilities are met without selling assets at distressed prices.

Mr. Shenoy also clarified that it is most important to do the duration matching, the task is much more challenging in case of long term liabilities where assets of longer duration to match those liabilities are not available. Considering international experience, he highlighted risks of investment in equity and property. There has to be appetite to invest in risky assets.

Mr. Phanes highlighted operational risk under falling interest rate scenario. To name a few of them are increased challenge around selling of savings linked products, communication with board members etc. He mentioned that there should be enhanced focus on other types of products like protection, assessment of real interest rate and the real returns could be attractive in falling interest rates given very low interest rate.

Mr. Bhat updated on use of derivatives in life insurance industry. He clarified that there is negligible exposure to derivatives and there are very few derivative transactions happened in industry post IRDAI opening of derivatives to Life insurance industry. Also, the volume of the derivative market is too small, can't hedge long term liabilities as the duration of available derivative instrument is

too short. Mr. Dhuri advised to be careful with derivatives and its impact on accounts has to be assessed well. His view was to use derivative for short term purposes till the right asset is found. He suggested to look for right and suitable bond and explore opportunities like reverse mortgage. Mr. Dhuri sounded that fall in interest rate may not have material impact on valuations of the companies as the most companies might adjust the portfolio mix. The ALM and cashflow matching might suffice the purpose.

The session ended with questions from participants and answers from panel members.

Panel Discussion - Investment strategies, product strategies in low interest environment

Moderator - Mr. Rajesh Dalmia, Senior Partner, EY.

Panellist - Mr. Philip Jackson, Consulting Actuary, Milliman;

Mr. Mihir Vora, CIO, Max Life;

Mr. Lee Waddle, CRO, AEGON Life;

Mr. Abhimanyu Das Gupta, Senior Manager, Deloitte Consulting LLP



Mr. Dalmia introduced all panel members and set the context for the



discussion around likely solutions under falling interest rate economic scenario.

Mr. Jackson emphasised on need for setting the customer expectations right



in falling interest rate scenario and investment in risky asset classes.

Mr. Waddle explained that par products have greater flexibility to



absorb risks arising from falling interest rates by adjusting future bonus rates. However, the same risk is very high in case of non-par products including protection products. He also suggested to look at falling interest rate risk with higher persistency and can pose real challenge. He also expressed that regulatory restrictions on asset allocation pose challenge in terms of designing of products.

Mr. Vora explained that we have not seen very long period of high growth,



there is no oversupply of capabilities, there is no old age population and no overcapacity of infrastructure given this scenario - inflation may not come down to the levels of 2-3% and hence there is less likely scenario of very low interest rate environment. He also touched upon importance of tight ALM of portfolio as well as slight divergence from ALM and invests in riskier assets. He also suggested building up of large buffer asset base to support investment in riskier assets.

The session ended with questions from participants and answers from panel members.

Session 2 - With-profits management

Speaker: Udbhav Gupta, Corporate Vice-President, Max Life Insurance

Mr. Gupta commenced the session with a presentation on Par business journey so far and next steps. He touched upon par business in pre and post privatization era, impact on par business post introduction of ULIP products and the current scenario post product regulations. He touched upon overseas markets and gave brief about the par business at Hong Kong, Singapore and China.

Panel Discussion - Various Issues with participating business as seen by different stakeholders

Moderator – Mr. Vivek Jalan, Director & Practice Leader – Risk Consulting and Software; Willis Towers Watson;

Panel members – Mr. Sanket Kawatkar, Principle and Consulting Actuary, Milliman;

Mr. Sunil Sharma, Appointed Actuary & Chief Risk Officer, Kotak Life;

Mr. P. K. Arora, Deputy Zonal Manager, LIC of India



Mr. Jalan introduced all panel members and kick started the discussion with focus around issues of participating business faced by Life insurance industry.

Mr. Arora started his speech with challenges faced by Life Insurance Corporation of India (LIC) when it was formed. Few points from his speech are put down here. Around 245 entities were merged to form LIC and each entity then had different set of products, heterogeneous policy holders and varying bonus rates. The main challenge of par business, when LIC was formed, was to ensure the bonus declaration has to be fair and equitable reflecting the underlying assets of their parent company and at the same time meet the reasonable expectations of the policyholders. To ensure fair distribution of profits LIC started to

add various parameters for distribution of bonus like policy term, premium payment term etc taking advantages from high computing powers made available with boom in information technology. He also touched upon the low interest rate era experienced by LIC during early 1960 and how par products successfully sailed through this era. He also stressed on the need for high standard of services to policyholders. Apart from these points he touched upon risks associated with excessive regulations. The very micro level regulations are difficult to implement and can have high cost associated for its implementation.

Mr. Sharma gave updates on the establishment of with profits committee and developments at committee. He updated that the committee has commenced on very positive note and has got independent status and the committee is considering widening its scope.

Mr. Kawatkar shared his views around absence of clarity in regulation on treatment of approved asset share, absence of consensus on calculation of asset share and reluctance from companies on spelling out asset share policy. He was of the view that bonus philosophy may not be made public but the relevant people should have clear understanding of it and get towards Principles and Practices of Financial Management (PPFM) over time. He also highlighted that cap on charges under traditional business looks difficult to implement.

Overall the panel was of the view that cap on charges is not good for the insurance industry.

The session ended with questions from participants and answers from panel members.

Panel Discussion -Way forward for with-profit business – Immediate Job on hand for the profession and the industry.

Moderator – Mr. Udbhav Gupta, Max Life Insurance.

Panellist – Mr. N. M. Govardhan, Retired LIC Chairman;

Mr. Anil Kumar Singh, CAO, Birla Sun Life Insurance

Mr. Jose John, Appointed Actuary, Max Life;

Mr. V. Rajagopalan, Consultant



Mr. Gupta introduced all panel members and kick-started the session.

Mr. Rajgopalan updated participants with latest developments and work at with profit committee. The highlight was around detailed discussion on advantages and disadvantages of with profit products, utilization of product commission, distributor education, management of with profit fund and building of ways to bring more transparency in par products apart from other aspects.

Mr. Singh expressed certain concerns related to par products like rigid product design, poor value in short term, in long term returns are not reasonable and non-tax efficient. He further spoke about product not being even shareholder friendly as they can't claw back money invested in product quickly and low profit margin.

The session ended with questions from participants and answers from panel members.

Day 2:

Session3: Changing strategies in changing external environment

Speakers : **Mr. Sanjeeb Kumar**, President, IAI, **Mr. Nilesh Sathe**, Member Life, IRDAI

Second day was opened by **Mr. Sanjeeb Kumar**, President of Institute of Actuaries of India, he thanked all the participants, all the speakers for the success of first day and encouraged to have active participation.

Mr. Sathe, presented his views on – overview of life insurance market in



India – distribution landscape and threats to the current operating model. Mr. Sathe touched upon various points – some of those are as below

1. LIC is driving the market given its largest market share of around 75%. Market growth / experience depends upon LIC growth / experience
2. Digitalization may move market up as in case of other industries like music, retail and banking. He highlighted that insurance industry has not moved towards digitalization as other industries and there is strong need for the same
3. Need to understand changing customer behaviour, e.g. the young generation of today prefer to have information in digital form instead of meeting in person to seek info
4. Growing uncertainties of the market are to be addressed by the industry like ageing population
5. Agenda for growth has to be clearly drafted –
 - a. Even with growth of digitalization agency model cannot be shut down. It is essential for non-financially educated people
 - b. Developing agency model is a challenge for new companies. However it is essential from long term perspective
 - c. Full potential of banca channel has to be exploited
 - d. Banks as non-promoter are not delivering same volume of business as banks as promoter partner
 - e. Within banca multinational banks and non-multinational banks there is a difference in the business
6. Direct to customers should grow
7. Segmental marketing is essential
8. Actuaries need to work on bringing more flexibility to products
9. Operational efficiencies
10. Better investment returns
11. Analytical and data mining – need for greater development

Panel discussion - Insurance as Savings products – Does it has future and is protection alone sustainable?

Moderator - Mr. Srinivasa Rao, Managing Director, Life, Munich Re

Panelist

Mr. Kshitij Jain, CEO, Exide Life;

Mr. Ashish Vohra, CEO, Reliance Life;

Mr. Sandeep Batra, ED, ICICI Prudential Life;

Mr. Sanjeeb Kumar, Appointed Actuary and Chief Risk Officer, Aviva Life

Mr. Rao started the session with introduction of all the panel members,



without undermining importance of protection products he highlighted that savings products has bright future and will grow. However, he stressed that there may be need for customer centric products, tweaks in distribution model etc.

Mr. Batra agreed with Srinivasas views and echoed same thing that savings



will remain core part of the business. He presented the growth of life insurance industry in recent past and compared the same against mutual fund to help better understand which industry was growing faster. It was Mutual Fund only based on asset under management (AUM).

Mr. Vohra spoke of many ideas to bring growth to industry. Some of these were launching of guaranteed return products, innovative product



design, change in the growth assessment parameters e.g. change from top line approach to total sum assured underwritten.

Mr. Jain suggested not falling in trap of comparing Life Insurance business



with mutual funds. He suggested to move away from first year premium (FYP) to some other indicators of business growth e.g. persistency, sum assured. This change may move focus of companies from FYP to other indicators.

Mr. Kumar suggested striking appropriate balance between



guaranteed and non-guaranteed products based on the balance sheet of the company.

