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INDIAN ACTUARIAL PROFESSION
Serving the Cause of Public Interest



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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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APPOINTMENT OF ACTUARIAL APPRENTICE

Applications are invited for the appointment of Actuarial Apprentices

Total Number of vacancies: 7* (For both streams of Non-Life & Life depending on the requirement of the corporation)

Eligibility Conditions: as on 31.07.2018

Age: 21 years (completed) and not more than 27 years i.e. candidate should have been born not earlier than 31.07.1991 and not later than 31.07.1997 both days inclusive, relaxation up to 30 years for OBCs and 35 years for SCs/STs. Age relaxation for PWD candidates is as per rules.

Qualification:

i. Graduation/Post Graduation in Science from recognized University with Mathematics or Statistics as main subject with 60% or more marks in aggregate, or
ii. Graduation/Post Graduation in Commerce from recognized University with Statistics/Actuarial Science as main subject with 60% or more marks in aggregate, or
iii. Graduation in Arts with Actuarial Science as major subject from recognized University with 60% or more marks, or
iv. Post-graduate Diploma in Actuarial Science with 50% or more marks

(10% relaxation in marks for SC/ST candidates).

AND

The candidate should have passed at least 3 actuarial subjects of exam conducted by Institute of Actuaries of India (IAI) and Institute and Faculty of Actuaries (IFoA).

Selection Procedure: Selection procedure shall be by way of personal interview

Application Procedure:

- Interested candidates may apply in the prescribed application form.
- Attach self-attested copies of the Caste Certificate (wherever applicable), School Leaving Certificate/ Matriculation Certificate showing Date of Birth or Birth Certificate separately, Degree Certificate & Mark-sheets, Certificate of the Actuarial papers passed
- Affix passport size photograph at the right hand top corner of the application.
- Then send the scan copy of the application along with the other required documents to the email id recruitment@gicofindia.com

Detailed Ad & application form is available on our website www.gicofindia.com
Last Date of submission of application- 31st August 2018

Deputy General Manager (HR)

Message from the Chief Editor



If you ask, what gossips are currently going amongst the actuaries and accountants; it's not about the audit of Insurance Company, nor is it about the quality of data or accuracy or completeness of the data. The talk of the moment is implementation of International Financial Accounting Reporting Standard (IFRS17) or IndAS 117. IFRS17 was released by IASB in May 2017 and is effective January 2021. It is interesting to know that during the preparation of IFRS 17, IASB had over 900 public meetings with Investors, Analysts, actuaries, regulators, accounting firms and others. During this process IASB reviewed over 600 letters.

The implementation of IFRS 17 is going to pose many challenges for insurance companies. Some of these challenges are that I foresee:

- IT System Development and re-defining the process
- Training required to up skill the existing staff
- Hiring new people ;
- Implementation of new calculation engines, storing of values like contract service margin at contract level ; recognition and de-recognition of onerous contracts
- IFRS 17 required attribution of profit to various parameters ; need to set up attribution analysis process
- Regulatory requirement for production of reports will change
- Cos will have to change the way ALM is done
- The entire risk management framework will have to go through a change as most of the tolerance limit and risk appetite may have been set based on statutory Profit at risk.

Companies will have to automate and digitise most of the valuation and reporting process for efficient production of numbers. It's the time when insurance companies need to set up their IFRS 17 implementation team. There is going to be loads of actuarial modelling required to meet the needs of accounting standard.

The challenge is to educate the board and management about interpretation of the results. There is lot of onus on actuarial profession to simplify concepts and educate management and Board of Directors. We need to have more actuaries who can take up roles in Finance function of insurance companies for smooth transition to new accounting regime. Given that IFRS 17 is Principle based accounting standard, the Accounting profession and Actuarial profession need to work together to interpret and decide on various aspects.

I believe, this is a great time for Actuarial profession across the globe to demonstrate the capability of the profession. Let's work with all stakeholders, Government, Regulators, Accounting profession to accomplish the goal of successful implementation of IFRS17 in time.

With this message I would like to sign off.

EVENT REPORT

1st Seminar on Data Science & Analytics

Organized By: Working Group on Wider Areas of Actuarial Science, IAI
Venue: Hotel Marriott, Bengaluru Date: 21st July 2018

WELCOME ADDRESS

Mr. Mahidhara Davangere V welcomed all participants to the event. He presented the initiatives and activities undertaken by The Working Group on Wider Areas of Actuarial Application which was established in January'2018. Since its inception, seminar on "Finance & Investment" and "Data Science & Analytics" have been conducted. The speaker highlighted the importance of taking the risk of moving onto untrodden paths, and conquering new domains where actuarial expertise could be harnessed. Mr. Mahidhara thanked his team The Working Group on Wider Areas of Actuarial Application for their support on various activities throughout the year.

INAUGURAL ADDRESS

Mr. B. N. Rangarajan was optimistic that the seminar would provide answers to the disruption of data, computing power and analytics when inculcated with actuarial techniques. He presented amazing examples to highlight the use of data science & analytics in day to day activities. He briefly touched upon the topics that were to be discussed in the seminar. The topics largely relate to data science, analytics, computing power, programming skills, etc. Mr. Rangarajan stressed on the opportunities that await every actuary out there in the wider fields of actuarial science.

Session : The Changing Landscape of Actuarial Profession

Speaker: Mr. Mahidhara Davangere V

Session Highlights

The session kick started with a brief background about the developments in non-traditional actuarial roles. The discussion continued with an explanation about various applications of actuarial science in sectors like banking, finance & investment, gambling, retail sales, cancer research, price optimization, sports analytics, race optimization, etc.

Mr. Mahidhara emphasized that the actuarial domain would undergo drastic changes in the coming 10 years, and for an individual to be a part of this ongoing cycle, it is important to venture out of the traditional roles. Actuarial science which is built around mathematical and statistical knowledge primarily could be used for developing new models/tools in the above mentioned sectors. Actuaries could take up the challenge of creating policies in these unconventional areas, which is in itself a behemoth task.

He later explained about the use of data science and analytics in modern day technology, Alexa, health band, IoT sensors. Our everyday lives are governed by more than 4 to 5 devices like these at least. He mentioned how IoT (internet of things) is altering our very reality and creating harmonic balance in our lives. This just goes to show the massive amount of data that is being created by such devices, the amount of computing power and analytics that it takes to create meaningful insights. He also shared the outcomes of a survey on data created in the last 2 millenniums. The midpoint of data created from 1 A.D. to year 2000 would lie in 1900's, similarly the midpoint of data created between 1900 to 2000 would lie close to 1992 and surprisingly the midpoint of data created between 1990 and 2016 would lie somewhere in 2013. This shows that the amount of data created, collected and stored in the last few years has grown exponentially. Thus emerged the world of big data. The recent development in this regard is Quantum Computing where data is stored on atoms.

Later in the presentation the speaker explained how storage devices had developed over the course of time, starting from floppy drives, compact disks, progressing to rewriteable disks, USB and the current cloud storage. The speaker emphasized that with this large amount of data available at our disposal, actuaries should upgrade their skills to provide insights to businesses and help in value addition.

The speaker quoted examples of taxi companies like UBER, game shows like KBC who employ actuaries to manage risk associated with the business. He mentioned the largest employer of actuaries in the unconventional areas is the Retail Sales sector which requires meaningful insights to tackle the behavioral aspects of

their customers.

Lastly, he emphasized that actuaries need to adopt the new curriculum of studies in their profession and make the move into data science and analytics.

Session Summary

The session highlighted the importance of data science and analytics in newer areas of Actuarial Science.

Session : Democratizing Data Intelligence

Speaker: Mr. Subhash Chandra

Session Highlights

Data democratization is the ability for information in a digital format to be accessible to the average end user. The goal of data democratization is to allow non-specialists to be able to gather and analyze data without requiring outside help (source techtarget).

Mr. Subhash Chandra started the session by highlighting the amount of storage available in the world. He presented examples of driverless cars that create up to 1 GB of data per second per car. He emphasized the use of Artificial Intelligence to study such large data sets, process it at lightning speeds and provide insights that cater to all demands of a business. He explained how consumer behavior is disrupting the retail sales sector. Every consumer trend is captured, steeped right into the enterprise and produce meaningful trends which will help improve businesses. He mentioned that with the exploding amount of data available, enterprises need to collaborate, be proactive and use the right insights from the data to improve business acumen.

As the session progressed, the speaker provided examples of latest technology that is disrupting the data domain. He mentioned that actuaries need to change the mindset of working in traditional roles; the wider applications of actuarial science are immense. With the computing power available in today's world, actuaries would find it relevant to bring in more data and get meaningful insights out of it, thus creating strategic decisions to businesses. He stressed that historical data is not sufficient to get the best insights and hence focus to be given on collecting real time data from all sources available.

He gave an example of how the driver onboarding process in a Taxi company was improved using modern day technology. Earlier it would take 36 hours to 48 hours on onboarding a new driver onto the system. But with the application of big data analytics this task could now be completed in 8 hours thus saving business expense. Another example was the fraud detection system in a banking sector. Earlier frauds were detected in 15 to 17 hours, but with the new model this is being done in few minutes. Thus the computing power of big data analytics. The speaker highlighted that smart real time dynamic workflows are important to avoid process holdups and develop standard objective approach.

Session Summary

The Session emphasized on How to make data more intelligent, extract more insights, use it for business advantage.

Session : Disruption ahead in assessing risks in life and health insurance

Speaker: Mr. Balachandra T Joshi

Session Highlights

The session highlighted the emerging opportunities, concepts & approach surrounding Life and Health underwriting and how this concept could be linked to emerging technology. Further, the presenter elaborated the importance of underwriting to actuarial control cycle and its impact on the risk premium. Importance of each aspect were explained with examples.

The session progressed with key highlight to developing a framework for underwriting. An automated model could result in faster underwriting process and act as an early warning system, help in targeted marketing, better risk prediction, etc. Technology and behavior are the emerging domains which need to be tapped for better pricing of insurance products. Another case discussed was the use of analytics to have deeper understanding of comorbidities. With the improved risk understanding, innovative products can be defined. For improved computing and analytical power, "Blockchain" is a boon that offers us all of this in one package.

The session was concluded with a detailed discussion around applicability of Blockchain for continuous improvement of insurance products.

Session Summary

- The need for an automated underwriting tool that can handle over 70% of the initial risk assessment without human intervention.
- Use of big data analytics to solve complicated cases, create efficient insights, moreover reduce time and help price right insurance products to specific customers.



Session : Unconventional applications of Actuarial Analytics

Speaker: Mr. Sumit Ramani

Session Highlights

Mr. Sumit Ramani had an interactive session with the audience. The session focused on unconventional applications of actuarial applications, though unconventional they revolve mostly around insurance products. The session started with explaining the need of such products. This would address the financial need of an insured in the state of incapacity. Mr. Sumit presented examples of unconventional actuarial applications, highlighting a few below:

- Gaming industry
- Provide an insurance premium discount to the customers who use the motion sensing game thus stay fitter
- Estate planning
- Usufruct arrangement, "the right to enjoy the use and advantages of another's property short of the destruction or waste of its substance"
- Health Industry
- Strategic decision between a health economics consultant and insurers to improve business acumen
- Blockchain/ICO Initial Coin Offering)
- Data model to provide accurate results of the return on investment
- Information Technology
- Crypto wallet creation using Blockchain

The speaker also explained that the proactive analytics like predictive analytics play a significant role in decision making. The discussion continued with a brief explanation about the applications of data analytics to unconventional actuarial areas. Data analytics could be used to find solutions for a wide range of challenges. The session continued with discussions about smart analytics and how it enables to shape the next level of risk understanding and provide better services for customers.

Session Summary

The session helped in understanding various unconventional areas where actuarial knowledge can be applied.

Session : The Art of Data Science: how it's changing now and shaping future

Speaker: Mr. Khushwant Pahwa

Session Highlights

Mr. Khushwant Pahwa started the session by motivating all student members to explore wider sectors of actuarial applications. He presented an in-depth explanation of data science, data mining, data analytics, big data etc. The speaker introduced the topic by highlighting the importance of data analytics in the insurance industry and also shared non-insurance scenarios like equity research, gaming industry, election, and sports analytics. He highlighted that while actuaries have great substantive expertise in analytical thinking and quantitative skills, but to be true data scientists they must have technology skills viz. programming, visual representation ability, handling unstructured data etc., to interact with both their statistical and domain knowledge. He also explained the applicability of big data analytics in wider fields.

He explained that the data is the asset created today to enhance the future and hence need to invest. While there are many traditional data sources that are being used for the purpose of data analytics, certain new age sources may also be explored. These include data from fitness wearables, social media, genetic data etc. The speaker also discussed various challenges in the current scenario for employing actuaries in data analytics like





focus on statutory/regular work, cost, low investment in innovation, lack of analytics/training of resources.

Session Summary

- A brief summary on required skillsets to work in the unconventional actuarial areas
- Demonstrating the art of applying data science in actuarial domain.

Session : Group discussion on Case Studies - Telecom industry, Real estate planning & Politics

Panelist: Mr. Yash Ratanpal, Mr. Manoj Kumar Chhatlani, Mr. Khushwant Pahwa, Mr. Mahidhara Davangere V

Session Highlights & Summary

The participants were divided into 10 groups and questions were asked by the moderators to an individual from each groups. This ensured a collaborative thinking between each group members on sharing their thoughts. There were 3 case studies shared with the groups. Each group was expected to analyze each case study and develop a strategic model. Mr. Mahidhara explained that the focus of an actuary is on work ethics and professionalism. The groups came up with innovative models to handle various situations. Overall, the session was highly interactive and meaningful insights were shared for each case study.