The session ended with questions from participants and answers from panel members.

Session - Digital Disruption

Speaker - Mr. Eric Anklesaria, Partner, KPMG.

Mr. Anklesaria presented the latest development in Insurance Industry. He spoke in details about InsureTech – collaboration of Insurance and technology to provide solutions to customers, machine learning, robotics

and digital labour apart from other innovations. He spoke on various



digital disruptions like Lemonade which processes claim in 3 minutes, TROV which provide wealth and estate planning solutions online, Metromile – pay per mile insurance premium act. The session ended with questions from participants and answers from panel members.

Panel Discussion - Bancassurance vs Tied Agency Vs Online – Future of Distribution in India.

Moderator - Mr. Kailash Mittal, Director – Advisory Management, KPMG

Panellist Mr. K. S. Gopalakrishnan, CEO, AEGON Life;

Mr. Satyan Jambunathan, CFO, ICICI Prudential Life;

Mr. Sanjeev Pujari, Executive Director (Actuarial & Risk), SBI Life;

Mr. Abhay Tewari, Appointed Actuary, SUD Life



Mr. Mittal introduced all panel members and opened the floor to panel members for discussion. Mr. Gopalakrishnan highlighted importance of digitalization in business growth. He gave examples of how digitalization helped various industries like automotive (Tesla), music, movies, banks grow and change the landscape it worked in the past. He mentioned that for future growth one needs to

adapt to the changing technology and there is no alternative. He went on to mention that if we don't change today there is someone somewhere working on a new model to take over traditional business model.

Mr. Pujari spoke about situation today and 25 years back and how things changed over 25 years with boom in Information Technology (IT) from manual ledgers to highly computing system, manual proposal form to online proposal form and so on.

Mr. Tewari highlighted that technology may not take over agency channel as customers need personal touch in case of complicated products and customized products. Only, in case of standard products online channel may work well. Cost savings, value to customer can lead to growth of online channel. Ultimately choice of channel depends on what customers are looking for and what they have and want.

Mr. Jambunathan highlighted that distribution channels were established to reach to the customers. The success of any distribution channel depends on preference of customers towards that particular channel. Companies need to ensure that these channels are rightly shaped and customers enjoy dealing with those channels. He raised few questions to think over like why it takes long time to close sale of insurance linked savings product compared to other savings products. Having access to so many distribution channel like agency, banca and direct why are we not ahead of other distribution channel to close the sales faster?

Mr. Gopalakrishnan highlighted that we need to look at what customers are looking for, transparency in our deals with customer, cost efficiency and customized solutions to customers. Digitalization of underwriting and issuance, eKYC etc. can help offer customized pricing.

The session ended with questions from participants and answers from panel members.

Session – IndAS – Implementation Issues

Speakers – Mr. Sagar Lakhani, Partner, KPMG

Mr. Niraj Shah, CFO, PNB MetLife

Mr. Lakhani commenced the presentation on IndAS implementation



and challenges around its implementation. He updated participants with its date of implementation of IndAS and the current status of the implementation drive. Both **Mr. Lakhani and Mr. Shah** spoke in turn on various aspects related to IndAS implementation and impact on Balance Sheet upon implementation of IndAS. The items discussed were impact on investment and financial instruments, employee benefits, stock options, segmental reporting and placement of fund for future appropriation apart from various other factors.

Mr. Bikash Choudhary conducted survey on product regulations. The voting was real time and the results were shared instantly. The results of survey will be shared separately.

Session4: Product Regulations – A perspective

Panel Discussion – What is the way forward for development of products in India?

Moderator - Mr. Bikash Choudhary, Appointed Actuary & CRO, Future Generali Life Insurance Co.

Panellist - Mr. Rajesh Dalmia, Senior Partner, EY; **Mr. Dinesh Pant,** LIC;



Mr. Munish Sharda, CEO, Future Generali India Life Insurance Co.;

Mr. Sai Srinivas Dhulipala; Appointed Actuary, Bajaj Allianz Life



Mr. Choudhary briefly introduced all the panel members and kick started the



discussion on set topic. **Mr. Sharda** highlighted that, the regulatory changes were more customer centric considering long term perspective. He expressed that customers should get easy and simple to understand products. On regulations he said that it could restrict innovation.

Mr. Dhulipala spoke on product regulations. He suggested that there could be some relaxation under reduction in yield (RIY) requirement. Also he suggested that the guarantee requirements under pension products could be removed and variable

insurance products could be more simplified.

Mr. Dalmia prescribed that in some countries there are no any product regulations and use and file is the common process for product launch. However, he clarified that India is a different market and may require different set of regulations from other countries. He also mentioned that ULIP is a best product if customer sticks to it for long term. However due to lower profitability it is not attractive to shareholders.

Mr. Pant said that we need to evaluate how customers look at these regulations. He believed in following regulations with spirit and that helped him to develop innovative products.

The session ended with questions from participants and answers from panel members.

The CILA was ended with thanking note from **Mr. Ramakant Malpani**.



He thanked all the presenters, participants and IAI staff for making this event a big success. ■

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10th Seminar on Current Issues in Health Insurance



Organized by: Advisory Group on Health Care Insurance & Advisory Group on Sustainable Development and Microinsurance, IAI

Venue: The Club, Mumbai

Date: 15th February, 2017

Session 1: Insurtech & Digital innovation for Insurance

Speaker: Mr. Yannick Even, Director, Head of InsurTech Solutions, Life & Health Asia, Swiss Re



This session looked at the key technology trends impacting the world of insurance, including InsurTech innovation from startups and what traditional insurers are doing to push their digital boundaries. Several case studies illustrating how InsurTech and traditional insurance companies have adopted to technology to enhance customer engagement and experience were also presented to the audience.

Highlights of the Session

1. Digitalization is seen as the Fourth Industrial Revolution by the World Economic Forum and is fast changing the world, as we know it. Every day, we see new digital interactions, fueled by the increasing application of intelligent systems and faster technology innovation cycles.

2. Customer expectations and behaviour are changing rapidly, as a result of more simple and personalized solutions. Consumers, particularly in Asia, are choosing digital experience over brand loyalty.

3. Many industries have dramatically been transformed by this digital wave. Whilst the insurance industry is moving slowly towards a more digital world, a risk adverse culture, legacy systems, lack of consumer insights and channel conflict management have meant that it is behind the curve in keeping up with the pace.

4. In a matter of few years, many InsurTech entrepreneurs and their startups have started to emerge to bridge the gap, in a matter of few years. These startups are able to move much faster, are much more agile, customer focused, tech enabled and are able to make data-based decisions, providing valuable insights that are relevant to today's customer. InsurTech are already covering the entire Insurance value chain and unbundling the services of established players.

5. With Global mobile data traffic and Global Connected wearables devices estimated to grow at an exponential rate in future, particularly in Asia, what does this mean for Actuaries? Actuaries are expected to be comfortable in handling data deluge and dynamic risk management. Actuaries should learn to collaborate across LOBs, geographies, technology/data experts; learn to innovate - be agile and take risks; learn to fail - test and learn culture; and learn to learn - face fast tech innovation cycles.

Summary:

In essence a new customer value chain is to be built using technology

and digitization to enhance customer engagement and experience.

Session 2: Customer Engagement and Risk Management through technology in Health Insurance

Speaker: Mr. Joydeep Roy, Partner & Leader-Insurance & Allied Businesses, PWC



The session looked in how technology can help in customer engagement and risk management in Health Insurance. There was an overlap with first session on technology aspect so the speaker focussed more on various process / functions that require deconstruction, and transition to a more technology oriented and data driven decision making.

Highlights of the Session:

1. The adoption of technology and analytics in other B2C businesses has fuelled customers' expectations of customised delivery of services and better engagement with service providers. The Insurance providers are lagging behind than the other service providers e.g. banks, stock brokers. There is a need to distil insurance value chain and deconstruct Insurance business, to facilitate better customer engagement and risk management.

The commercial, consumer and regulatory considerations need to keep in mind while arriving at customer value proposition.

2. Product Design has to move from one size fit all approach to more customised / personalised cover for individuals. Pricing and Underwriting has to incorporate Big Data and Machine Learning to provide covers which are more aligned to underlying risk profile. But at the same time the practitioner have to be mindful of privacy laws, which are becoming stricter, and regulatory compliance which might curtail access to data.

3. Distribution would need to devise an approach to motivate customer to buy online. As there is greater proportion of people who currently don't buy online, are getting influenced by people who buy online. Distribution has to move pretty fast to direct selling and assisted selling.

4. Administration and Claims management could transition from manual on premise model to cloud based distributed model.

Session 3: Insights into how health mutuals work in the micro insurance space

Speaker: Mr. Kumar Shailabh, Executive Director, Uplift India Association



The central theme of the session is how health insurance can work for the poor; particularly in current backdrop where Health insurance is known to be a bleeding portfolio amongst insurance products, penetration abysmally low, premium rising every year. The mutual approach to provide health insurance cover for the masses with low ticket size was presented to the audience. The learnings and best practices on the way were also shared.

Highlights of the Session:

1. Key highlights of mutuals working in Health microinsurance space; pure claims ratio is in the range of 60%-80%, Renewal rate of 70%-98%, almost non-existent fraud by policyholders, low ticket size 150-250 Rs per person per year. Also clients get to vote on what should be excluded and rejected, no government subsidy.

2. Key learnings from running mutuals health microinsurance programs are : design products that matches paying capacity and needs, reduce asymmetries in information, creating gatekeeping mechanisms, creating ownership- feeling of solidarity and responsibility, create a strong "after sales" model of engagement.

3. The following challenges are faced by the mutuals :

- Overall public awareness and support for mutuals
- Regulatory oversight
- Initial investments in mutual infrastructure

Summary:

Health mutuals that run on the principles of solidarity and responsibility, seem to have found out ways to not only lessen the pain points of health insurance, but offer an inclusive and viable model of insurance in the long term.

Session 4: Fraud Management in Health Insurance

Speaker: Dr. Sanjay Tiwari, VP – ICLM, and Mr. Nazeem Khan, VP-ICLM, ICICI Lombard General Insurance Co. Ltd.



This session look at Fraud management and associated challenges in health insurance. The speaker opened the session by providing an introduction

to Health Fraud and Abuse, practical definition of Health Fraud is articulated and fine distinction between Fraud and Abuse is explained. Fraud Types, Patterns and Entity, Detection, Investigation were also presented during the session. Finally speaker talked about Challenges and Way Forward for Fraud Management.

Highlights of the Session:

1. Interesting facts were presented on impact of Fraud on claim costs for US and Indian Market. Also public attitude towards fraud, based on a survey by Insurance Research Council, is shared with the audience.

2. Types of Fraud were explained by giving definition and relevant examples. Internal and External Fraud - based on the source within or outside the company, Soft or Hard Fraud- based on the nature of misrepresentation and intent.

3. Entity involved in health claims fraud like Customers, Fraud rings, Hospital, Agent and Employee, and typical fraud committed by those entities.

4. Fraud deduction approach involving effective Anti-Fraud policy, Fraud detection starting early along with policy sourcing, adequate trained staff, leveraging technology and analytical tools to have robust fraud detection mechanism.

5. Fraud Investigation process, importance of quality investigator, need for independent investigation agency, Fraud triggers, outcome of investigation process.

Summary:

An overview of various aspects of Fraud Management was provided and several case studies were presented illustrating the process of fraud detection and investigation.

Session 5: Panel discussion on current issues in health insurance

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

Panellist: Mr. Vishwanath Mahendra Chairperson of AG on HCI, Mr. Joydeep Saha, Chief Actuarial

Officer & Appointed Actuary at Max Bupa Health Insurance Company Ltd, **Mr. Biresh Giri**, Appointed Actuary, Cigna TTK Health Insurance Co Ltd, **Ms. Anuradha Sriram**, Appointed Actuary, Aditya Birla Health Insurance Co. Ltd.



The panellist presented their views on the current issues / challenges in health insurance. Discussion were focussed on Pricing, Distribution, Fraud and Use of technology. Following are the important takeaways from the panel discussion:

1. The OPD cover is missing as part of health cover offered by Insurance provider. There is need to come up with a strong OPD cover, as lack of data and utilisation rates make pricing of OPD cover difficult.
2. Distribution can leverage new avenues like social media, digitalisation and learn from overseas market especially China.
3. Technology used in health insurance is still in primitive stage e.g. data in excel, missing field values. Major disruption is waiting to happen.
4. Group medical cover is bleeding due to wrong pricing. The pricing needs to be corrected along with cost containment strategy like gatekeeping.
5. Advice to budding actuaries by the panellist: look thing in right perspective, understand big picture, speak to all stakeholders and ask questions don't blindly follow set processes.

Session 6: GOQII Health Insurance approach

Speaker: Mr. Srinivasan V, Founder and CFO on Demand CFO Bridge LLP



This session looked at health related data and its impact on health insurance. Speaker talked about how wearable technology has made it possible to track various aspects of physical activity and health related data of users. How this collected data can gave valuable insights to insurers to know the impact of active life on morbidity, its related pricing and categorisation of customers.

Highlights of the Session:

1. Statistics from World Bank, OECD report were used to highlight current Global Health Crisis and in particular number of people in India suffering from various ailments. More over majority population of India is not covered by organised health care system. Also it was stressed that Healthcare Providers do not have a holistic view of user health, due to their disintegrated approach and disparate data sets. This leads to expensive and reactive solutions.
2. GOQII - An Integrated Preventive Health Platform, which motivates people to stay healthy by guiding them to make a permanent shift to a better lifestyle. It is a complete health care platform which facilitates engagement with user through wearable devices, records their daily activity level, provides personalised coaching, doctor consultation & diagnostic, and stores personal health records. All these user data points can be leveraged to provide behaviour-driven Health Insurance benefit.

3. Comparison of traditional healthcare with an integrated approach: Traditional health care focus is cure / reactive, data ownership is with doctors and access is restricted, technology is provider centric and standalone, and business model is transactional. Whereas in an integrated approach focus is preventive / proactive, data ownership lies with user and panoramic data, technology is customer centric and integrated, and business model is of relationship.

4. Challenges posed by integrated preventive health platform to traditional health insurance offering. Integrated approach can offer customised pricing for customers, takes in to account holistic view of user health, real time risk management to give better risk profile, improved customer retention due to better engagement and experience.

Summary:

Integrated Healthcare platform can engage and motivate the user to move towards better and healthy lifestyle, and have potential to disrupt Traditional Healthcare. They have better customer loyalty and engagement through Community Programs. They can partner with health insurance provider to offer holistic approach to customer engagement and risk management, help bridge the trust deficit between customers and insurance provider through relationship model. ■

About the author

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10th HCI Feedbacks

New & plausible data analytics techniques for health

Any case studies with organised data on impact on portfolio performances of any targeted pricing strategy

The two topics were squeezed into the time duration, more time should have allotted, say 2 days

Arrangement is really nice. I cannot find any improvements for now

More coverage about sales and marketing of Health Insurance Products; and underwriting Challenges

Abord Disease-critical illnesses etc, how should they be covered in the policy.

Most of the topics covered only medical plans not other production long term health Insurance like - IP, CIR, TCI

Topics were very well chosen & had right balance

Presentation from the regulatory perspective

Topics were good, may be wider discussion of current products across market and those coming in future would have been helpful

More on analytics & case studies

Emporience rating case studies (detailed) OPD's etc - HIV / Aids etc

My personnel impression -excellent program

Use the opportunity of collective wisdom to agree on industry level Challenges & agree on some actions a clear outcome . For E.g Data Challenge . We have been mentioning those for too long & need to discuss on solutions & who can do what.

Discussion on issues with some analysis / case studies / solution to issues (potential)

The topics were well chosen & the speakers were very good

More technical Presentation of other countries . Health Products & how it works

THE ACTUARY INDIA' WISHES MANY MORE YEARS OF HEALTHY LIFE TO THE FELLOW MEMBERS
(Who have attained 60 years of age)

WHOSE BIRTHDAY FALL IN MARCH 2017

Happy
BIRTHDAY

Mr. K K Dharni

Mr. G Chidambar

Mr. S Krishnan

Mr H C Mehta

Mr Ramjit Dhanasar



What's the Business Model for a Life Insurer's Equity Investment?



Ind AS 109: Financial Instruments bears the question of the link between a life insurer's business model and thereupon the accounting of equity investment. The authors attempt to deduce the link.

Over the next few months, Indian insurers will implement for financial reporting the IFRS-adapted Ind AS accounting standards. The activity would continue over a few reporting quarters. Significant to the implementation, particularly with Indian life insurers, are two accounting standards: a) Ind AS 104: Insurance Contracts, and b) Ind AS 109: Financial Instruments. **The accounting treatment of a life insurer's equity investments under Ind AS 109: Financial Instruments is the subject matter of this discussion.**

Accounting options for equities

Accounting for equity investment – recognising income and carrying assets – is done on a fair value basis under the existing IRDA financial accounting standards. Ind AS 109 continues the practice, however elicits greater discussion on classification of the marked-to-market gains and losses to either the Profit and Loss Account (P&L) or Other Comprehensive Income (OCI). While reporting periodically, Ind AS 109 frequents the question, "How is the asset, and in this case equity investment, held within the entity's business model?"

Business Model

As ordinarily understood, the business model does not allude to the life insurance business' product strategy or distribution philosophy.

Rather, business model dwells on the organisation of groups of financial assets. Application guidance B 4.1.2 instructs that business models are determined at a level that reflects how groups of financial assets are arranged together to achieve a particular business objective. Basis of conclusion BC 4.1 (C) states that a business model encompasses the way the entity arranges its financial assets to determine its measurement attribute, to provide relevant and useful information to users for their assessment of the amounts, timing and uncertainty of entity's future cash flows.

Fair Value Accounting

If an asset is carried at fair value, Ind AS 109 provides the choice of recognising the gains/ losses between two reporting periods either under the OCI or P&L. The default treatment directs the gains/ losses to OCI, however to achieve the matching of revenues with costs, the gains/ losses should be recognised in the P&L (clause 4.1.5).

In some lines, the equity investment could have a direct corresponding change on policyholders' liabilities (e.g. unit reserves backed by equity assets). Here, if the change in liabilities is routed through the Revenue Account, the fair value change should also be recognised in the Revenue

Account.

However, a contract sold by a life insurer could be classified as an investment contract if it fails the 'significant insurance risk' test under Ind AS 104: Insurance Contracts. In such case the change in liabilities would mirror the change in assets i.e., only a Balance Sheet movement without passing through the Revenue Account. The equity assets backing investment contracts of life insurers would meet the matching convention (clause 4.1.5) by directly reflecting themselves on the liabilities and without the need to pass the P&L.