Session : Data Science and emergence of a Multidisciplinary Professional (Panel Discussion)

Moderator: Mr. Mahidhara Davangere V.

Panelist: Mr. Subhas Chandra, Mr. Balachandra T Joshi, Mr. Khushwant Pahwa, Mr. Sumit Ramani.

Session Highlights

Mr. Mahidhara warmly welcomed everyone to the first discussion on Data Science and Analytics held for the first time in Bengaluru. He requested Mr. Sumit Ramani to brief on the applications of data science and analytics in the wider areas of actuarial science.

Mr. Sumit Ramani highlighted that actuaries are well qualified to enter into the wider fields. In the olden days actuaries did work as data scientists for insurance companies, collecting data, analyzing it and thus pricing right insurance products. He mentioned that the first actuary, "Halley" looked at the number of deaths and was the first person to come up with a Mortality table.

Mr. Balachandra T Joshi explained that in the years to come actuarial field would be completely different from the current scenario. He suggested every individual to focus on the niche areas of actuarial science, to get the basics right and develop new models/framework that would compete with the disruption that lies ahead of us.

Mr. Manoj Chhatlani explained that IRDA has been performing data analytics in Life and Health Insurance and General insurance collecting data from various sources and developing meaningful insights that has helped shape robust regulatory framework.

Mr. Khushwant Pahwa highlighted that actuaries would definitely succeed in wider areas as they already have the necessary skills that the profession demands.

Session Summary

- To adapt to the ever evolving changes in the actuarial profession, skillsets need continuous improvement
- The discussions motivated young members to take up the challenge of venturing into wider fields



Closing Remarks

Mr. Mahidhara mentioned that the Institute requires "The Working Group on Wider Areas of Actuarial Application" to create awareness amongst the members. The institute would arrange more interactive sessions like these to bridge the gap between the curriculum and the industry needs. The Group is working on offering internship opportunities to members and senior consultants in banking sector. There was an interactive question and answer session. The questions mostly focused on the role of actuaries in big data analytics, difference between a data scientist and an actuary, need for such diverse roles in an organization, next steps to venture into wider areas.

Written by



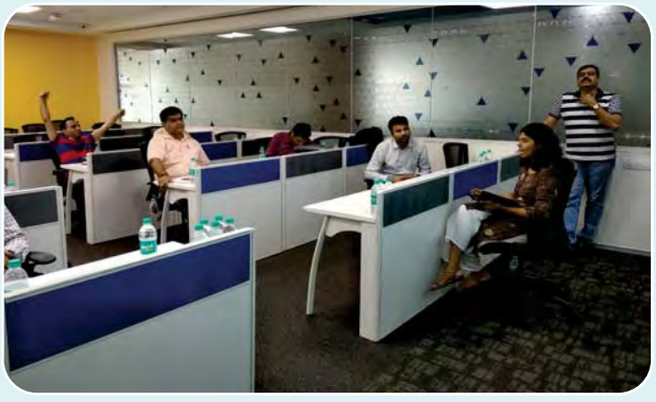
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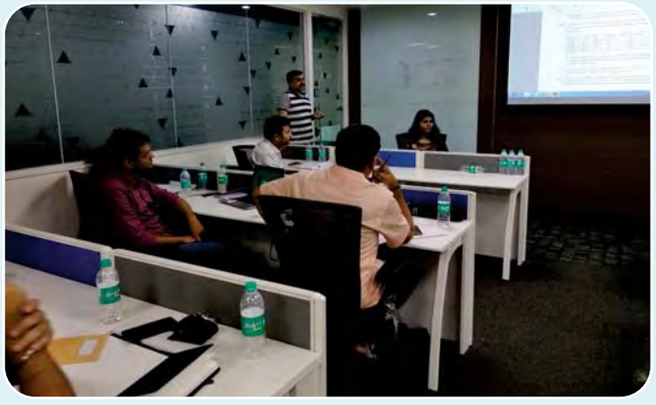
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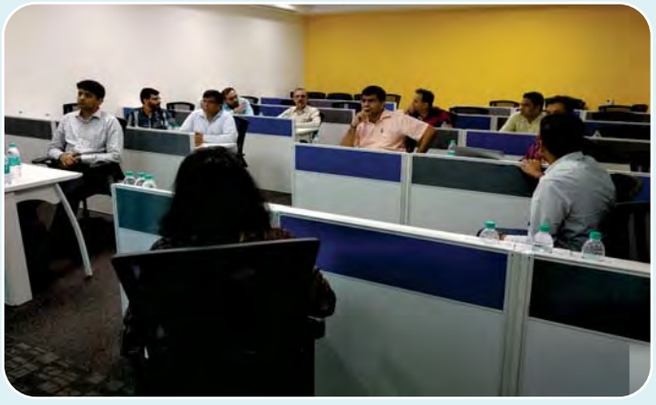
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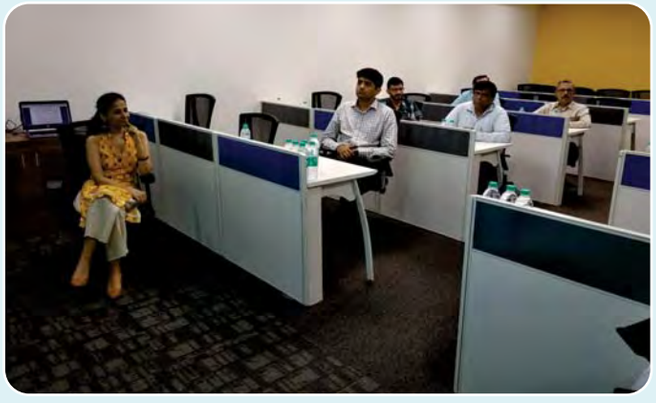
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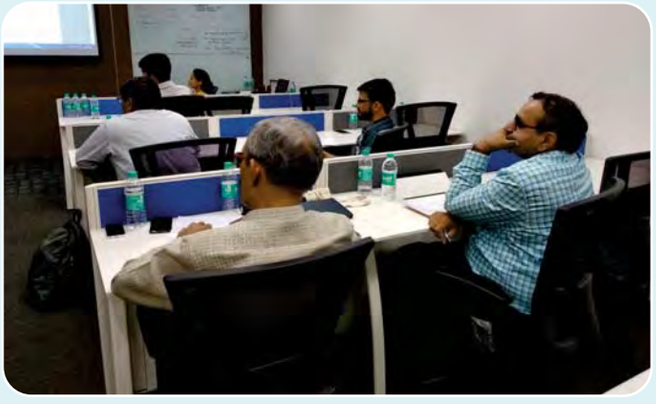












Mr. Anuj Mathur

Managing Director & Chief Executive Officer
Canara HSBC Oriental Bank of Commerce Life Insurance Company Limited

How Actuarial students and Actuaries may contribute in various department of the Life Insurance Companies other than Actuarial Department ?

I believe, given their in-depth understanding of the financials of life insurance operations, actuarial resources are best placed to contribute to a wide range of areas in a life insurance companies besides their core areas of activities. In our Company, we have been engaging our actuarial resources into a wide range of cross functional initiatives and also involving them to assess the financial impact of business decisions being taken on in the Company. For instances, they actively participate, at a macro company level, in creating the business plans of the Company and giving inputs on sales and distribution strategies for optimizing shareholders' values. On the other hand, at a micro level, they have also been involved in a range of initiatives across functions such as inputs to the risk function on development of appetites and mandates such as those related to market risks, insurance risks, inputs to the investment function on asset liability management, etc.

Has Company hired any actuarial personnel in other than actuarial department, e.g. reinsurance I Underwriting etc?

The Company has Actuarial personnel in the Risk function of the Company. While in any Company the actuarial resources will be primarily concentrated within the actuarial function, more avenues for them may emerge within Risk, Finance and investments.

How Life Insurance changed in last two years?

The Industry has witnessed a decent growth in recent past and presently is at a very promising juncture. The industry is estimated to grow 15-20% in the next 3-5 years and the growth would essentially come from the Tier 2 & 3 cities (apart from the Tier 1 cities) as the awareness towards this critical product line is increasing. People now realize that they need to plan the financial security of their family and provide for the unforeseen. The introduction of Point of sales products will add a lot of boost to life insurance penetration. The Industry will have to work jointly in ensuring that the Life Insurance solutions are made available to all segments of the population.

Canara HSBC OBC Life Insurance



Any other point you wish to highlight

Technology is evolving on multiple fronts and lot of it is changing the way insurance business has been working traditionally. Digital as a medium is influencing the consumer at the decision making stage. Big data analytics, cloud computing and mobility are other areas which will see big investment and movement in the next few years as it holds promise for the Industry. This has already started having impact on the product innovation and pricing and this is just the beginning.

A year plus in IAI Office

- From the desk of Executive Director

I joined IAI office as Executive Director on 27th June 2017. One of three interviewers double confirmed from me that this is primarily administrative job. I am from Actuarial Background and earlier this post was held by other than actuarial personnel. Following Actuarial Control Cycle helped in this journey.

I could witness many things happening with support of fellow actuarial personnel led by the IAI Council. Some of them.

Implementing Council decisions - The challenge is always to execute the Council decisions in timely manner. One such example is issuance of CoP. The CoP was made mandatory for Actuaries certifying the valuation of Pension and employee benefits. This was more or less smooth sail. The Actuaries including Senior Actuaries in age cooperated. IAI office strengthened their records and IT system well before 31st March 2018.

Roping in support of Committees and Advisory Groups - I can rejoice this bit that chairpersons, secretaries and members of various committees and advisory groups had great synergy. This helped IAI to organize various seminars and training programs. Slowly IAI is making a dent in wider areas.

Employment to student Actuaries - The whole hearted efforts are being made to enable students in want of employment to find the job. Students are being encouraged to be ready to work in wider areas of insurance companies, e.g. Underwriting I Reinsurance I Finance I Compliance I Operations I Claim Management, etc. and other wider areas e.g. banking and investment banking. F & I seminar, data science seminar, certification course in life product design and pricing, reinsurance , health insurance product design and pricing helped student to get jobs. The webinar was first time conducted for health insurance certification course. The job mela was conducted. Four recruiters from Life and General Insurance companies and one from a KPO visited IAI office, interacted with students and collected CVs. IAI office also sent the CVs collected to different organizations.

Examinations - Vendors for off-line and on-line examinations were scouted for through following the RFP process. The vendors delivered and almost achieved IAI expectations. In one examination in Mumbai, despite torrential rains in 2017, decision was taken to conduct the examination and it went well.

Agreements in place - IAI gets many jobs through external vendors. Currently the job is allocated to vendors post entering into valid agreements. For vendors continuing from past, the agreements are being enforced.



Mr. Dinesh Chandra Khansili
- Executive Director, IAI

IAI Staff - Attracting and retaining the staff is a challenge for any organization. IAI strengthened its IT, Marketing and Examination team. IAI could hire the Senior Manager level for their IT team.4 days In-house training was imparted first time to five new recruits by senior staff. After gap of about two weeks trainees were asked to prepare and present to rest of staff members. The topics were assigned to trainees other than relating to their own department where they are working currently. Friday classes are also a norm. These are just for half an hour. This started by individual staff member speech to rest of staff members on given topic of their choice. This was to shed the hitch of public speaking. This was emotional moment particularly to some executive staff level. In later classes, the knowledge on GST, MS Excel, MS outlook was given by senior staff. In future other MS office and other relevant classes would be undertaken.

Audits - To instil confidence in IAI office, IT audit, secretarial audit, labour Audit have been undertaken. The points raised in IT audit were plugged in. The outcome of other audits are being discussed. The services of new set of internal and external auditors were undertaken. The financials audit report was discussed in detail.

Increase in seminar and training participation - Approximately 50% increase in seminar and training programs shows that IAI is marching ahead in building its brand image. At times members are attending the programs despite their fulfilling the minimum CPD credits in their areas of choice. The participation from non-members is also seen and it is about 10% in different seminars.

Effective Communication - The efforts are being made that effective communication reaches to the members and other stakeholders. The first such was for new office address. The examination related communication was upgraded. The effective communication saw an impact on increase in participation in various seminars and training programs.

Meeting members' expectations - This is always a difficult task. IAI is keeping watch on various areas. E.g. new members through ACET examination are being properly communicated, students study material reaches to them in time, the exam related queries are addressed to, etc. Similarly members' other queries are being addressed promptly. But there is enough to be done. Sometime IT poses the problem and it is being strengthened. Video quality and IAI website need to be improved upon.

Strong Financials - The record income in history of GCA to tune of 30 plus million and record post expenses 20 plus million INR was possible due to support of the GCA organizing committee and group, support of stakeholders and IAI acting as a bridge. The increase in surplus to tune of 4.37 cr for FY 2017-18 and is testimony of the statement.

Beyond Boundaries - IAI represented IAA seminar in Sri Lanka through its President. The link with IAA authorities was re- established. This would further help in reaching out beyond boundaries especially in neighboring countries.

Compliance - Post enactment of the Actuaries Act 2006, compliance by IAI is a task. The compliance with APSs relating to statutory valuation of liabilities, issuances of CoPs, provisions of Act, regulations and Council orders, etc would be mandatory. As explained under heading Audit would further streamline compliances. The modification, addition in Act provisions would need MoF assistance. Those members who could not pay subscription upto 30th June but paid at later dates were brought back to register of members by putting their respective cases to Council.