Figure 1 records our views on plausible equity accounting treatment. Specific situations may warrant a treatment distinct from that tabulated.

Re-classification between OCI and P&L

Ind AS 109 permits re-classification in the case of equity investment if the life insurer changes the business model (clause 4.4.1 read with 5.6.1), however previously recognised gains and losses cannot be re-stated from OCI to P&L or vice versa.

On the other hand, a life insurer can also irrevocably elect (clause 5.7.5) to present all subsequent changes in the carrying value of equity investment in OCI. Two aspects need emphasis: one,

Figure 1: Equity Accounting Treatment and Rationale

Business segment	Objective of holding equity assets	Likely treatment	Ind AS 109 paragraph reference	Rationale
Unit Linked (UL) Fund, Insurance Business	Fair Value of equity assets translate to unit reserves (UL liability)	Fair Value, P&L	Para 4.1.5 (Minimise Accounting mismatch)	As the fair value change in liability is classified under P&L, the corresponding change in UL assets should also be classified under P&L.
Unit Linked (UL) Fund, Investment Business	Fair Value of equity assets translate to unit reserves (UL liability)	Fair Value, Balance Sheet asset-side	Para 4.1.5 (Minimise Accounting mismatch)	As the fair value change in liability reflects only in the Balance Sheet, the corresponding change in UL assets should also be classified in the Balance Sheet.
Non-participating, Traditional Fund	To match expenses	Fair Value, OCI	Para 4.1.4 (Irrevocable decision to classify equity through OCI)	Equity would be classified through OCI since although it could violate the accounting mismatch. The need to minimize volatility would mean that equity fair value change would be routed through OCI.
Participating Fund	To match expenses and discretionary benefits	Fair Value, OCI	Para 4.1.4	Change in the financial liability unlikely to be mirrored by a change in assets, e.g., bonus smoothing. Fund for future appropriations (FFA) may not fully lift the liability. Case for classifying equity assets backing reserves in OCI since although it could violate the accounting mismatch, the desire to minimize volatility would mean that equity fair value change would be routed through OCI.
Shareholders' Fund	No specific liability to match	Fair Value, OCI	Para 4.1.4 read with Para 4.1.5	Equity investment is usually held to assume risks for the long-term.

dividend would be recorded in P&L (clause 5.7.1A read with 5.7.6); and two, profit or loss on sale shall not be recorded in P&L i.e., recycling that is ordinarily allowed for bond investment will not apply for equity investment [clause 5.7.1(b)]. This treatment may need further debate whilst drawing up the taxable profits as ordinarily profit or loss on sale of equity investment will not be shown in P&L.

Conclusion

In summary, a considered evaluation is warranted in the accounting of equity investments of a life insurance business. There are long-term implications on recognition of profits or losses of equity investment in P&L, the resulting tax effect, and the adherence with the principle of matching equity asset movement with liabilities. Life insurers should hold this adage close to heart, *"With regard to accounting policy, we overestimate what new implementation can do in the short-run and underestimate what it can do in the long-run."*

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ACTUARIAL AWARDS

This year the Actuarial Awards Evening was held during the 12th edition of the "Current Issues in Life Assurance" conference in Munich, Germany, where he congratulated all the newly qualified fellows and other awardees and advised them on their careers. The top performers, were felicitated by the President and Vice President of the Institute of Actuaries of India. The event was managed by professional event organisers who entertained the guests throughout evening. The programme ended with a musical performance.

Fellowship being awarded at the hands of President, IAI, Mr. P. S. Karthikeyan



P S Karthikeyan



Shivali Chopra



Abhishek Chadha



Manish



Tribhuvanaram Sundaramurti



Shilpi Jain



Ankur V Goel



Ashish



Ridhi Paliwal



Vijay Mudliar



Sana Konnur



Harvinder

Associateship being awarded at the hands of Vice-President, IAI, Mr. P. S. Karthikeyan



Kush Gupta



Kailasam Arumugam



Sandhya Kudumulukunta



Rakesh

DS EVENING 2017

ce" seminar (CILA). The award programme started with inaugural speech from Mr. Srinivasa Rao, Managing Director on building their careers post qualification. The awardees, which included newly qualified fellows, associates and examers of best article and reportage in the Actuarial Magazine were also awarded with prize and trophy. The event was ended on happy note!!



Mr. Sanjeeb Kumar; during Actuarial Awards Evening Function



Hemnani



Neha Podar



Prerna Nagpal



Pranav Saklecha



Taneja



Aditya Jain



Nitin Kalra



Devesh Khatri



der Kaur



Bharat Khurana



Garima Gupta
(Received By Mr. Pranav Saklecha)



Gaurav Batra

, Mr. R Arunachalam; during Actuarial Awards Evening Function



Kumar



Shilpi Jain



Varun Jain

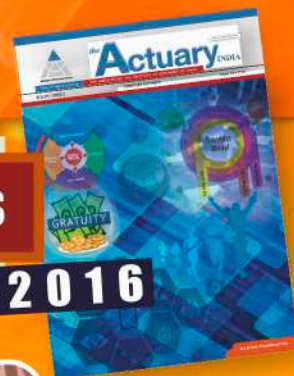


Harshada Shringarpure

Actuarial Awards Evening

Best Articles & Best Reportage Awards

for the year 2016



SPECIAL JURY AWARD to
Late Mr. Akshay Pandit
for his contribution in
'the Actuary India' magazine



Received by
Ms. Niyati Pandit
(Daughter of Late Akshay Pandit)

Best Articles and Best Reportage Awards
given at the hands of IAI President,
Mr. Sanjeeb Kumar



**1st Rank
Best Article
of the year
2016**

Author: MAYUR ANKOLEKAR

Title: TUNING THE IFRS ADAPTATION



**1st Rank
Best Reportage
of the year
2016**

**Author: BHAVNA VERMA &
VANDANA BALUNI**

**Title: CONCURRENT SESSIONS ON
LIFE INSURANCE**



Received by Mr. Devinder Kumar



**2nd Rank
Best Article
of the year
2016**

Author: SONJAI KUMAR

Title: APPLICATION OF STRESS TESTING



**2nd Rank
Best Reportage
of the year
2016**

**Author: TANUSHREE GUPTA
& ROCHAK GARG**

**Title: 7th Capacity Building Workshop
on GLM Pricing Techniques &
Excess of Loss PRICING**



Received by Ashik Salecha



4th Capacity Building Seminar on Health Care Insurance

EVENT REPORT

Organized by: Advisory Group on Health Care Insurance & Advisory Group on Sustainable Development & Micro Insurance, IAI

Venue: The Club, Mumbai

Date: 16th February, 2017

The purpose of the Seminar was to touch the topics which would enhance the technical knowledge related to health insurance product pricing & designing and to be aware of the challenges prevailing in the Indian Health Insurance sector specifically the ones related to the low income groups/ market along with the measures that may be adopted to address the same.

The seminar was attended by experienced and aspiring actuaries from Health Insurance industry, consulting firms, and others. Ms. Raunak Jha, Secretary, Advisory Group HCI welcomed the audience and set the ball rolling with her welcome speech.

Session 1: Pricing with deductibles – Stochastic Vs Financial Economics Techniques: Practical Examples

Speakers: Mr. Vishwanath Mahendra Appointed Actuary & Chief Risk Officer, Apollo Munich Health Insurance Co. Ltd., Mr. Mayur Ankolekar, Consulting Actuary, Ankolekar & Co.

The first session of the seminar discussed two approaches that can be applied in pricing a health product with deductibles. The objective was to compare the two approaches used for pricing a product as mentioned by Ms. Raunak Jha who was anchoring this session.



She introduced Mr. Vishwanath, who discussed the Stochastic approach using Monte Carlo Simulation Model. Mr. Vishwanath started with a randomly selected claims data for an indemnity product that followed log-normal distribution and determined



the mean, variance and other statistical measures. He then took different sets of sum insured and deductible and determined the corresponding risk premium using the simulation approach.

The session was then taken over by Mr. Mayur, who discussed the



Black-scholes model which is used in the financial derivative market to give a theoretical estimate of the price of European-style option. The aim was to develop a health product pricing model with a deductible that allows for volatility of claim experience and time to claim payments after premium receipt. His thesis was to replicate the payoff of a health insurance policy

with a deductible, from that of a call option. He said that just like a European call option, a health insurance policy also gives its holder a right, but not an obligation, to a claim at a particular time at a predetermined strike level viz., the policy deductible.

Mr. Mayur highlighted the fact that the closer the expected claim is to the deductible, the higher is the uncertainty of the policyholder to exercise the right to claim. He then took the audience through the Black-Scholes option pricing formula which gives an estimated fair value and is a function of risk-free rate, volatility and time to expiry of the option. Further, he discussed the limitations of Black-Scholes Model and how it contrasts with the health insurance policy (with deductible). He mentioned that this model can help estimate the severity. If frequency can also be modelled as a stochastic variable, this model shall give a more realistic price. However, frequency modelling is not currently envisaged in the “deductible as an option” framework.

It was observed that the result obtained from both the above approaches was similar and the difference observed was attributed to the volatility aspect

which was not considered in the first approach.