On-line and Off-line classes - To help students to pass the actuarial examinations quickly, the on-line and off-line classes are being undertaken. This is also a source of income for the IAI.

Education curriculum 2019 - The new education curriculum 2019 is on cards. Two communications have been floated. There would be various activities undertaken in coming days.

General and health Insurance area - The record sponsorship by general insurers and plenary session on General Insurance in GCA, around 100 participation in capacity building programs/seminars in health and general insurance shows actuarial personnel working in GI and health areas support to IAI.

Liasioning with IRDAI - IRDAI being the regulator of insurance companies where many actuarial personnel work keeps very important place for IAI. The close liasioning with IRDAI is undertaken.

The Actuary India - The number of initiatives were undertaken. The CEOs interview got published. The employers showed their confidence and published their employment need advertisements. There were various quality articles and reports got published. The revenue was at one point negative but now it is six lacs plus.

The election 2018 - The year is seeing power of ballot and important would be who holds the reins of IAI for next two years.

The Actuaries Day - IAI decided 21st August to observe Actuaries day as mark of respect to Late **Sh. L S Vaidyanathan**, the first Actuary of India.



IAI office being followed up - IAI has grasped many points from other organizations. But there are few items which attracted attention by other organizations about IAI. The success of LED wall and registration process during GCA were enquired from IAI. The success of use of application for survey during CILA and prime during health insurance certification program on webinar is also being enquired from IAI office.

New office and its upkeep - IAI is proud owner of its own headquarter at Seawood Navi Mumbai. One regular job is to maintain its upkeep. The liasioning with L&T is must. Being new building the leakage and other problems exist. The liasioning is also required for meeting any emergency. IAI got the help when one of its staff member had to get emergency assistance.

The members' services and compliances would be at top priority and to ensure that IAI objects stated in the Actuaries Act 2006 are honored. There are other initiatives being taken. The other challenge would be to ensure IAI web-site is delivered, Video quality is improved and ultimately the good message reaches to the members. Amongst challenges and always being on toes, the new energy is filled in when a very senior Actuary stands up from his wheel chair during GCA and says- Vibrant IAI. The challenge would be not only to maintain the pace but take it to the next level. In such situation Robert Frost poem titled Stopping by woods on a snowy evening reminds-

The woods are lovely, dark and deep,
But I have promises to keep,
And miles to go before I sleep,
And miles to go before I sleep!

Life Insurance Insights

Top 10 – news, views and trends

"Generali has announced its intention to increase stake in Future Generali Life to 49%, while Legal & General has sold its entire 26% stake in IndiaFirst Life to Warburg Pincus. The market remained abuzz with transactions as LIC is planning to acquire a majority stake in IDBI Bank while PNB MetLife is reportedly planning to launch an IPO later this year.

Life insurance industry registered a moderate growth in weighted new business premium collections of 12.4% in FY2017-18, as private insurers recorded a healthy growth of 17.4% collectively to capture a majority market share. A number of new products were launched during the reporting period with majority of them being unit-linked. The IRDAI has eased the norms governing the utilisation of the services of Panel Actuaries. There have also been some changes in the top positions at the IRDAI, ICICI Prudential Life and SBI Life. Following is a summary of the top ten key trends and developments that shaped the life insurance market in India for the period March to June 2018."

10 The Authority eases norms for availing the services of a Panel Actuary

The Authority has revised its standards on the process of utilizing services of Panel Actuaries in light of the continuing shortage of actuaries eligible for the statutory valuation of liabilities. As per the circular, during any quarterly valuation of a financial year:

- a Panel Actuary for life insurance is permitted to be associated with at most one life insurer and life insurance business of one reinsurer,
- a Panel Actuary for general insurance is allowed to be associated with one stand-alone health insurer, a general insurer, and general insurance business of a reinsurer.

The scope of work and further details of involvement for the Panel Actuary have not been amended. These norms came into effect from the March 2018 valuation onwards and are also applicable for the annual statutory actuarial valuation at the end of a financial year.

9 Update on new product launches

Indian life insurance industry has seen quite a few new product launches during the period of March to June 2018. Contrary to the previous trend, there has been an increase in unit-linked products (ULIPs) during this period. Bajaj Allianz Life has offered innovative features on ULIPs like 'return of mortality charges' and 'return enhancers' with the launch of 'Goal Assured'. HDFC Life has launched a single premium annuity plan where the insured can choose the annuity rate at the time of buying the policy, amongst other options offered under the product such as immediate and deferred annuities, return of purchase price on death, etc. As observed in the previous quarters as well, insurers are continuing to diversify their propositions by offering health products in their portfolios such as health and cancer related products.

8 Positive profits reported by 17 private life insurers for FY2017-18

As per financial results disclosed by 22 private life insurers, 17 have reported profit for FY2017-18, compared to 16 out of 22 insurers in the previous fiscal. Amongst the 17 insurers to have reported profit, 13 have recorded a positive year-on-year growth compared to the profit figures reported for FY2016-17. The total profit after tax for private life insurers making such disclosure has increased by 8.5% from INR54.95 billion in FY2016-17 to INR59.61 billion in FY2017-18.

7 Distribution landscape update

BSE and its joint venture partner Ebix, are reportedly planning to establish an insurance distribution exchange platform, subject to regulatory approvals. This platform will enable distribution outlets, stock brokers, wealth management advisors and financial institutions to sell life and non-life insurance products. Other updates include:

- IndiaFirst Life has partnered with Oxigen payment wallet to harness its large Point-of-Sale network to sell products without any paperwork.
- Canara HSBC OBC Life has also entered into a distribution alliance with Can Fin Homes, which has a network of 132 branches spread across the country.
- In a move to strengthen agency distribution, Tata AIA

has reportedly doubled its premier agents to over 5,000 since last year. The insurer is focusing on premier agents who will understand customer needs better and be able to upsell and cross-sell products.

6 Insurance companies harnessing technology to improve performance

Media reports suggest that a consortium of 15 life insurers in India, in collaboration with Cognizant, have developed a block-chain solution to facilitate data sharing across all insurers. This move is aimed at reducing risk of breaches in data, fraud and money-laundering; and providing customer services. HDFC Life has launched Elle, a website chat-bot that will be able to address policyholder's queries such as policy details, requests for premium receipts and other statements using artificial intelligence. Reportedly, the company has also launched a new data platform called Atom on Amazon Web Services which educates the customers about the benefits of life insurance and assists them in buying policies digitally.

5 PNB MetLife goes ahead for listing

Media reports suggest that PNB MetLife is planning to go ahead with its IPO plan. Reportedly, the company would be filing its offer document with the regulator soon. PNB MetLife is a joint venture between Punjab National Bank and MetLife with holdings of 30% and 26%, respectively; along with other stakeholders. It will be the fourth life insurance company in India to list on stock exchanges.

4 Key appointments at the IRDAI, ICICI Prudential Life and SBI Life

The IRDAI has recently appointed former IAS officer Mr. Subhash Chandra Khuntia as the Chairperson, succeeding Mr. TS Vijayan who completed his five year term. Reportedly, Mr. NS Kannan has been appointed as Managing Director (MD) and Chief Executive Officer (CEO) of ICICI Prudential Life, subject to regulatory approvals. He has previously served as Chief Financial Officer of ICICI Bank and Executive Director of ICICI Prudential Life. Further, Mr. Sanjeev Nautiyal has been appointed as MD and CEO of SBI Life, replacing Mr. Arijit Basu who has been appointed as MD of the parent company, State Bank of India.

3 Update on potential transactions

Following news have been reported on potential transactions in the life insurance industry:

- LIC has decided to increase its stake in IDBI Bank to 51%. The buyout has been approved by the Board of LIC. Reportedly, the IRDAI has approved the deal, allowing the insurer to hold a stake above the regulatory threshold of 15% on the condition that the company would bring the stake down back to 15% over the next few years. The deal will also require an approval from other regulatory bodies, SEBI and RBI.
- Generali has expressed interest in increasing its stake in Future Generali for both its life and non-life insurance ventures from 25.5% to 49% as part of its strategic expansion plan in Asia. As per reports, through this move, Generali may commit up to approximately INR9.5 billion to the partnership. Reportedly, the transaction is expected to close during the second half of 2018 subject to necessary regulatory approvals.

2 New business premium collection: Life insurers register a moderate growth of 12.4% in new business premium collection in FY2017-18

As per statistics released by the IRDAI, weighted new business premium (measured as 100% of regular premium and 10% of single premium) collections for the life insurance industry amounted to INR796.1 billion during April 2017 to March 2018, reporting a growth rate of 12.4%, compared to 18.8% recorded in previous year. Private insurers have outperformed state-owned LIC by achieving a growth of 17.4% leading to an increase in their market share from 49.1% in FY2016-17 to 51.3%. LIC has registered a growth of 7.5%. SBI Life has retained its top position amongst private insurers, posting a growth of 27.5%, year-on-year. The top 5 private insurers (SBI Life, ICICI Prudential Life, HDFC Life, Max Life and Kotak Life) displayed robust growth capturing 67% market share amongst private insurers.

1 Warburg Pincus buys Legal & General's 26% stake in IndiaFirst Life

Warburg Pincus has acquired 26% stake in IndiaFirst Life by investing close to INR7.1 billion, reportedly. The deal values the insurer at INR27.3 billion. IndiaFirst Life is a joint venture between Bank of Baroda and Andhra Bank, which hold 44% and 30% respectively. Legal & General which held the remaining 26% exited the venture by selling off its entire stake. Various other companies had shown interest in the stake such as General Atlantic LLC, Ergo International AG, Manulife Financial Corp and Fairfax.

Written by



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"Mr. Vivek is a Managing Partner, Willis Towers Watson Actuarial Advisory LLP."

ANNOUNCEMENT

2nd Seminar on Data Science & Analytics

Planned by: The Working Group on Wider Areas of Actuarial Science
Date: 20th August, 2018 **Venue:** Hotel Pllazio, Gurugram

Background:- Seminar on Data Science & Analytics is an event of the Institute of Actuaries India, focusing on Actuarial applications in the Data Science and Analytics domain. The objective of the seminar is to create awareness among the actuarial members and anybody interested in the field of Data Science, Analytics, and disruptive technology on the convergence of actuarial science with data science. Actuaries have long been viewed as Insurance and Pension specialists. However Actuaries are professionals with multi-dimensional skillset like mathematics, statistics, accounts, modeling and business. Actuaries can also be called as the earliest data scientists who have been applying modeling and analytics on data and deriving business insights. The advent of Big Data Analytics and Data Science domain coupled with technological revolutions like machine learning, artificial intelligence, etc have enabled the exponential possibilities for actuaries to contribute not only in the traditional domain but also beyond. This one-day seminar will help participants to understand and appreciate the current developments in the field of Data Science and analytics in various domains and enable them to apply actuarial knowledge with a novel touch. The participants will have an opportunity to interact with Industry experts, practitioners and technology experts working in leading organizations. The content, in large parts is non-actuarial, non-technical and hence of relevance to the non-actuarial audience as well.

Seminar Topics & Speakers :-

- Democratizing Data Intelligence – Subhas Chandra, Singular Labs Inc, Ex- Google, SAP, IBM
- Big data in Insurance - Manoj Kumar Chhatlani, IRDAI
- The Art of Data Science: how its changing now and shaping future - Khushwant Pahwa, KPAC
- The Changing Landscape of Actuarial Profession - Mahidhara Davangere V., Pramartha
- Data Science and emergence of a Multidisciplinary Professional (Panel Discussion)
- Case study and break-out sessions - (Working Group Team Members)

General Points:-

- Registration Fees (Excluding 18% GST):
  Students & Associate Members: ₹2,000/-
  Affiliate & Fellow Members: ₹4,000/-
  Non-Members: ₹4,800/-
- CPD Credit for IAI members: 6 hrs. Technical (As per APS 9 -Rev. Ver 2)
- Point of contact: Ambreen@actuariesindia.org

1st Capacity Building Seminar ON IFRS 17

Organized By: Working group on IFRS 17
Date: 24th August, 2018 **Venue:** The Westin Mumbai Garden City, Mumbai

Background:- The International Accounting Standards Board on 18th May 2017 issued the new standard IFRS 17 – Insurance Contracts. This Standard sets the "rules" for determining the liabilities for insurance contracts. The developments around release of IFRS 17 have resulted in IRDAI reviewing the position of implementing the Standard in India and the adoption of this Standards will be effective 2020-21. The implementation of IFRS 17 or Indian alternative IndAS 117 will impact measurement and reporting of financials not just from an actuarial perspective but also at an overall Company or Industry's perspective. Under IFRS 17, the financial reporting process, of which the actuarial calculations are one part, it will be a combined actuarial and finance competence. Data, systems, process and people will need to be integrated, and for the actuaries working in financial reporting, a greater understanding of the end-to-end financial reporting process is required. In this seminar, which will be first among the series of such capacity building seminars, we will hold sessions to demystify the Standard, required preparedness for transition including systems, processes etc, issues in implementation and panel discussion to discuss the way forward how we as a profession come together to support the common issues so that the industry is prepared to be compliant by 2021.