Looking at the similarity of the results obtained from two approaches, Ms. Raunak concluded the session by saying that there certainly exists a possibility to explore the financial derivative market for finding new approach for pricing health products.

Session 2: Health Insurance product design for low-income women centred groups

Speaker: Mr. Arman Oza, Director, SEWA

Mr. Arman started the presentation by stating the objective of product



development which is to create a balance between scale & sustainability of the product and how much value it holds for the client. However, he said that it is often found that one is achieved at the cost of another. He explained that the objective of product development in micro insurance should be to reduce vulnerability and bring welfare. He listed various reasons like loss aversion, status quo bias, availability bias, narrow framing and cognitive dissonance which gave an insight of how the consumer perceives insurance and as a result ends up not buying insurance.

In order to develop a product for any market segment, it is important to understand the characteristics of the target customer as it helps make the product sustainable. Mr. Arman gave a brief introduction to the audience highlighting the key characteristics of a low income consumer. He said that a product needs to have a balance of insurability and saleability. Also, a risk that has a high frequency is more saleable in this market segment than the one with high severity. Based on a research, he gave reasons for why it is beneficial to make a product woman centric. He concluded the session by

saying that a product that has simple wordings, covers high frequency risks, less exclusions, flexibility in premium payment and caters value to the consumer is more likely to sustain in this market segment.

Session 3: Does health insurance cover bundled with other risks, deliver value to the low income market?

Speaker: Mr. Kamlesh Gupta, Head of Valuation, Birla Sun Life Insurance Co. Ltd.

The third session commenced with **Mr. Kamlesh** throwing some light



on the growth of health insurance business in past 5 years in terms of the premium and number of people covered. Health insurance business has grown in double digits registering a growth of 21.7% in year 2015-16 in terms of premium. He highlighted the fact that the growth in Group (other than Govt. Business) and Individual business has been similar (close to 45%) since 2013-14. He then moved on to describing a low income person as per the Indian and International standards and explained how the risk management options help a low income person cope with the impact of shocks on their household income and assets. He spoke about the nature of risks faced by low income people, their ways to mitigate these risks and the impact of adopting these ways in long term. He also listed the factors related to product, claims, underwriting and others that give value to low income people while buying insurance.

He came to the concept of bundling wherein a number of benefits are put into one integrated insurance policy and are also known as package/ basket coverage or combi products. He apprised the audience with the relevant micro insurance regulations issued in 2015 and the improvements

brought by them. He mentioned that although bundling does cater value to a low income person, it may not be applied in all scenarios and may not be a solution to every situation as was evident from the VimoSEWA experience which decided to shift from bundled to unbundled product.

Mr. Kamlesh continued to speak about the Value Added Services (VAS) with Health products which can be categorised as preventative, consultation and access to low-cost supplies and services. He emphasised that these VAS should be offered in phase i.e one at a time in order to get its full business value. He further highlighted the advantages and disadvantages of bundling and concluded the session by saying that bundling may be successful if customers are made aware of its benefits and real needs of the customers are met at low premium while providing them with better services.

Session 4: Future benefit reserve in Health Insurance

Speaker: Mr. Rajesh Dalmia, Senior Partner, Ernst & Young

The session commenced with **Mr. Rajesh** explaining the concept of



Future benefit reserve. This is a reserve kept for bad risks which is already in the books of the company for example the risk that would emerge after a waiting period like PED, has elapsed. He said that currently most of the companies keep outstanding claim reserve, IBNR and URR/UPR but no reserves are kept for the liability that would emerge in future against the bad risk that exists with the company. He emphasised on the fact that the companies must recognise these bad risks in their portfolio which may exist due to various reasons like multiple waiting period/ PED, guaranteed renewability, different benefit for

different variants or portability and reserve for the same. He then shared some literature review on Guaranteed Renewability (GR) where in one of the studies suggested that GR premium should be front loaded however, another study shows that in a non-perfect capital market this front loading would discourage the young to undertake the insurance.

Mr. Rajesh moved on to briefly discuss the approach to arrive at the reserves that allow for the future benefit reserves. He also listed the ways to manage renewability guarantee in which cross subsidisation of products, obtaining locked in reinsurance rates, portability, clumsy/discouraging renewal process were there, to name a few. He concluded that it is important to recognise the necessity of keeping the future benefit reserves and stated that holding such a reserve becomes even more important in case of guaranteed renewability and guaranteed premium as in both the cases the chances of the value of future benefits exceeding the value of future premiums is high.

Session 5: Application of unsupervised learning and decision trees on Big data to validating Actuarial Product designing assumptions

Speakers: Mr. Prabhakar Veer, Senior Director, Sutherland Global Services

Mr. Atul Verma, Senior Actuarial Analyst, Sutherland Global Services

Mr. Prabhakar commenced the session by saying that if a machine is fed with good quality data, it can itself produce useful and credible results



without being explicitly programmed. He said that in today's world, actuarial pricing has become very sensitive towards new business volume written and persistency and so these are projected/ estimated frequently. The objective of their study was to investigate the factors impacting sale

of the insurance products post launch in the market, understand the demand of existing customers and setting up steps to identify potential customers.

Mr. Atul explained the various key words used in their study like supervised/ unsupervised algorithms which are the two ways of machine learning algorithm, clustering, big data and decision trees. Mr. Prabhakar took the audience through the presentation and discussed the various market segments analysed by them. He mentioned that one of the major concerns was whether machine learning would work in our systems which neither has a perfect data nor so largely Big data. He further said that in today's digital world, a reduction of even 1% of system inefficiency in Healthcare may generate an estimated value of 63 billion US dollar over a period of 15 years. Mr. Atul explained the programming approach method which was done in R-Hadoop Ecosystem that was created to handle big data. They discussed the different database used for investigations like CRM database, demographics data, agent conversations data and information scraped from various web and social media sources which helped in explaining the buying behaviour of policyholders and also the challenges in handling big data along with other challenges.

They continued to discuss the observations about gender behaviour of policy purchase, demographic distribution of policies sold and their observations when supervised learning technique was applied on classified examples to generate categorical decision tree. They further discussed

the Product Affinity analysis, Agent performance analysis and highlighted the key findings based on these observations.

Mr. Prabhakar spoke about another analysis approach called as Sentiment Analysis which can be done by text mining through Web crawler. Based on the information given by the Web Crawler, customer's inclination towards buying a policy was analysed. He said that even the time at which a customer is approached for policy sale has an influence on how likely is the customer to buy insurance.

The session was concluded with Mr. Prabhakar presenting the audience with the opportunities and recommendations based on these analyses. He said that improvement in sales can be achieved by using some simple approach i.e. tapping the areas where a consumer would be inclined to buy insurance like picking a right time to call the customer, offering them the right product basket etc. He also said that placing higher focus on customer service and satisfaction of prior and existing customers and referrals yields beneficial results.

The seminar ended with, Mr. Varadaprasad Jagannathan giving



the vote of thanks to the organisers of the event, the speakers and the participants of the seminar. ■

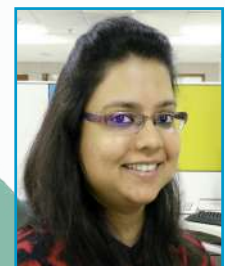
About the author

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Feedbacks from the Participants

More topics focussed on Practical Challenges related to Health insurance should be covered.

More session on pricing based on product design would have been more helpful.

More % of how to do things along with what to do, the math behind things

Pricing / Reserving Case Study

Theoretical Topics can have a separate seminar

Topics on Health Telematics would be useful

Yes, more of the application topics of all the actuarial studies, may be thesis of people

The seminar can include some more technical session

IFRS / SOLVENCY II related topics could be touched upon next time

IAI UPDATES

Constitution of Wider Fields Committee

Wider Fields Committee has been constituted with effect from 2nd March 2017. This Committee consists of following members:

Mr. Sunil Sharma	Chairperson
Mr. Dhiraj Goel	Member
Mr. M Karunanidhi	Member
Mr. Richard Holloway	Member

Functions of the Committee:

- Interaction with existing and potential users of the actuarial profession to generate more employment opportunities in traditional and non-traditional areas including Promotion of off-shore opportunities.
- Interaction with other professional bodies such as accountants, company secretaries, management accountants, etc.; industry bodies such as CII and FICCI and insurers' associations in India and overseas; financial regulators [banking, securities and pension] and government insurance departments—Postal Life, Employees State Insurance, State government insurance departments, etc. to market the actuarial profession with a view to create new jobs and applications of actuarial techniques.
- After assessing the needs of various users, enhance the employability of student members, suggest diploma courses or specific diplomas [to members who pass certain specific actuarial subjects] to meet the demands of market in India and overseas [e.g. pension administration, insurance analytics, etc.]
- Any other functions required to achieve the objectives of creating wider field opportunities.