Seminar Topics:-

1. Demystifying IFRS 17
   a. Brief overview of the standard highlighting the changes and terminology used in the standard
   b. How it impacts different line of business.
2. Prepare for transition- where and how to start?
   a. Top 5 things that the company should be looking while preparing for transition
   b. Concerns of CFO/Actuary/CIO/CEO/shareholders?
   c. Steps involved in transition
   d. Documentation or governance or policies required.
3. System- Finance/Investment/Actuarial systems- required modifications?
4. Panel discussion on how to implement within the timeline and how we (or profession- both CA/Actuarial) could come together in addressing common issues?

General Points:-

- Registration Fees (Excluding 18% GST):
  Students & Associate Members: ₹2,500/-
  Affiliate & Fellow Members: ₹5,000/-
  Non-Members: ₹6,000/-
- CPD Credit for IAI members: 6 hrs. Technical (As per APS 9 -Rev. Ver 2)
- Point of contact: Ambreen@actuariesindia.org

Role of actuaries in the broking firm

Technological advancement and the emergence of new modelling and numerical analysis firms outside of traditional actuarial entities could be a potential threat to actuaries. But statistical devices cannot make up for the insurance expertise held by actuaries.

Actuaries have unique expertise in the insurance industries that allow them to incorporate those advanced data models into an insurance broking business.

Role of Actuaries in Broking Firms

It's not always easy to take a step back from your business and assess your operations without bias. Often it takes an independent eye to point out company strengths and flaws.

When you have a legitimate independent, third-party entity looking at operations and giving their opinion, that might carry more weight with the insurance company and the regulator than the company's internal perspective and analysis.

For broker accounts, the primary focus of the actuary's role is assisting the broker in structuring an insurance program for the client. The broker is the individual responsible for the solicitation of actuarial work from clients and initiates the request to prepare an actuarial study for the client.

An actuary can assist Life brokers in meeting the clients' goal by assessing the following areas:

- Communication with the client and broker
- Analysing clients' current assets and income
- Analysing clients' current and future liabilities
- Projections of assets and liabilities
- Asset Liability matching in different scenarios by selecting insurance products based on his liability profile
- Preparing the report for the clients

An actuary can assist Non-Life brokers in meeting the clients' goal by assessing the following areas:

- Communication with the client and broker
- Preparing the loss projections based on the clients risk profile
- Provide careful wordings while formulating a policy for the client
- Negotiating with the insurer(s) to get the best quotes
- Preparing the report for the clients

This gives a broad idea on how the actuaries can help the brokers to facilitate their clients by doing in-depth analysis of the data as they are experienced in handling data and doing future projections.

The Actuary as Communicator

Probably the most important role the actuary plays in a brokerage firm is communicator of technical information. The actuary must communicate with two audiences, the broker and the client. The broker must have a solid understanding of the assumptions and techniques that were employed in the report. The broker uses the study to design the insurance program for the client. If the broker has a thorough understanding of the study, then the broker can better serve the client in the design of an insurance program. This can be vital information in the brokerage process.

The Actuary as a Resource for Brokers

The actuary has the responsibility in the brokerage firm to keep the brokers aware of changes in the actuarial environment. The medium to convey the information can range from a phone call to a seminar. Some examples are:

- Change in the economic assumptions e.g. interest rates
- Change in the regulations and interpretations of the regulations
- Effect of change in the regulations on the clients
- Change in the tax laws
- Changes in the clients' requirement because of new technology etc.

Summary

This paper has attempted to briefly explore some of the many roles an actuary can play in an insurance brokerage firm. I believe, as has been shown in this paper that the actuary plays a very important role in the brokerage firm and as the market hardens (and it will someday) the importance of the role of the actuary will increase.

Written by



Mr. Manoj Kumar Chhatlan

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"Mr. Manoj is a Fellow Actuary from IAI. He currently leads the Inspection team at MRO, Inspection Department of IRDAI. He is a member of working group on Actuaries in wider areas."

An Overview of Life Insurance Market in Nepal

This article provides a brief description of the life insurance market in Nepal which covers insurance evolution and penetration, market players, industry composition, financial highlights, insurance products available, expenses and claims experience and the recent developments in the Nepal market.

Evolution of Insurance in Nepal

The history of insurance practices evolves with "Guthi System" which is the joint family culture that has been prevalent from ancient times in Nepal. This system has provided security and assistance to individuals and families in times of need. It is a kind of trust where lands and money are allocated from different sources for religious and charitable purposes. Hence, this trust was referred as Guthi and this money or lands were utilized for a needy purpose, which was called as a Guthi system. In other words, this was practical system of gathering properties or assets from a state or people and using in future for some social cause. 'Guthi' is derived from Sanskrit word 'Gosthi' that refers to an association or an assembly. But changes to the social structure, modernization and growth of various small-scale industries brought the necessity of insurance companies in Nepal to insure any loss and damage.

In 1937, to meet the growing economic and social development Nepal Bank Limited was established as the first bank of the country. However, there were no locally owned insurance companies and Indian insurance companies had established their presence in the country and thus the premium collected was taken to a foreign land to be managed. To stop the strong presence of foreign insurance companies in local market, "Maal Chalani ra Bima Company" was established under the ownership of Nepal Bank Limited in 1947, which was renamed as Nepal Insurance and Transport Company in 1959 and further renamed as 'Nepal Insurance Company Limited". It was the first local insurance company ever established in Nepal.

The establishment of democracy in Nepal brought a rapid economic and social revolution and in result, many industries began to establish. Investment began to increase in education, trade and transport. Many Indian insurance companies started to have dominance in the Nepalese market as Nepalese insurance company had limited sources and was still in infant stage. To meet the demand of increasing need of modern insurance company, Nepal government established 'Rastriya Beema Sansthan Private limited'. Later, it was converted to Rastriya Beema Sansthan in 1968. (Insurance Board Nepal) Beema Samitee was also established in 1968. "The word 'Beema' means 'Insurance' and 'Samiti' means 'Board' in Nepalese language. Hence, the word 'Beema Samiti' is synonymous to Insurance Board, which is constituted to systematize, regularize, develop and regulate the insurance business within the country under Insurance Act, 1992" (Insurance Board Nepal).

Deposit Insurance and Credit Guarantee Corporation were established in 1974 and General Insurance Company in 1968. These were the first private insurance companies in Nepal. After the restoration of democracy, the government initiated economic liberalization in the country and as a result, many private insurance companies were introduced. There are 26 insurance companies registered in Nepal of which 17 are general insurance companies and 9 are life insurance companies until 2017.

Demographics & Background

Nepal, officially the Federal Democratic Republic of Nepal, is a landlocked central Himalayan country in South Asia. Nepal is divided into 7 states, inhabiting a population of 29.3 million and is the 93rd largest country by area. Some quick facts about the Nepal population are as follows:

Data	Size
Population	29.3 million
Population Growth Rate	1.18%
Sex Ratio	0.98
% of Population Under Age 15	34.6%
% of Population Between Age 15-64	61.1%
% of Population 65+	4.4%
Total Life Expectancy	66.2 years (M:64.9, F: 67.4)
Literacy Rate	64.9% (M: 75.5%, F: 55.11%)

Thus, it can be observed that the Nepal population pyramid is of an expanding type. This type of pyramid is common for developing countries with high birth and death rates. Relatively short life expectancy, as well as low level of education and poor health care characterize such kind of population age distribution model. It must be noted that the value of more than 50% of population between age 15-65 indicate that the pressure on working population in Nepal is relatively high to provide a living for themselves and cover expenditure on children and aged persons.

Insurance is considered a sector with vast potential in Nepal as the penetration of insurance is just 1.31 percent of the GDP at present. According to the Financial Inclusion Roadmap 2017-2022 prepared jointly by The Centre for Financial Regulation and Inclusion (CENFRI), Finmark Trust and United Nations Capital Development Fund (UNCDF), 80 percent of the adult population of Nepal do not have any type of insurance coverage. As per Insurance Board (IB), the access to insurance in the country currently stands at 12 percent combining both life and non-life insurance coverage. Estimates put just around 5 percent of the country's population to be covered by life insurance policies at present.

The awareness of insurance among the general people has remained low despite the fact that the first insurance company was established during the Rana regime in 1947. Nevertheless, with an estimated present market size of around ₹ 48 billion, the Nepali insurance sector has seen remarkable growth in the post-liberalisation era that started after the political change of 1990. From just five companies in 1992, the number has climbed to 26 over the last two and a half decades (this excludes the license of new companies in 2017).

Insurance Market

The life insurance market in Nepal comprises of 9 insurers namely National Life Insurance Company, Nepal Life Insurance Company, Met life Insurance Company, Life Insurance Corporation (Nepal), Asian Life Insurance, Surya Life Insurance, Gurans Life Insurance and Prime Life Insurance. The government-owned Rastriya Beema Sansthan is also in the life insurance business.

Ownership Structure	No. Of Insurers	Name of Insurers
Private Sector	6	National Life Insurance, Nepal Life Insurance, Surya Life Insurance, Prime Life Insurance, Asian Life Insurance, Gurans Life Insurance
State Owned	1	Rastriya Beema Sansthan
Foreign	1	MetLife
Joint Venture	1	LIC Nepal
Total	9	

All the insurers except Rastriya Beema Sansthan have been considered for the purpose of analysis, this is due to unavailability of data for Rastriya Beema Sanstha. The financial highlights for all the insurers have been produced below for a quick comparison. It can be observed that Nepal Life Insurance Company demonstrates a strong financial position amongst the insurers followed by National Life Insurance Company and LIC Nepal, emphasizing a greater need for smaller insurers such as Gurans Life Insurance, Surya Life Insurance to strengthen their position. Although some insurers have outperformed the others, the Insurance penetration overall seemed to have increased, as we note a positive trend in increase in Net Premium (on average by 32%) and Net Profit for all insurers.

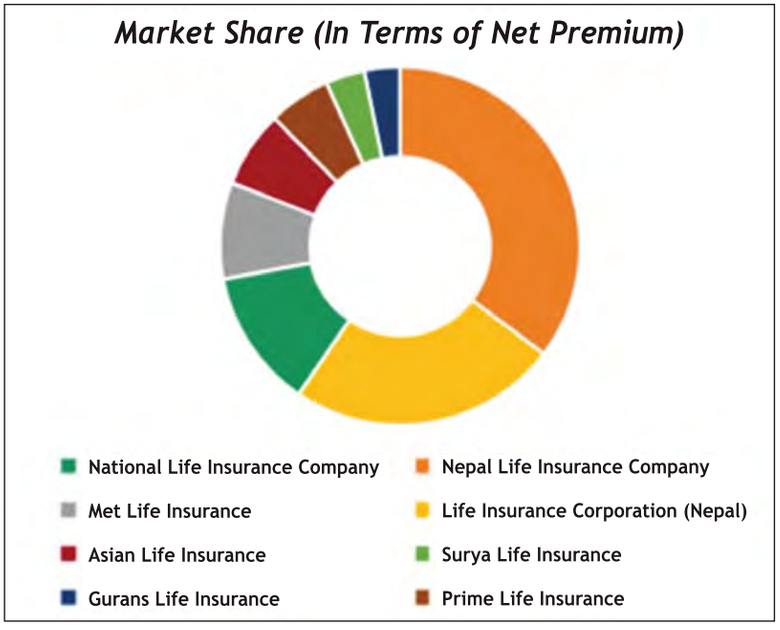
(In Million)	National Life Insurance Company			Nepal Life Insurance Company		
Financial Highlights	2015/16	2014/15	Growth %	2015/16	2014/15	Growth %
Paid Up Capital	1,325	1,019	*30%*	2,168	1,734	*25%*
Reserves and Surplus	378	386	*-2%*	841	491	*71%*
Life Insurance Fund	14,316	11,920	*20%*	31,405	23,291	*35%*
Long Term Investments	4,670	2,373	*97%*	5,420	6,137	*-12%*
Net Premium	3,601	2,887	*25%*	10,135	7,974	*27%*
Net Profit	350	264	*33%*	907	528	*72%*

(In Million)	LIC Nepal			Asian Life Insurance		
Financial Highlights	2015/16	2014/15	Growth %	2015/16	2014/15	Growth %
Paid Up Capital	1,069	856	*25%*	671	671	*0%*
Reserves and Surplus	409	348	*18%*	282	194	*46%*
Life Insurance Fund	26,484	20,248	*31%*	7,744	5,855	*32%*
Long Term Investments	5,489	5,043	*9%*	6,992	5,240	*33%*
Net Premium	6,958	5,328	*31%*	2,000	1,641	*22%*
Net Profit	321	249	*29%*	106	31	*239%*

(In Million)	Gurans Life Insurance			Prime Life Insurance		
Financial Highlights	2015/16	2014/15	Growth %	2015/16	2014/15	Growth %
Paid Up Capital	550	500	*10%*	488	488	*0%*
Reserves and Surplus	187	171	*9%*	739	557	*33%*
Life Insurance Fund	2,222	1,516	*47%*	3,583	2,639	*36%*
Long Term Investments	63	200	*-68%*	1,022	777	*32%*
Net Premium	925	678	*36%*	1,606	1,278	*26%*
Net Profit	76	37	*105%*	209	121	*73%*

(In Million)	Met Life Insurance			Surya Life Insurance		
Financial Highlights	2015/16	2014/15	Growth %	2015/16	2014/15	Growth %
Paid Up Capital	-	-	*0%*	500	500	*0%*
Reserves and Surplus	892	578	*54%*	257	142	*81%*
Life Insurance Fund	11,177	9,923	*13%*	1,646	1,051	*57%*
Long Term Investments	2,173	758	*187%*	751	751	*0%*
Net Premium	2,493	1,960	*27%*	1,010	623	*62%*
Net Profit	344	68	*406%*	132	22	*504%*

As at 15th July 2016, Nepal Life Insurance Company succeeds to be at the forefront by holding 35% of market share in terms of Net premium. Other significant players include National Life Insurance Company and LIC Nepal and the consolidated holding by these three companies contribute to almost 72% of the market share. The other 5 insurers contribute to the remaining 28%, each contributing minor in the range of 3%-8% towards the market share.