Constitution of Acts and Regulations review Committee

The Council in its meeting dated 4th February 2017 has constituted the "Acts and Regulations Review Committee" with following members

Mr. K Subrahmanyam	Chairperson
Mr. K Sriram	Member
Mr. Pravir Chandra	Member

Functions of the Committee:

Review and recommend what changes are needed in the Actuaries Act, Companies Act, Rules and Regulations to enhance the value of the actuarial profession;



4th Seminar on APS on Employee Benefits & Capacity Building on ESOPs

EVENT REPORT

Organized by: Advisory Group on Pensions, other Employee Benefits & Social Security, IAI

Venue: The Plazzio Hotel, Gurgaon **Date:** 3rd March, 2017

Session: Welcome and Inaugural Address

Chairperson: Mr. A. D. Gupta



Session was divided into four topics namely:

- 1) Context, Background and Overview of the Principles of the new APS
- 2) Discussion on Technical Application Section of the new APS
- 3) ESOPs – Introduction and Discussion on Ind AS 101 Share Based Payments
- 4) Practical example and insights into valuation and reporting of ESOPs

Mr. AD Gupta inaugurated the session. In his welcome speech, he highlighted the following points:

1. The new APS has been designed to cover the multiple existing APS & GN's on Employee Benefits.
2. The main aim of the new APS is to remove different practices followed by different actuaries

and to bring standardization in Employee Benefits valuation & reporting.

3. Provident fund is kept outside the scope of the new APS.
4. The 1st Agenda was to provide brief on new APS and to discuss various aspects of new APS.
5. The main purpose of the seminar was to prepare the participants beforehand for the new APS. Also the new APS is in advanced stage but still there is a possibility to incorporate any last minute changes based on the discussion in this seminar.
6. The 2nd important agenda was to discuss the scope of valuation of Share Based Benefits as per IND AS 102 by practicing actuaries. The post lunch sessions of the seminar were dedicated to ESOP's valuation.

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

Speaker: Mr. Kulin Patel, Consulting Actuary, Towers Watson



Introduction:

- The current set of Standards and Guidance Notes were written over a decade ago.
- There are many overlaps and mix of principles and certain rules in different sets of APS's and GN's.
- The existing APS's and GN's do not cover new accounting standard IND AS 19 which is based on the principles on IFRS.
- Therefore there is a need to relook at the existing APS & GN's and come up with one consolidated APS.

Highlights:

- The new APS will merge the following existing APS's and GN's into one standard (Diagram on page 20):
- AGPESS initiated revamp to move towards a more "principles based" approach.
- Objective to provide members with a comprehensive standard applicable across all type of actuarial advice in the area of employee benefits.
- The new APS is divided into two main parts:

Main Body	Technical Application
Judgement	Gratuity
Responsibility of the member	Leave
Data	Post-Retirement Medical
Methodology	Pension
Assumptions	Long Service Award
Reporting	

Existing Actuarial Practice Standards / Guidance Notes

APS / GN Number	What it covers	APS / GN Number	What it covers
GN 11	Actuarial Investigations of Retirement Benefit Schemes	Single Comprehensive APS (APS XX)	
APS 12	Investigation of Retirement Benefits - Choice of Actuarial Assumptions for the Actuarial Valuations Required under AS 15	~~APS 12~~	~~Investigation of Retirement Benefits - Choice of Actuarial Assumptions for the Actuarial Valuations Required under AS 15~~
APS 13	Investigations of Retirement Benefit schemes: the actuarial reports under FAS 87, FAS 88 and FAS 132	APS 15	Pension Fund Terminology
APS 14	Illustrations of Defined Contribution Pension Scheme Benefits	APS 20	Actuarial Practice for Social Security Programmes
APS 15	Pension Fund Terminology	GN 28	Guidance Note on Other Employee Benefits
APS 18	Retirement Benefit Schemes - Actuarial Reports	GN 29	GN 29 - Valuation of Interest Rate Guarantees on Exempt Provident Funds
APS 20	Actuarial Practice for Social Security Programmes		
APS 26	Actuarial Reports under Accounting Standard 15 (Revised, 2005) issued by the ICAI		
GN 28	Guidance Note on Other Employee Benefits		
GN 29	GN 29 - Valuation of Interest Rate Guarantees on Exempt Provident Funds		

Summary

The session was very informative and very well received by all the participants. The speaker, Mr. Kulin appreciated the fact that this is for the first time that we are discussing the APS which is yet to come and highlighted important new points covered under proposed APS including disclosures, data and assumptions. The speaker stressed on the fact that the intent was not to write new APS but to pick the PRINCIPLES from existing APS and consolidate in one. The session was followed by a short discussion on Principles based standards and what do we do as professionals to mitigate those disadvantages. Mr. YP Sabarwal raised the point that everything cannot be prescriptive. The group also discussed the fact that whether the actuaries should accept the inputs and assumptions provided by the client without any reasonableness checks or they should thoroughly investigate the

accuracy of the assumptions shared by the clients. Finally the group concluded that what to accept and what to reject solely depends on the judgment of the practicing actuary.

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

Speakers: Ms. Chitra Jaisimha, Consulting Actuary, AON Hewit



Introduction

The new APS prescribes certain minimum considerations for valuation of Defined Benefits plans for Accounting Purposes. The new APS covers the plans:

- Gratuity Benefit Valuation
- Leave Valuation (Sick /PL/Casual)
- Post-Retirement Medical Benefit Schemes
- Post Retirement Pension Valuation
- Long Service Award Valuation

The aspects/considerations mentioned in the new APS are not exhaustive and there may be other relevant aspects which should be considered while carrying out valuation.

Highlights

The speaker Ms. Chitra discussed about the common aspects of all the valuations. Following are the common items for all the valuations:

Data

- Number of Employees, Total Salary (Basic , Basic plus Components, CTC), Average Age, Average Past Service

Assumptions

- Salary growth rate, Discount rate, Attrition rates, Mortality / disability rates

PUC Method (Projected Unit Credit Method)

Benefit - Gratuity

The speaker discussed the following aspects: Plan Design, Upper Limit, Vesting Period, Retirement Age

• Gratuity Model

In case of employee's service in later years leading to a materially higher level of benefit than in earlier years, an enterprise should attribute benefit on a straight-line basis from:

- (a) the date when service by the employee first leads to benefits under the plan; until
- (b) the date when further service by the employee will lead to no material amount of further benefits under the plan, other than from further salary increases.

Benefit – Leave – Important Aspects

Plan Design, Accumulation Limit, Availment /Encashment Assumption, Relevant salary for Benefit, Leave balances, Specify leave encashment whether allowed during service, Specify whether encashment of leaves upon termination of employment is allowed, Limitations of utilization / availment of leaves

• Leave Model

The model used for Leave valuation of accumulated may projecting the consumption of leave and leave balance at each future time period.

Benefit – Medical – PRMB – Important Aspects

Future medical cost inflation, Mortality and disability rates (both pre and post-employment and for all beneficiaries), impact of mortality improvements, Frequency and severity of benefit (In case of non-availability of data , average cost per beneficiary may be used and mentioned in the report),

Description of the benefit valued , including specifying the contributions payable under the scheme by the employees and / or beneficiaries under the scheme.

• PRMB – Model

In case of benefit under the post-retirement medical benefit scheme extending to spouse of the employee as well, the model used by for valuation shall appropriately allow for joint-life probabilities.

Benefit – Pension – Important Aspects

Salary growth rate considered during employment for each component of salary (e.g. for basic salary, dearness allowance, grade pay, etc), Pension growth rate considered post-employment for each component of pension (e.g. for basic, dearness allowance, grade pay, etc), In case of pension valuation of public sector undertakings, whether the impact of future merger of dearness allowance is considered in the valuation, Mortality / disability / morbidity rates (both pre and post-employment), impact of mortality improvements, Description of the benefit valued , including specifying the contributions payable under the scheme by the employees and / or beneficiaries under the scheme.

• Pension – Model

In case of benefit under the Pension scheme is extended to spouse of the employee as well, the model used by for valuation shall appropriately allow for joint-life probabilities.

Report

The valuation report shall include clearly

- All the inputs – Data, Assumptions, benefit structure
- Adequate disclosures
- Disclaimers (e.g. highlighting the limitations and extent to which the user of the report can rely on the valuation report.)

The session was concluded by group exercise followed by debrief/group sharing.

Summary

The session was very interactive with almost all the participants sharing real life examples of complications and challenges which they face while doing the valuations of above mentioned benefits. Mr. M.L. Sodhi highlighted that leave availment is not shown as benefit disposed from PBO leading to deviations in Actuarial Gains/Losses. There is no standard published table on mortality improvement which is an important factor in Pension Benefits and Medical Benefits Valuation. It was suggested by the participants that Pension Committee can come up with a guidelines for mortality improvement so that it can be used by all the practicing actuaries. Pension liabilities were also substantially increased in the past due to various wage revisions. Pension is provided on Basic + DA, so salary growth should be considered on both the components. How the impact of wage revision should be considered in Pension Valuation was also an area of discussion.

Session 3: ESOPs – Introduction and Discussion on Ind AS 102 Share Based Payments

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

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



Introduction

ESOP valuations is a new area where practicing actuaries can offer their services to their clients. When the speaker, Mr. Jenil asked from the participants to raise hands if they are working in this domain than only 10%

of the participants raised their hands. So 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.

Highlights

Following are the important areas related to ESOP valuations which can be explored by actuaries for new business opportunities:

- ESOP Scheme Design & Drafting
- Employee Education & Scheme Administration
- Fair Valuation of the options granted
- Accounting Treatment of options granted
- Disclosures in the Financial Statement

ESOP valuations, accounting and disclosures are governed by the following regulatory guidelines:

- IND AS 102, Share Based Payments
- SEBI 2014 Guidelines

Various scenarios of share based payment arrangements were explained by the speaker.

Methods of calculating the fair value of stock options

There are two well-known methods of option pricing:

- Black-Scholes Option Pricing Formula
- Binomial Option Pricing Model

IND AS requires any option pricing model to take accounts the following factors:

- Exercise Price of the Option
- Life of the Option
- Current Share price of the Options
- Expected volatility of the share price
- Expected future dividends
- Risk free rate over life of the option

Vesting Conditions can be related to Service Condition or Performance based i.e non market condition. Para 19 & 20 of IND AS 102 talks about the accounting treatment of ESOP liability based on different vesting conditions.

The Speaker also demonstrated the accounting treatment with the help of an example.

Disclosures – The disclosures should include the following important areas:

- Nature & Extent of Share Based Payment Liability in existence at the end of reporting period.
- Fair Valuation method & assumptions, with rationale behind assumptions
- Effects of Share Based Payment Transactions on entity's P&L and F/S

Summary

It was a new topic for most of the participants therefore not much questions were asked by the participants. The session provided complete details about how ESOP valuations can be carried out. The organizing committee also provided a handbook which consists of all the necessary documents to carry out ESOP valuation. The group discussed whether the actuaries should only do calculation of fair value of options or they should also calculate the expense for P&L. Again the choice and scope of work will be at the discretion of the practicing actuaries.

Session 4: Practical example and insights into valuation and reporting of ESOPs

Moderator: Mr. K K Wadhwa, Consulting Actuary

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



Introduction

Due to many technical jargons, ESOP valuations seem to be a complex area to practice. The Speaker, **Mr. Khushwant** explained the calculation of fair value 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. The speaker also shared the details of resources related to ESOP Valuations which are available online. All the participants were immensely benefited out of this session.

Highlights

The reference material shared by the organizing committee contains the following documents:

- IND AS 102: Share Based Payments
- GN on Share Based Payments
- IND AS 101: First time Adoption
- SEBI (Share Based Employee Benefits) Regulations, 2014
- CT8 Chapter 12 (The Binomial Model)
- CT8 Chapter 13 (The Black-Scholes option pricing formula)
- Mayur Ankolekar's presentation on ESOPs

Black-Scholes Model

Price of Call Option (C) = $S * N(d1) - K * \exp(-r * (T - t)) * N(d2)$

$d1 = [\ln(S0 / K) + (r + \sigma^2 / 2) * (T - t)] / \sigma * ((T - t)^{0.5})$

$d2 = [\ln(S0 / K) + (r - \sigma^2 / 2) * (T - t)] / \sigma * ((T - t)^{0.5}) = d1 - \sigma * ((T - t)^{0.5})$

S = Stock Price on the date of Valuation

K = Strike Price of Call Option

r = risk free rate of return

T = Expiry Time in years

t = Current Time in years

σ = Annualised volatility of the Stock

A live example was discussed with the participants. Call option price for INFOSYS LIMITED as on 23 February 2017 maturing on 30 March 2017 was calculated using Black Scholes Model. The option price calculated by Black-Scholes model was very close compared with the actual option prices mentioned on NSE.

The Speaker also discussed an example of Accounting Treatment of Equity Settled Share Based Payment Transaction. Various scenarios such as actual attrition holds/ actual attrition does not hold were also discussed.

Following items should be disclosed in the ESOP Report

- Description of share - based payment arrangements
- No. of Options movement during the year
- Weighted-average exercise prices of options
- Weighted-average fair values

and remaining contractual life of options

- Description of method / assumptions used to estimate the fair value of option
- Other key information on fair value of options
- Expense to be recognized in P/L statement

In case of non-listed companies, a major challenge is to find the share price as at the grant date of options.

Summary

This session further 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 build their expertise further. All the relevant reference material related to ESOP valuations was provided in the seminar. Hopefully, we will see many more actuaries entering into this domain in coming future. ■

About the author

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Feedbacks from the participants

More detail on Modelling Part of Draft APS

Compliance on ESOP

With DB Schemes going down , actuaries need to find new awareness of employee benefit consulting

Arrangement is really nice. I cannot find any improvements for now

Practical Challenges for IND AS 19, Application e.g. applicable retrospectively

The two topics were squeezed into the time duration , more time should have allotted, say 2 days

May be we could have more case studies, to have greater audience interaction

Lean in Insurance Services



Introduction:

Manufacturing sector is known for the Total Quality Management effort that helped increase productivity and operational efficiency and improve the quality of finished products. Not every service organisation has been successful in imbibing these quality philosophies that have been successful in manufacturing. Services are people dependent and this adds to the complexity while implementing quality philosophies that have been tried and tested in manufacturing. In this case, we are going to discuss the essential question: Can an insurance firm use the concept of “Lean” to grow its business and increase customer satisfaction? If so, what are the challenges involved? How can these problems be addressed? How can an insurance company cope with change management? What are the critical success factors to achieve success in Lean in insurance organisation? Can success of an insurance firm in the Western world be replicated in other developing countries like India, Brazil, China and South Africa? How can the insurance business institutionalize such efforts?

Case details:

Eureko is a large insurance group that operates in the Netherlands under its Achmea brand. In 2006, the Dutch government implemented radical market reforms to launch a compulsory national health insurance scheme that had to be executed by private insurers.

Many companies were in a dilemma. They were uncertain about the future

costs and the premium levels in the new system. Achmea had adopted the inorganic route to grow their business through mergers of insurance companies. Achmea had two options – either to exit the health insurance business or to compete on quality to win substantial market share.

Jeroen van Breda Vriesman was the executive board member responsible for the health division and group information management and technology. The company decided to implement lean in its health division. In a matter of 3 years, the loss making health insurance business became profitable. The company then decided to scale up this effort so that transformation could be brought in other sectors like non life, life insurance, pensions by adopting the same philosophy.

Mr Van Breda Vriesman believed in the importance of a compelling vision and of engaging the right leader at every level. Liberalization was a great challenge for all insurers operating in the health insurance space. The challenge was to meet the government’s expectation to improve the health system in terms of better quality and prices.

Achmea started transforming their operations including customer care and the front and back offices which now had to deal with a larger customer base. Prior to liberalization, Achmea was facing the following challenges:

- Cost benchmarks were not met
- Focus on customer service was lost

- Administrative process had become more important
- Employees were not given the opportunity to contribute to improvement in work efficiency

The company kick started a movement in the organization called “Sens” which in Dutch meant – Together effectively towards success. There was a need to identify the right talent to support the implementation. The company started scouting for internal talent who could help the company in the transformation. They also started a program for training managers who did not have the desired competency to support this effort. This was followed by selective outsourcing of routine tasks so that full time employees could focus on the core competency of business – viz. promotion of the health insurance business. Thus, unwittingly, the company used the “Lean” philosophy to bring about a transformation in the prospects of health insurance business.

Lean is a philosophy that reduces waste, improves quality and reduces cost. Lean questions the status quo. The beauty of lean is that it helps a company to continuously improve in a systematic way. It is not person dependent. Lean depends on cumulative efforts of the team. Lean efforts can be replicated with greater precision and accuracy.

Achmea learnt important lessons while implementing lean. Though strong leadership is a pre-requisite for success of lean, that alone is not enough. The company must have a vision and a clear strategy for achieving lean. It

is vital to explain to the employees and engage with them regarding the purpose and objective of working on lean principles.

Lean is not about cutting costs and meeting budgets. Lean is about transformation. Lean is all about continuous improvement. Lean is all about creating a better company. Achmea realized that incredibly big changes can be made in a short time if a firm gains the trust of employees, makes them see the reality of what is in it for them.

Lean is not an effort that can be pushed. A firm has to pull its employees towards lean so that they willingly contribute to the achievement of lean objectives. In Achmea, 400 managers and key players in the division were involved in the exercise. The company felt a need to create a sense of common ownership among the employees. This made it easier to communicate with the teams about the need to change.

Achmea laid a road-map in which the first step was to put customers first as part of the strategy to improve the health insurance business. Four stakeholders namely customers, shareholders, employees and business partners were identified whose interests had to be balanced.

Cost and quality of health system has to be sustainable. Thus, sustainability became a key driver for people to accept lean principles. Health care improvement necessitated a partnership between insurers and service providers. Achmea decided to support lean efforts in hospitals that they worked with. They gained the trust of their customers. The company believed that lack of trust between internal teams would lead to duplication of work and create waste in the system.

Achmea had performance indicators that measured how sales teams trust each other and how customers trust Achmea overall. It is essential to learn how this trust can be improved further. The company also measured the trust of health care providers.

Measuring the impact of Lean

1. Financial impact – The Company looked at costs and the turnover in terms of gross written premiums.
2. They measured employee satisfaction. The employee satisfaction levels improve only gradually. In the initial months, satisfaction drops due to change management issues. But the situation improves later on as employees start experiencing the benefits of lean.
3. Measuring customer satisfaction is a critical metric. Number of mistakes made, number of complaints received, number of customers lost (not every customer who is dissatisfied may bother to complain; many dissatisfied customers simply switch to competition). The challenge was to assess behavioral changes in customers.

To breed customer loyalty and retain customers was an important goal. How can the business influence the customer to buy more insurance and recommend its services through word of mouth publicity which is No.1 in terms of promoting a service.

After implementing Lean in the health insurance business, Achmea experienced a 50-60% improvement in customer satisfaction. There was an improvement of 5-10% in efficiency in terms of lower costs and higher employee and customer satisfaction. Company merely budgeted the costs of implementation. They did not factor the potential efficiency gains (return on investment) at that time or the performance against budgeted costs. The focus of Lean was not cost control but continuous improvement.