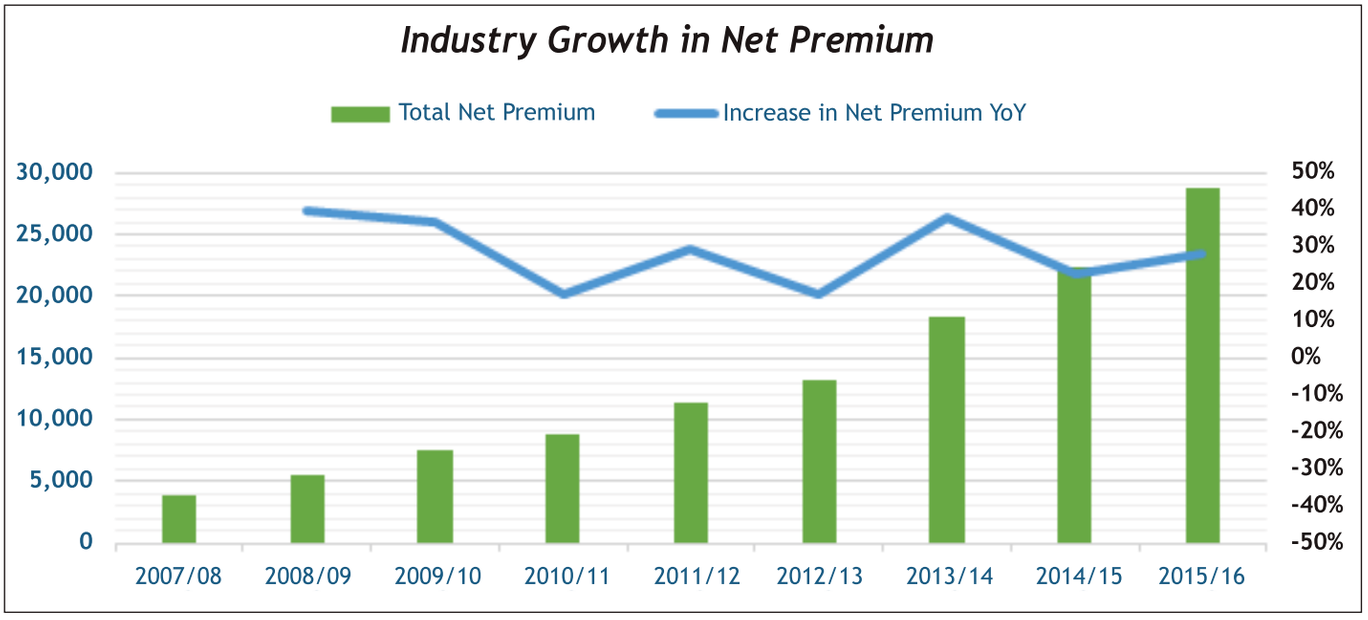
Insurance Products

Insurance companies in Nepal have various types of insurance products for Nepali policyholders. Life insurers have been selling a range of policies such as whole life policy, term life insurance, endowment plans, money back plans, accident and health related policies, children insurance plans, group insurance/employee benefit, among others. Various riders such as Accident, Total and Permanent Disability, Premium Waiver Benefits, Critical Illness are also offered along with the main products. Other than the traditional products, Foreign employment, micro insurance, annuity plans and other innovative products are trending in the Nepal markets. For example: NLIC, for instance, introduced the one-year 'Smart Life Insurance'

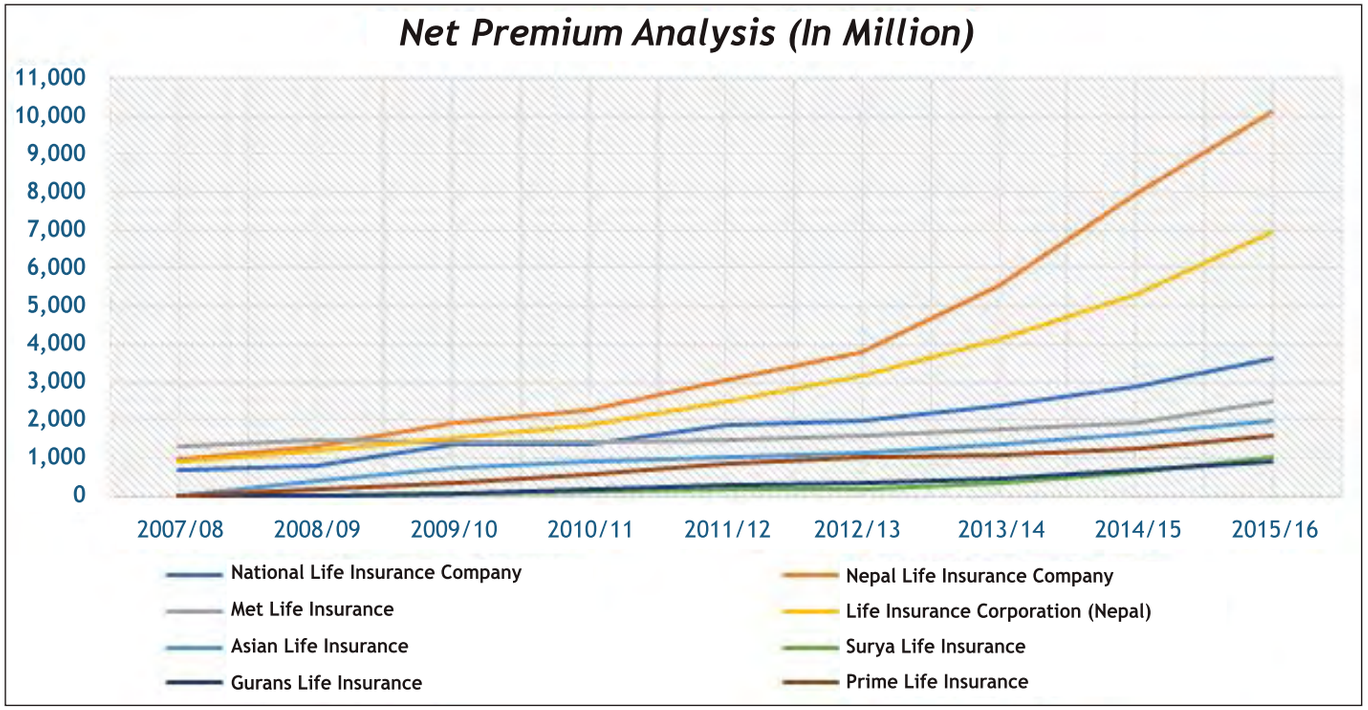
scheme under which the company will provide ₹ one million to the nominees if a policyholder dies during the policy period. The insured are required to deposit ₹ 10 per day.

Industry Growth

The life insurance market in Nepal has increased from ₹ 3.9 billion (In 2007/08) to ₹ 28.7 billion (In 2015/16), growing by an average of 29% year on year in term of Net/Gross Premium.



The growth story of individual insurers has been displayed below to distinguish better the aggressive players from the mild ones.

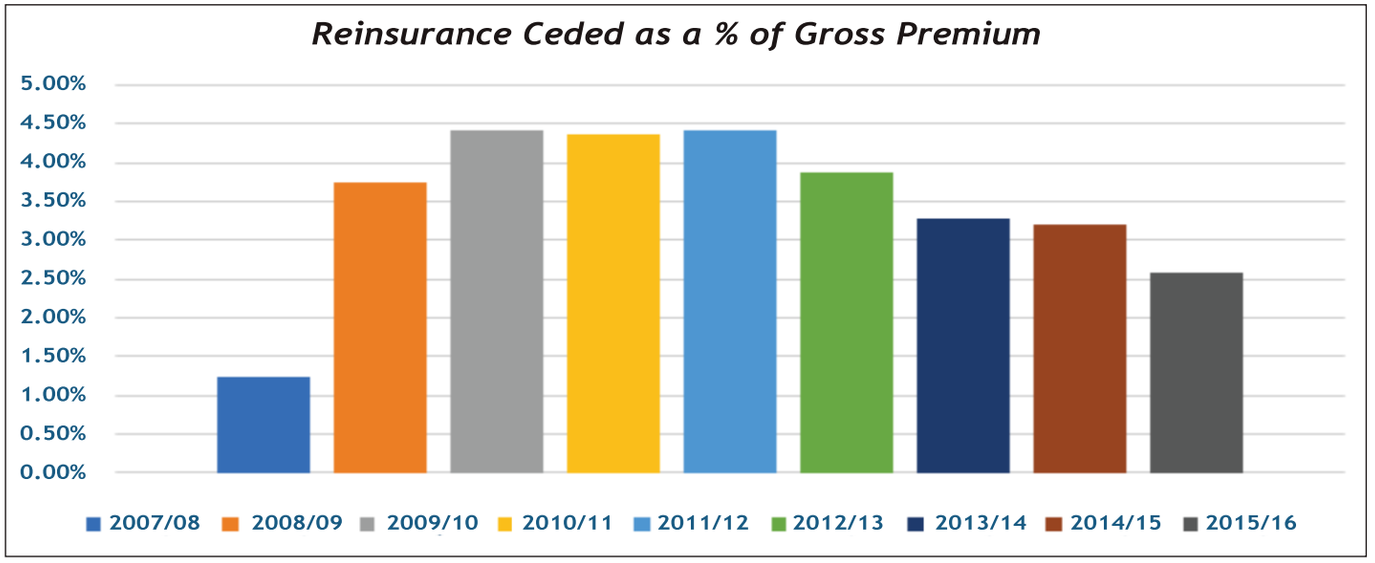


Reinsurance

Reinsurance is insurance that is purchased by an insurance company directly or through a broker as a means of risk management for risk transfer, lower capital requirements, income smoothing, tax mitigation and others. The ceding company and the reinsurer enter into a reinsurance agreement which details the conditions upon which the reinsurer

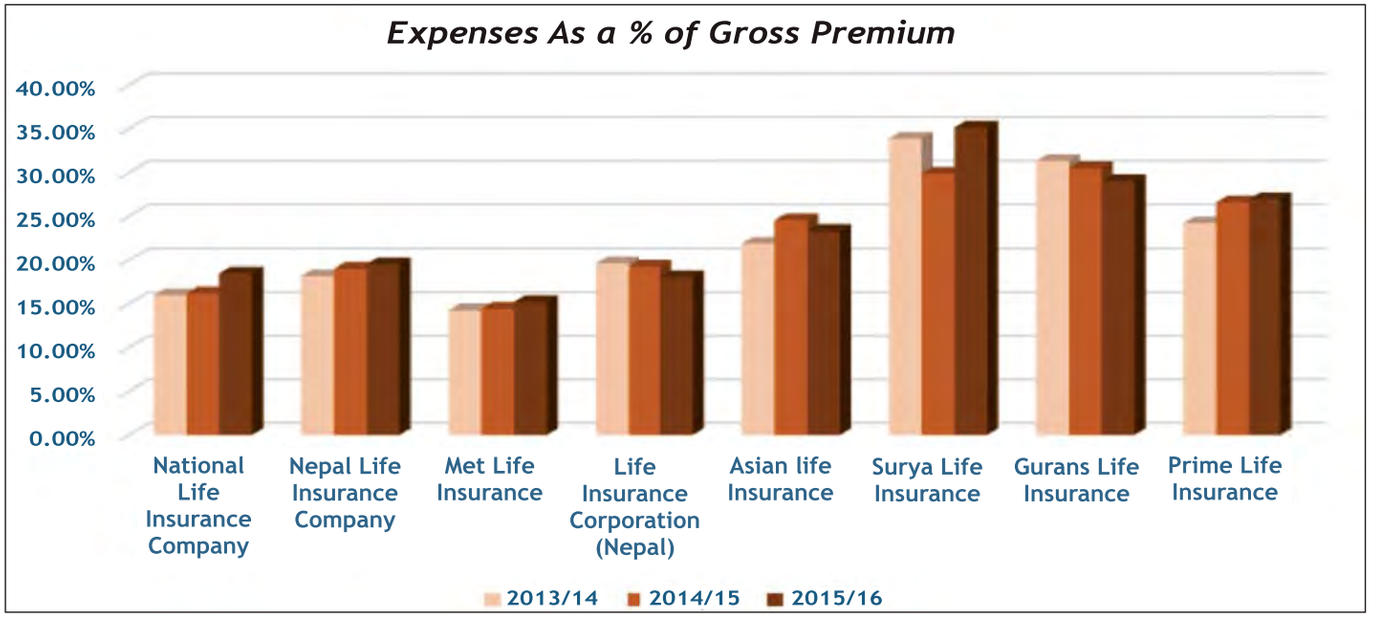
would pay a share of the claims incurred by the ceding company. The reinsurer is paid a "reinsurance premium" by the ceding company, which issues insurance policies to its own policyholders. There are two basic methods of reinsurance: a) Facultative Reinsurance - which is negotiated separately for each insurance policy that is reinsured, b) Treaty Reinsurance - which means that the ceding company and the reinsurer negotiate and execute a reinsurance contract under which the reinsurer covers the specified share of all the insurance policies issued by the ceding company which come within the scope of that contract.

While there is domestic reinsurer- Nepal Reinsurance Company Limited which has been established fairly recently and foreign reinsurers such as Hannover Re, Munich Re, Swiss Re and others, the reinsurance ceded as a % of Gross Premium remains lows at an average of 3.46% over the previous nine years.



Expenses

Controlling expenses is one of the pivotal aspects of conducting life insurance operations. Insurers worldwide are struggling to control and manage expenses to improve profitability and reduce the capital strain. Also, higher expenses result in lower return for the policyholders making it unfair and unattractive. Agent commission, Medical Fees, other Direct Expenses and Management expenses charged to the Revenue Account are considered for the analysis below. Agent Commissions are regulated as per Schedule 10, Insurance Regulation 2049 (1993) by Beema Samiti. It can be noted that the industry average for the previous 3 years stands at 19.74% of Gross Premium, with Surya Life Insurance exceeding the list with an average of 32.96% and Met Life being the lowest at an average of 14.61%.



In order to control the expenses, in 2015-16 Beema Samiti has instructed to all Life Insurance Companies to limit their Management Expenses on the basis of gross premium collection as per the enlistment: -

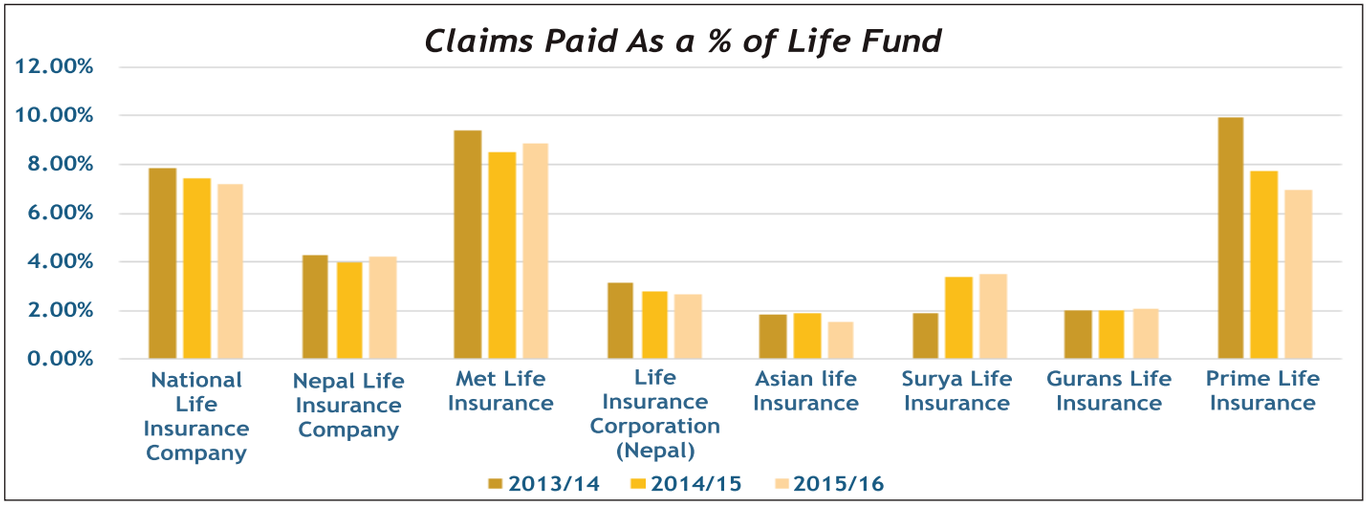
Life Fund (₹)	Management Expenses
Upto 200 Crore	16%
200 To 500 Crore	14%
500 To 900 Crore	12%
900 To 1400 Crore	7.5%
Above 1400 Crore	7%

According to this circular, Met Life Insurance Company, LIC Nepal and Asian Life Insurance Company seems to have managed management expenses within limits, while the others would have to take measures to maintain management expenses.

As at 15th July 2016	Management Expenses (As a % of Gross Premium)	Life Fund (In Crore)	Restriction as Per Circular	Status
National Life Insurance Company	8.54%	1,431.63	7.00%	ACTION REQUIRED
Nepal Life Insurance Company	8.22%	3,140.52	7.00%	ACTION REQUIRED
Met Life Insurance	6.60%	1,117.75	7.50%	EXPENSE WITHIN LIMITS
Life Insurance Corporation (Nepal)	5.93%	2,648.44	7.00%	EXPENSE WITHIN LIMITS
Asian Life Insurance	11.61%	774.43	12.00%	EXPENSE WITHIN LIMITS
Surya Life Insurance	20.12%	164.60	16.00%	ACTION REQUIRED
Gurans Life Insurance	14.40%	222.17	14.00%	ACTION REQUIRED
Prime Life Insurance	16.17%	358.31	14.00%	ACTION REQUIRED

Claims Paid

The shareholders of an insurance company would be extremely keen to observe how the claims experience turns out since it would directly influence the profitability, reinsurance arrangements, underwriting practices and liquidity considerations. Claims Paid comprises of death claims, maturity claims, survival benefits and surrender benefits. The death/maturity/survival benefits are made as per the contractual obligations and surrender benefits are likely to be based according to the company's Surrender Value methodology approved by regulator. Claims Paid as a % of Life Fund is an interesting ratio to demonstrate the emergence of claims experience year on year reflecting stability or fluctuations in the benefit pay-outs. Met Life Insurance and Prime Life Insurance seem to have the highest claim payouts, reflecting the poor mortality experience or writing shorter term products with higher maturity/survival payouts. LIC Nepal, Asian Life Insurance and Gurans Life Insurance seems to have a better claims experience than its peers. Industry experience averages roughly around 5% of the life fund towards meeting claim pay-outs each year. Higher claims ratio is observed for National Life Insurance, Met Life Insurance and Prime Life Insurance.



Economic Environment

Nepal lies between the two big countries China and India which represent the world's two largest and fastest emerging economies. Their bilateral trade has continuously grown over the past two decades. The largest exporter and importer are doing their economic transactions where Nepal lying in-between them has lots of business opportunities. The Gross Domestic Product (GDP) in Nepal has increased by 7.50 percent in 2016 from the previous year. GDP Annual Growth Rate in Nepal averaged 4.38 percent from 1993 until 2016, reaching an all-time high of 8.60 percent in 1993 and a record low of 0.10 percent in 2001.

As compared to other Asian countries, the Nepalese bond market is not well developed, and the investors and borrowers still prefer bank loans against the bonds. The bond market of Nepal is yet to develop in terms of investor awareness, integration of efforts for bond market development among the regulatory body, issuers and traders and proper implementation of regulatory framework. Even within the bond market, the government bond composes higher proportion than that of corporate sector. The government bond is issued by Nepal Rastra Bank and traded in NEPSE (secondary market). The government bonds issued in Nepal are categorized under five types: Development Bond (DB), Citizen Saving Bond, Foreign Bond, Special Bond and National Saving Bond.

The equity market in Nepal is characterized by low liquidity, high concentration and volatility. The trading is observed to be infrequent- further hampering the liquidity. It is observed that investors seem to trade on market sentiments rather than on any fundamental analysis. NEPSE is Nepal's only stock exchange market.

Regarding interest rate provided to the depositors, returns on deposit are higher than the rates of return provided to the investors (bond holder) by same banks for the same maturity period. Due to lack of trading in secondary market investors have limited choice i.e. to buy bond when it is issued and hold until the maturity date. That's why although corporate bond provides higher rate of return than fixed deposits it is not able to lure investors toward buying bonds.

The benchmark interest rate in 2017 remains at 7% in Nepal. While Nepal Rasthra Bank is the central bank of Nepal, there are various Commercial Banks (Class A) such as Siddhartha Bank Limited, Nepal Bank Limited, Rastriya Bank Limited, Himalayan Bank Limited, Everest Bank Limited and others that offer higher interest rates on deposits. The below table shows the fixed/recurring deposits by Nepal SBI Bank Limited and one of the commercial banks.

Duration	Nepal SBI Bank	Commercial Bank*
≥ 1 month and < 3 months	4.60%	9%
≥ 3 months and < 6 months	5.55%	10%
≥ 6 months and < 1 year	8.00%	11.5%
≥ 1 year and < 2 years	9.75%	11.25%
≥ 2 years and ≤ 3 years	8.50%	8.5%
> 3 years and ≤ 10 years	7.75%	7.5%

** Name of Commercial Bank undisclosed*

Such lucrative interest rates on short term deposits (1-2 years) and unavailability of longer term securities are likely to distort the investment objectives of an insurer, who most likely would weigh short term investment gains more highly than a longer-term liability match, thus fostering asset liability mismatch problems. Thus, annuity products are rare in Nepal market. A falling interest rate environment would pose a significant risk, since the insurers will find it increasingly difficult to meet the cost of guarantees.

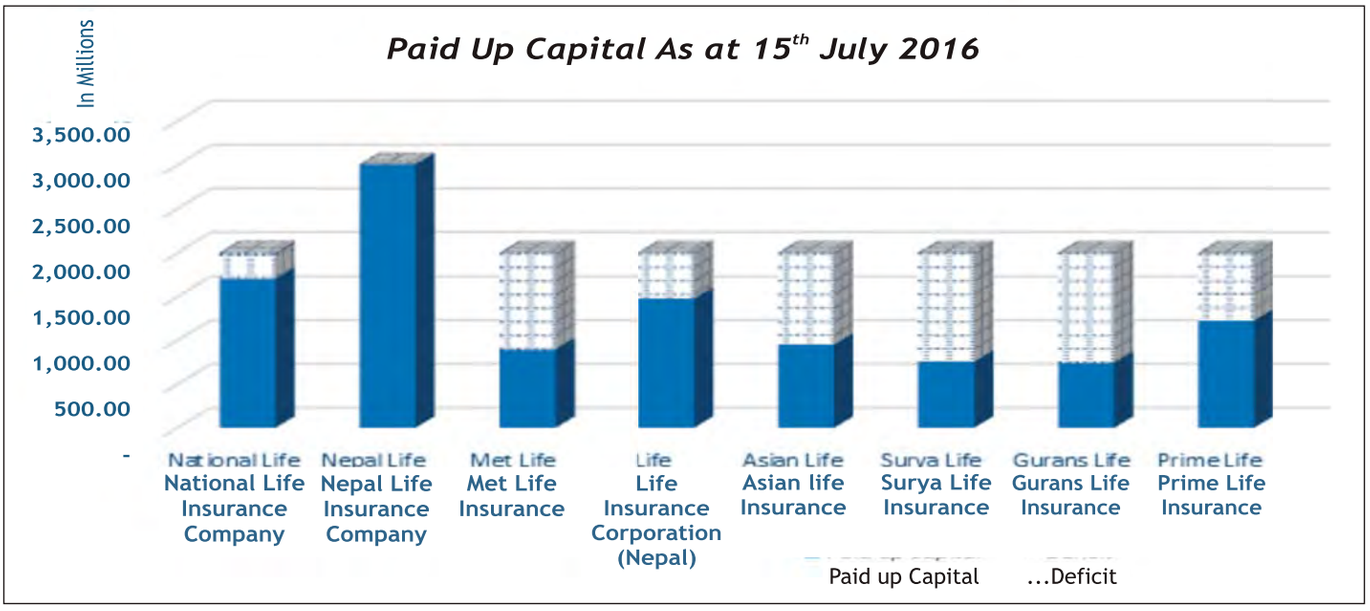
Recent Updates

In 2017 Nepal's life insurance scene was set to witness intense competition with an entrance of new companies readying to join the market. The government has given the go-ahead to 10 life insurance companies to begin operations, bringing their total number to 19. The new entrants are Citizen Life Insurance, Star Life Insurance, Sun Nepal Life Insurance, Sanima Life Insurance, Reliance Life Insurance, Reliable Life Insurance, IME Life Insurance, Mahalaxmi Life Insurance, Jyoti Life Insurance and Union Life Insurance.

According to the Insurance Board (IB), the insurance sector regulator, 12 companies had applied for permits, among which two were rejected as they did not meet the standards required by the Insurer Registration and Insurance Operation Directive, 2073 (2016) which was issued on March 31. The companies have been given six months to set up and organise their respective businesses that are subject to be monitored by the IB before the insurers start operations.

The IB instructed life and non-life insurance companies to boost their paid-up capital fourfold. Life insurers are required to increase their paid-up capital to ₹ 2 billion from ₹ 500 million and non-life insurers are required to increase their capital to ₹ 1 billion from ₹ 250 million. The board has given insurance companies until mid-July 2018 to fulfil the requirement. The rationale behind insurance companies raising their paid-up capital is to enable them

to expand their business, increase the retention amount and make it easier to settle claims during the catastrophes like the recent earthquake. The analysis below shows the paid-up capital for the existing insurers as at 15th July 2016 and additional capital required to raise the capital to ₹ 2000 million.



** The capital represents the Paid-up Capital and the Reserves & Surplus (Free Assets)*

It can be observed that all the insurance companies except Nepal Life Insurance Company seem to have concerns regarding capital requirements and thus may want to reassess their business models to incorporate the capital injections and increased competition.

Currently the government is working to amend the existing Insurance Act,1992.