Change in behavior and change in culture was essential for successful transformation of business through lean. Smaller steps lead to greater success. This was what Achmea learnt from their experience. It is important for an insurance firm to know its customers, know the processes, develop new products and implement an IT system.

The vision has to be same across the company. Employees have to be motivated to influence others to take part in the process of converting the plans into actions. Lean cannot be implemented in the short term. It needs a long term vision. A firm has to allow employees to get thoroughly acquainted with lean. Only this can lead to achieving the goal of meeting the needs of customers.

The greatest challenge in lean implementation is changing the mindset, integration of different thinking patterns into one and aligning the individual/ personal goals of different managers. Excitement about lean is crucial. Managerial behaviors need not be the same at all times. Some managers are excited about changing the culture; others are excited about achieving certain metrics. The company has to pull the right levers – good people, better strategy, time to be spent on changing culture and behavior, push on delivery and keep the discussions flowing.

The company set up a central program office to build the right competencies that would help manage the change. They hired an external partner for lean, another for bringing about a behavioral change in employees and one for the program's MIS. Eventually, the company trained some employees to become "Lean Champions" so that they could achieve consistency, track progress and build capabilities across divisions.

The discussions about lean happened at every level. This resulted in Achmea meeting the efficiency targets leading to both customer and employee satisfaction. They used the right talent for implementing lean. The vision was important as without vision people tend to think of Lean only as a short term, cost cutting exercise. The experience gave Achmea better insights about consumer preferences, products that they need to launch and the IT systems that were needed.

A climate of continuous improvement needed that the employee was put first and given a chance to implement

his own ideas every day to improve customer service. When a company starts looking at customer complaints and tries to avoid recurrence of same mistakes, this translates into reduction of waste. Future ready companies think about completely eliminating customer complaints by delivering a world class product or service.

The company implemented lean in a host of activities like issuing of renewal notices, claims processing, handling enquiries, new product development. A performance management culture was initiated. Employees were cross trained to handle a multitude of tasks. The company kept on reiterating – how can service delivery be improved, how can costs be controlled, how can processes be re-engineered to avoid duplication of work, how can an element of trust be built and how can the momentum of continuous improvement be sustained?

Achmea started online document retrieval for proposal [policy]

and claims forms. An insurance company could have a single form for proposal and claim so that this saves the customer's time as well as the employee's time. There is a greater need to create awareness about exclusions in the policy to avoid gaps in communication at a later stage. Achmea thus achieved great success in implementing lean to reduce waste, improve operational efficiency, increase customer satisfaction and

eventually deliver what the customer wanted.

References

http://www.mckinsey.com/client_service/financial_services/profiles/~ /media/mckinsey/dotcom/client_service/financial%20services/latest%20thinking/reports/lean_management_new_frontiers_for_financial_institutions.ashx. ■

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ANNOUNCEMENT

27th India Fellowship Seminar (IFS)

Date: 1st & 2nd June, 2017 Venue: Hotel Sea Princess, Mumbai.

The 27th IFS is open to IAI Fellow Members for CPD requirement (12 hrs-Professional.) under APS 9 (Ver.2); and to Student/Affiliate/Associate members for fulfilling requirement for admission as FIAI.

In view of the fact that all participating students, associates & affiliates have to be assigned topics for presentation, the registration will close by **20th April, 2017** (for Students, Associates & Affiliates). Though the registration for fellow members will remain open till **25th May, 2017**

Registration Fees for IAI members - Rs. 10,000 + 15% Service Tax.



To Register, LOGIN to your account on IAI website.

www.actuariesindia.org

Point of contact: Quintus Mendonca - Quintus@actuariesindia.org.



New Zealand

COUNTRY REPORT

New Zealand Society of Actuaries

Andreas Gluyas term as President of the New Zealand Society of Actuaries started at the conclusion of the Annual General Meeting in Tauranga on 20 November 2016. Andrea is the first female President of NZSA and first President to have qualified through the Australian exams rather than UK exams. Paul Rhodes retired from Council and Nick Smart was elected onto Council. A brief bio on Council members can be found on the Society's website⁽¹⁾.

A strategy day for council and committee convenors was held on 20 February 2017⁽²⁾. This identified key-risks for the actuarial industry ranging from loss of relevance for the profession to loss making events. Societal investment approach and soft skills were identified as the most important areas for the Society to focus on.

Financial Markets Authority

New Zealand's conduct regulator published its strategic risk outlook on 15 February 2017⁽³⁾. This outlines the root causes of risk to fair, efficient and transparent financial markets. It sets out the potential risks connected to these drivers and the FMA's strategic priorities.

During 2015-16 year, the FMA investigated 71 cases. They imposed sanctions not involving court action in 23 cases and initiated court proceedings in 10 cases⁽⁴⁾.

The FMA is both guard dog and guide dog for New Zealand's financial markets. On 28 February they published a series of pointers for customers to use when they are dealing with financial services providers⁽⁵⁾. You are entitled to competence, be treated honestly and fairly, be informed, know how much you are paying and have problems and complaints dealt with properly.

Review of Financial Advisers Act

The Ministry of Business, Innovation and Employment seeks written submissions on the draft Financial Services Legislation Amendment Bill and proposed transitional arrangements⁽⁶⁾.

Key elements of the new regime are:

- reducing regulatory boundaries to enable robo-advice and make it easier to give tailored advice
- requiring all advice providers to put customer interests first and only give advice if competent
- replicating efficiencies in Qualifying Financial Entity regime to all financial advice providers
- simplifying designations to financial adviser and financial advice representative
- graduated compliance and enforcement tools consistent across all licensed financial services
- improved consumer understanding through disclosure and client care

- require a strong connection to New Zealand to be on the Financial Service Providers Register

Advisers who operate as sole trader or in small partnerships may find it costly to establish a Financial Advice Provider. Dealer groups may transform from commission aggregators to a licenced club for former registered financial advisers. Product providers may also expand their aligned networks for distributors who are comfortable becoming a representative.

Retirement Age

John Key resigned as Prime Minister on 5 December 2016 and was quickly replaced by his long time deputy Bill English. Eight years ago, John Key had ruled out increasing the eligibility age for New Zealand Superannuation whilst he was Prime Minister.

On 7 March 2017, it was announced that the eligibility age will be gradually lifted from 65 to 67 in 20 years' time and the residency requirement from 10 to 20 years⁽⁷⁾.

The current fortnightly pre-tax benefit, which is not means tested, varies between \$ 636 (married, partner non-qualifying) and \$ 887 (single, living alone)⁽⁸⁾. The amount is increased on 1 April each year in line with the increase in national average earnings.

The future cost is partially pre-funded through the \$ 33bn NZ Super Fund⁽⁹⁾. However, with increasing longevity and lower average family size, the cost

of NZ Super as a proportion of GDP was set to rise considerably.

Many other OECD countries have raised their state retirement age in recent years as a means of reducing the future burden on tax-payers for a predominantly a pay-as-you-go benefit to seniors.

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 Appointed Actuary

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Appointment of Head - Strategy and Marketing on Full Time Basis

IAI, a statutory body established under The Actuaries Act 2006 (35 of 2006) for regulation of profession of Actuaries in India, is inviting applications for the post of “Head- Strategy and Marketing” on full time basis.

Name of the Post	Head – Strategy and Marketing reporting to the Executive Director
No. of Post	One
Age	The candidate should not be over the age of 50 years as on 1.1.2017
Qualifications	Candidate should be a Post Graduate in Business field or should have M.B.A in marketing or equivalent stream from reputed Institute or Fellow and Associate of the Insurance Institute of India / other equivalent Institute, Actuary and Chartered Accountant.
Experience	Candidate should have at least 7 year relevant work experience
Emoluments and Benefits	Competitive; indicate your last drawn salary including all allowances
What is expected?	1) To promote the Institute of Actuaries of India (IAI) externally and act as a link between the Institute and human resources contacts in organizations that employ actuarial staff. 2) To maintain effective communication and Liason with government bodies, other Institutes or agencies to evolve new strategies. 3) To prepare strategy for promotion of Actuarial Profession in India. Enhance Brand value. Create opportunities for Actuaries in wider fields. 4) To prepare Strategy plan and implementation schedule in consultation with President/ED. 5) To initiate and maintain strong and positive relationships with relevant sectors of the media. 6) To review and design the complete range of IAI marketing materials including power point presentations. 7) To organize workshops and conferences. 8) To liaise with external stakeholders. 9) To help develop and maintain a databank of websites relevant to the actuarial community. 10) To assist the President /Executive Director of the IAI on strategic projects. 11) Any other as assigned by the President or the Executive Director
Critical Generic Competencies	1) Strong communication and presentation skills: ability to communicate well verbally as well as in writing 2) Strong research and analytical skills 3) Open to intermittent travel 4) Able to interact with senior management professionals within and outside of the relevant industries
Selection Procedure	The selection procedure shall be by way of personal interview
How to apply	Completed application on foolscap paper, along with a recent photograph and copies of requisite certificates/documents should reach us at the following address on or before 21st April 2017. The envelope should be super scribed in the top corner “Head – Strategy and Marketing”. To, Mr. R B Upadhyay Executive Director 302, Indian Globe Chambers, 142, Fort Street, Mumbai 400 001. Softcopy of Resume should also be mailed to ea@actuariesindia.org

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