- The draft act proposes to make insurers maintain their total assets at a higher level than their liabilities. "Insurance companies will have to maintain their solvency margin (the ratio between total capital and total liabilities) at not less than 1.5," says the draft act.

- Micro insurance is being seen as a tool to increase insurance in Nepal. The government led by former Prime Minister KP Sharma provisioned the micro insurance programme in the budget for FY 2016/17. Under this, both life and non-life insurers are mandatorily required to provide at least 5 percent services in micro insurance out of their total services. The programme sets out to minimise the financial risks associated with agriculture, cattle/livestock and other small rural businesses. IB has already introduced the Micro Insurance Directives in 2014 which has set the insurance policy amount at a range of ₹100,000 - ₹200,000 with the annual premium being 0.1-5 percent. According to a source at the Ministry of Finance, the new insurance bill will have a provision for the licensing of micro-insurance companies.

- Similarly, insurance companies will have to reassess their financial position including assets and short and long-term liabilities annually and submit a report to the regulator. The assessment must be done by a person licensed by the IB.

- Likewise, companies found selling insurance policies without a licence will be penalised, their assets will be confiscated, and the proprietor will be fined a sum equivalent to three times the company's worth and jailed for three to 10 years.

The new amendments and entrance of new players seem to boost the life insurance business in Nepal.

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Analysis of Surplus - Part IV

While going through this article, keep the Excel File "CASHFLOW-ENDOWMENT" open. The **hyper link** to this file is given below. Click on this Link, keeping the **"Ctrl"** key pressed. The Excel File will get downloaded from the Web Site. But you **may not be able** to navigate within the Excel Sheets. On top of the Excel Sheet displayed, you will **find a box with the Caption, "Open With" and a downward arrow. Click on the arrow and choose the Option "Google Sheets"**. The Excel File will open again and you would be able to navigate within the file.

The Excel file, "CASHFLOW-ENDOWMENT", is in MS Office format. Till now, this format was being accepted in the Google Blog. It appears that now the format has to be either Adobe or Google Sheet. So, the file "CASHFLOW-ENDOWMENT" has to be first converted to Google Sheet format.
https://drive.google.com/file/d/1RnpAMIcoyoNoVKXAziGiXRfVXvTYDqir/view?usp=sharing

Real Life Situations

74) The method of analysing surplus has been demonstrated in the foregoing sections through simple examples, by taking just one policy and using policy year instead of financial year. In real life situations,

- One will have to handle not just one policy, but millions of policies.
- What has to be analysed is the surplus emerging in the valuation at the end of a financial year, not at the end of each policy year. The policy year and financial years may coincide only under an insignificant proportion of policies.
- The valuation basis too will invariably be different from the premium basis (except in those countries where, as per regulatory requirement, it has to be the same as the premium basis). So, while analysing surplus, the base will be the assumptions involved in the previous valuation.
- Under a majority of the policies, the mode will be quarterly or monthly and not yearly as given in the examples.
- Maximum number of lapses will occur in the first policy year, after payment of just one or two quarterly premiums.

How to adopt the theoretical approach developed so far to real life situations?

75) In all the above examples, both the expected and actual values were calculated and the difference between the two determined. However, while conducting the analysis of surplus in real life situations, only the expected values of various components are determined on the basis of assumptions made in the last valuation and the actual values are taken from the revenue account.

76) When the valuation process is completed at the end of a financial year, the Office will be having the following data.

a) File containing particulars of policies that participated in previous year's valuation
b) File containing particulars of policies that participated in current year's valuation
c) File containing only particulars of policies issued during current year
d) File containing particulars of policies that lapsed during the year (both with and without acquiring paid-up value)
e) File containing particulars of policies revived during the year (policies lapsing and being revived in the same year will not however be included)
f) File containing particulars of policies that resulted into death claim during the year
g) File containing particulars of policies surrendered during the year
h) Revenue Account for the year

Premium Income and Expenses

77) Starting with the data file used in the last valuation and using the same basis as that adopted in that valuation, the expected values of premium income and expense outgo (in respect of marketing, commission and administrative expenses) can be estimated (See paragraphs 24 to 27). The corresponding actual values of these items can be obtained from the Revenue Account for the current year. While extracting information from the Revenue Account, income and outgo pertaining to policies issued in the year under consideration have to be segregated from the total income and outgo.

78) The actual premium income would have been affected by lapses and surrenders of policies and by policies being made paid-up during the financial year, revivals, variation of the actual number of claims from the expected number of claims and policy alterations. The actual premium income will invariably be less than the expected premium income and the difference between the two will affect the revenue surplus and hence the valuation surplus. It will be taken as a Negative Contribution in the Analysis of Surplus. Only when the number of revivals in a year is significantly high, the actual premium income may be higher than the

expected premium income.

79) The new policies issued during the year would not have participated in previous year's valuation. So, there will be no expected premium income or expected commission outgo or expected outgo in respect of administrative expenses in respect of these policies, but only actual premium income, commission outgo and outgo in respect of administrative expenses.

Death Claim

80) When a death claim is settled, the Revenue Surplus will get reduced by the amount of claim paid and the liability under the policy will become zero.

If the amount of claim is C, the increase in Revenue Surplus will be (- C)
If the Reserve held under the policy were R, the Increase in liability will be equal to,
(Liability after death claim – Liability before death claim)
= (0 – R) = - R

So, Valuation Surplus in respect of a death claim will be
= Increase in Revenue Surplus – Increase in Liability
= (- C) - (- R) = (R - C)

Since the amount of claim paid will invariably be greater than the Reserve held under the policy (except in the case of a few plans), (R - C) will be negative.

81) As under Premium Income and Expenses, starting with the data file used in last valuation and using the same basis as that adopted in that valuation, the **Expected** amount of Total Reserve held (say E_R) and **Expected** amount of Total Claim Outgo (say E_C), in respect of policies that participated in the last valuation can be estimated. So, the Expected contribution from death claims to Valuation Surplus will be **(E_R - E_C)**, which will invariably be negative. In fact, these expected values can be determined within a few days after completing the last valuation. This will enable us to continuously monitor the emergence of surplus during the current year.

82) The **Actual** Totals of claims outgo and reserves held can be obtained from the File containing particulars of policies that resulted into death claim during the year. The death claims in respect of new policies issued during the year have to be excluded in this process. If the **Actual** amount of Total Reserve held is, say (A_R) and **Actual** amount of Total Claim Outgo is, say (A_C), the Actual contribution from death claims to Valuation Surplus will be (A_R - A_C). This will invariably be negative. Because of lapses and surrenders and also due to the margins kept in the expected mortality rates, the actual number and amount of death claim paid will invariably be less than the expected number and amount.

Death Claim Strain

83) The difference between the reserve held (as per last valuation) under a policy resulting in death claim and the actual amount of claim paid is known as "Death Claim Strain". Invariably, the amount of claim paid will be higher than the reserve held under the policy. The Expected Strain due to death claims will be, **$E = (E_C - E_R)$** and the Actual Strain will be, **$A = (A_C - A_R)$** The Ratio of the Actual to Expected death claim strains is known as the **(A / E) Ratio** of Death claims.

84) If this Ratio is more than 90%, it would mean

- Either, The Claim Experience is quite bad and the standards of underwriting have to be reviewed
- Or, The Mortality Table used in the valuation is too light and the mortality rates have to be appropriately rated up.

The Ratio should be between 80% and 90%. This is not however a hard and fast rule. If the Ratio is very small, say 70% or less, it would mean that the Mortality Rates used are not commensurate with the actual mortality experience and the mortality rates used have to be appropriately rated down.

The difference between the actual and expected death strains will be one of the contributors to valuation deficit/surplus.

85) Why is the (A / E) Ratio calculated on the basis of Actual and Expected strains? Will it not be sufficient to find the ratio between the Actual and Expected amounts of death claims? It is because, the ratio of Actual to Expected amounts of death claims will not give any indication as to whether the claims are occurring in the early or later durations. Consider for example a group of policies issued at the same time under the 20 year endowment plan.

- If the number of death claims during the last three years before maturity increases, it is not a serious problem. The difference between the total amount of claim paid and total amount of reserve held will not be significant.
- But, if the number of death claims during the first three years from commencement increases, it may be indicative of serious deficiency in standards of underwriting. The difference between the total amount of claim paid and total amount of reserve held will be quite significant in this case..

Only the ratio of actual to expected strains due to death claims will thus clearly indicate whether the claim experience is deteriorating or not.

86) Surplus or deficit can arise not only in the case of death claim but also in the cases of Accident claim, Critical Illness claim, … etc., and also in the case of Survival Benefit claim and Maturity claim. When a policy

lapses in the year in which a survival benefit falls due, but before the due date of the benefit, the actual amount of survival benefit will be zero and so, less than the expected amount. The reverse will be the case when a policy gets revived in the year in which a survival benefit falls due. A lapsed policy may get revived in the year in which it matures. In that case, the actual amount of maturity benefit will be greater than the expected amount. A policy expected to mature in a particular year may also become a death claim before the date of maturity.

Surrenders

87) Since, in the case of LIC of India, no assumptions are made in the valuation basis regarding expected surrenders, the Expected outgo in respect of surrenders will be NIL. The actual outgo in respect of surrenders can be obtained from the Revenue account or, from the File containing records of policies surrendered during the year.

Surrender Strain

88) When a policy is surrendered the amount of surrender value paid will be an outgo and the reserve held in respect of the policy (i.e. the policy liability) will be released. Using the file containing records of policies that are surrendered during the year, determine the total reserve held under these policies, as per the last valuation and the total amount of surrender value paid. The difference between this Reserve and the actual outgo in respect of surrenders will be Surrender Strain or Surrender Surplus for the year. (It would be quite tedious to find the reserve under each policy at the time of surrender. Using the reserve held at the time of last valuation will be a good enough approximation)

89) When the Reserve held under a policy that is surrendered is less than the surrender value paid it would cause a strain, which is known as Surrender strain. At the end of each year, a Life Office should estimate the Surrender Strain, in respect of each Plan of Insurance. If it is found to be significantly high in respect a Plan it should,

- Either revise downwards the Surrender Value Rates,
- Or strengthen the valuation basis,

in respect of that Plan.

The total surrender strain/profit will be one of the contributors to Valuation deficit/surplus.

Revival Strain

90) Revival can be of two types: Revival of a fully lapsed policy and Revival of a paid-up policy. In the case of revival of a fully lapsed policy, the increase in liability due to revival will be the liability under the policy at the end of current year. In the case of revival of a paid-up policy, the increase in liability due to revival will be the difference between the liability under the policy at the end of current year and the liability in respect of the paid-up policy as at the end of last year. The revival strain will then be,

(Increase in Liability) LESS {Consideration amount received for revival (i.e. arrear premiums with interest), net of commission and expenses related to revival}

91) If the value of the above is positive, it indicates the presence of Revival Strain If it is negative, it indicates its absence. The negative Revival Strain will, in fact, contribute to surplus. Generally, revival of policies which lapsed in early durations and being revived within a few years may cause a little or no strain. But, revival of policies lapsing at later durations can cause considerable strain on Revival.

If the premium income received when a policy is revived has already been counted under "Contribution of premium income to deficit/surplus", care should be taken not to count it again.

92) In India, life insurance companies generally estimate the expected strain, in the following year, due to revival of lapsed policies and make provision for the same in the valuation schedule. In such cases, the provision made is to be treated as the Expected Strain due to revival and the actual strain can be calculated from the file containing records of policies revived during the year.

Investment Income

93) The Expected Investment Income during the year can be defined as,
Interest (at the last valuation rate of interest) on
[The Fund at the beginning of the year + Half of (Expected premium income – expected outgo in respect of marketing & commission expenses – Expected outgo in respect of administrative expenses – Expected outgo in respect of claims)]

The Fund at the beginning of the year is the same as the total policy liability as at the last valuation and the method of calculating the other four expected values have already been seen. It was stated earlier that the claim outgo will occur at the end of the year and so, is not expected to affect the investment income for the year. But, that statement was in respect of Policy Year. In the case of Financial Year, claim payments have to be made throughout the year. Here, Survival Benefit claim, Death Claim and Maturity Claim, will all come under the term "claim".

Since, the outgo in respect of tax and shareholders' share of surplus will occur at the end of the financial year, it will not affect the investment income for the year. But, if advance taxes are paid at the end of every quarter, it would affect the investment income.

94) The Actual Investment Income has to be obtained from the Revenue Account. However, the investment income as per the revenue account will include interest income on Reserves like Solvency Reserve, Revaluation Reserve, Equalisation Reserve, Catastrophe Reserve, Provision for bad loans (non performing assets), Exchange fluctuation Reserve, etc. It will also include the investment income from the cash flow generated by the new business done during the year. The investment income pertaining to the new business can be separated only by approximate methods.

Release of Surplus from provision for Future Bonus made in the last valuation

95) As seen under Example 5, item vii, the Provision for Future Bonus, which was a part of the policy liability as determined in the last valuation, had three components, viz.

- Provision for interim bonus payable in case of death claims during the next year (along with tax and shareholders' share on the same)
- Provision for allotting new bonus to the survivors at the end of next year and
- Provision for setting up the reserve for future bonus in respect of survivors at the end of next year.

(See Annexure)

96) At the time of last valuation itself, the value of the second of the three components mentioned above and the expected number of survivors at the end of next year could have been estimated. The release of surplus from this provision at the end of next year will then be,
(1 + i) * Expected number of survivors * Value of the second component.

Reduction in Liability due to Lapses

97) As seen under Example 4 (Second year, item vii), there will be reduction in liability when a policy lapses without acquiring any paid-up value. By comparing the file used in the valuation as at the end of previous year, with that used in the valuation as at the end of current year, the policies that lapsed during the current year without acquiring paid-up value can be identified and the consequent reduction in liability can be determined approximately.

Elimination of Negative Value

98) If the total Negative Value eliminated in the current valuation is, say $(NV)_1$, it would have reduced the total surplus by $(NV)_1$. Similarly, if the total negative value eliminated in previous year's valuation were, say $(NV)_0$, the surplus in current year's valuation would have consequently increased by $[(1 + i) \times (NV)_0]$, where i is the rate of interest used in the last valuation. Since, different rates of interest might have been used under different plans it is advisable to take plan wise totals of negative values eliminated.

New Business Strain

99) Determine the value of,
Liability in respect of the new policies - [The New Premium Income during the year + Interest income corresponding to net revenue generated during the year by the new policies – Expenses in respect of marketing, commission and administration during the year in respect of the new policies – Amount of Claim outgo relating to the new policies]

That is, determine the value of,
Liability in respect of the new policies LESS Revenue Surplus in respect of those policies

If this value is positive, i.e. if the Revenue Surplus in respect of the New Policies is less than the Total Liability in respect of those policies, it means that the new business has resulted in some strain. This strain is known as New Business Strain and will result in the corresponding decrease In Valuation surplus.

100) Any sudden spurt in rate of growth of new business can aggravate the New Business Strain. Any sluggishness in new business can also aggravate this strain since marketing and administrative expenses cannot be immediately scaled down, in step with the fall in the volume of new business. In the case of Life Insurance Corporation of India, the rate of growth of new business was very high during the latter half of eighties and the first half of nineties. This resulted in a correspondingly high new business strain. It goes to the credit of LIC of India that, it was able to manage this strain without bringing in any additional capital.

Change in Valuation Basis

101) If the valuation basis used in the current year's valuation is different from that of the last year, first do the current year's valuation on last year's basis and analyse the surplus in the method discussed above. Then do the current year's valuation on the new basis. Let the two liabilities be V1 and V2. If (V2 > V1), subtract (V2 – V1) from the surplus. Else, add (V1 – V2) to the surplus.

Analysis of Surplus – Net Premium Valuation

102) Consider the two Screens, Premium-Calc-B and Premium-Calc-NetPrem of the Excel File CashFlow-Endowment.

In the first screen, the office premium corresponding to age at entry 35 and term 20 has been calculated. The parameters that go into the calculation are Interest rate, Mortality rates, Premium based expenses for the first year and renewal, Sum assured based expenses for first year and renewal, Bonus loading per 1,000 sum assured,

Rate of tax and Shareholders' share of surplus (profit).

In the other screen, the net premium corresponding to age at entry 35 and term 20 has been calculated. The parameters that go into the calculation are Interest rate, Mortality rates and Zillmer adjustment (giving the first year expense per 1,000 sum assured). No other parameter is taken into consideration.

103) While valuing the liability in Net Premium Valuation, Value of future expenses and Value of future bonuses to be declared, will not appear. It is implicitly assumed that the difference between the totals of office premiums and net premiums, along with interest surplus, would be sufficient to meet the expenses and provide profit margins. The Analysis of Surplus will therefore be much simpler.
It is to be noted that the Net Premium will itself be a function of the Valuation Basis.

Conclusion

104) In the Analysis of Surplus, I have dealt only with Bonus Reserve Valuation. While talking of Bonus Reserve Valuation, I cannot help mentioning **a comment (quoted below) that appeared in the article, "The Phase of Transition - an Historical Essay" by Mr. F.M. Redington (The Journal of Institute of Actuaries - Vol. 109, 1981 - 82).**

105) "My last theme is to record that time does nothing to reconcile me to Bonus Reserve Valuations. We cannot foresee the future and it is to me abhorrent, on the basis of some transient hypotheses as to that future, to use our power tool of present value to crush the rich complexity of a life office into one featureless and meaningless present value. And, it is to me a double offence when we then delude ourselves into a semblance of reality by using our power tool to spread that meaningless figure as a uniform bonus over the future. There is no possible defence for the assumption of uniformity. When we have a life fund under our care, it is the evolution of its surplus we are trying to study and to assume uniformity destroys that question. It is an act of vivisection which kills the life we are trying to understand.

106) To take an example, let us suppose that to meet the rising expenses there have been increases in premium scales. The effect of natural surplus is a gradual increase as new premiums replace the old, but with a bonus reserve valuation all the future premiums on the new business at the higher levels are capitalized and the old business shares in this anticipated surplus, to the ultimate detriment of those who will pay the increased premium.

107) This is an indefensible abuse. It was indeed the abuse which necessitated the nationalisation of life insurance in 1956. None of us would defend it as a deliberate practice but it is the kind of offence which the bulldozer of a bonus reserve valuation commits at every point of its flattening process".

108) For its language and style C.H. Lockitt would have included this article in his book "The art of the Essayist", a beautiful collection of English essays. But, the actuaries in India were only amused. Why?

- Before nationalisation of life insurance in 1956, none of the life insurance companies in India used the Bonus Reserve Valuation
- Even if they had used this valuation method, and the Government were not happy about it, instead of nationalising life insurance it could have easily directed the companies to use net premium method.
- Even after nationalisation, the Life Insurance Corporation of India continued, for the next three decades, with the same valuation method used by the companies

109) One may wonder as to how such a glaring error could have occurred in one of the most prestigious journals of the profession; and that too in an article written by one of the greatest actuaries of England. I can only make an "intelligent guess". In my next article on "The three major methods of Valuation of the Liability of a life insurance organisation", I feel that this mistake would have been due purely to mix up of names.

110) In those days, three types of Valuation methods were in use, viz. Gross Premium Valuation, Net Premium Valuation and Bonus Reserve Valuation. What was then known as Bonus Reserve Valuation is now called Gross Premium Valuation. What was then known as Gross Premium Valuation is no longer in use. This method had some shortcomings but was still being used since it involved the least number of calculations. When all calculations involved in a Valuation had to be performed manually, the simplest method of valuation had to be chosen. LIC of India too used this method till 1985. **Over a period of more than five decades, Indian actuaries demonstrated that, the strength of a valuation depends not on the valuation method used, but on the Sincerity and Professional Competence of the actuary.**

111) In the U,K. the Gross Premium method of valuation was rarely used. So, the Institute dropped this method from the types of valuation methods and rechristened the Bonus Reserve Valuation as Gross Premium Valuation. What was the need for this change and what was wrong with the name Bonus Reserve Valuation? This name is quite appropriate in the case of Participating policies. But, what about the portfolio of Non-participating policies, under which no bonus is payable? When no bonus is payable, the rate of future bonus will always be zero. In such cases, the term "Bonus Reserve Valuation" becomes meaningless. It was perhaps for this reason, the term "Bonus Reserve Valuation" was replaced by "Gross Premium Valuation", by the Institute of Actuaries, London.

112) In 1956, when India nationalised life insurance, Mr. Redington came to India and had detailed discussion with the then Controller of Insurance, Mr.Rajagopalan. He might have been informed at that time that all the Indian companies were using the Gross Premium method of valuation. Twenty Five years later, when he was writing the article **"The Phase of Transition - an Historical Essay"**, he might have remembered that information. By that time, the U.K actuaries would have completely forgotten that, long ago there was a method of valuation, known as Gross Premium method of Valuation and, when this method became virtually extinct, its name was given to the Bonus Reserve method of Valuation. This might have resulted in his mistaken assumption that all the Indian life insurance companies were using the Bonus Reserve method of Valuation before nationalisation.

113) The above article appeared in the Institute's Journal in 1981 – 1982. What were the developments after that?

- The Bonus Reserve method was adopted by the LIC of India, for the first time, for the valuation as at 31st March 1986; i.e. three decades after nationalisation. Perhaps it was the first life insurance organisation to use this method for statutory valuation.
- A few years later, both Canada and Australia adopted slight variations of Bonus Reserve Valuation.
- This method has now been prescribed by the Indian Regulator for all life insurance companies operating in India.

114) What about Mr. Redingon's views on Bonus Reserve method of Valuation. In my next article, I will describe all three methods of valuation and discuss their relative merits. The present day students would have not heard of (Old) Gross Premium Method of Valuation. It is necessary for them to atleast know what it is.

115) In this article, I have only dealt with Analysis of Surplus in the case of a portfolio of Non-Linked, Individual, Assurances. Since the article has already become too long, I decided to close it, for the present. At a later date, I intend taking up the Analysis in the case of Linked Assurances, Individual and Group Annuities and Pensions and Group Assurances. Group Assurances can be further divided into two parts: traditional group assurances and socially oriented group assurances. There is also another class of group schemes, known as Jumbo Schemes. Except in the case of Linked Assurances, the profit margin is quite low, or even negative, under all these cases. This aspect too will be touched upon.

(Annexure) Analysis of the Formula for Value of Future Bonus

Consider the case of an Endowment plan for term 20 years, age at entry 35, sum assured 1,000 and bonus rate b‰.

If **t** is the rate of tax and **s** is rate of shareholders' share of surplus, the rated up value of bonus will be,
$B = [b / \{(1 - t)(1 - s)\}]$

At the end of Year1, age attained is 36 and outstanding term 19 years. The value of Future Bonus will be

$$= B \times [\{C_{36} + 2C_{37} + 3C_{38} + ... + 19C_{54} + 19D_{55}\} / D_{36}] \quad (I)$$

At the end of second year, the value of Future Bonus will be,

$$B \times [\{C_{37} + 2C_{38} + ... + 18C_{54} + 18D_{55}\} / D_{37}] \quad (II)$$

Now, (I) can be rewritten as,

Value of Future Bonus at the end of first year =
$B \times (C_{36} / D_{36})$
$+ B \times (D_{37} / D_{36}) \times [\{C_{37} + C_{38} + ... + C_{54} + D_{55}\} / D_{37}]$
$+ B \times (D_{37} / D_{36}) \times [\{C_{37} + 2C_{38} + ... + 18C_{54} + 18D_{55}\} / D_{37}]$
$= v \times B \times (d_{36} / l_{36})$
$+ v \times B \times (l_{37} / l_{36}) \times \{\{C_{37} + C_{38} + ... + C_{54} + D_{55}\} / D_{37}\}$
$+ v \times B \times (l_{37} / l_{36}) \times \{\{C_{37} + 2C_{38} + ... + 18C_{54} + 18D_{55}\} / D_{37}\}$
Where, **i** is the valuation rate of interest and $v = 1 / (1 + I)$

This is same as,

Value of Future Bonus at the end of First year =
Present Value (as at the end of first year) of
[((rated up) Bonus x Probability of claim during the second year) + {(Probability of surviving upto end of 2nd year) x (Value of (rated up) Reversionary Bonus vesting at end of 2nd year)} + {(Probability of surviving upto end of 2nd year) x (Value at the end of 2nd year, of future (rated up) Bonus)}]

- **The first component of the above function is,**
  - [Present Value of (rated up) Bonus payable in case of claim during the second year] and gets utilised for payment of death claims during the second year. (The underlying assumption being that all claims are paid at the end of the year)
  - The difference between the Rated up bonus and Bonus will go towards tax and shareholder's share of surplus.
  - It is to be noted that, as per the formula, tax and shareholders' share of surplus are only to be paid on the bonus part of the death claim or maturity claim. In practice, tax has to be paid on the valuation surplus at the end of each year.

- **The second component goes towards allotting new bonus to the survivors at the end of the second year.**
  It is to be noted that what is being allotted is the value of rated up bonus, payable on maturity or earlier death of the life assured. The difference between the rated up bonus (B) and the bonus (b) payable to the policyholder will go towards payment of tax and shareholders' share. That is, as per the formula, tax and shareholders' share

are supposed to be payable only when a claim is settled on maturity or earlier death of the policyholder and, at the end of each year, only a reserve is to be set up in this regard. This, as we know, does not represent actual practice.

- **The third component goes towards setting up the reserve for future bonus in respect of survivors at the end of second year.**

By multiplying both sides by (1 + i) the equation can be written as,

(1 + i) x Value of future bonus at end of Year1 =
(Rated up Bonus payable at the end of Year2 in respect of death claims during the second year) +
[(Probability of surviving upto end of 2nd year) x (Value of Rated up Bonus vesting at the end of 2nd year)] +
[(Probability of surviving upto end of 2nd year) x (Value of future Rated up Bonus as at the end of 2nd year)]

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Institute of Actuaries of India

The Actuary India – Editorial Policy

Version 2.00/23rd Jan 2011

A: "The Actuary India" published monthly as a magazine since October, 2002, aims to be a forum for members of the Institute of Actuaries of India (the Institute) for;

a. Disseminating information,
b. Communicating developments affecting the Institute members in particular and the actuarial profession in general,
c. Articulating issues of contemporary concern to the members of the profession.
d. Cementing and developing relationships across membership by promoting discussion and dialogue on professional issues.
e. Discussing and debating issues particularly of public interest, which could be served by the actuarial profession,
f. Student members of the profession to share their views on matters of professional interest by way of articles and write-ups.

B: The Institute recognizes the fact that;

a. there is a growing emphasis on the globalization of the actuarial profession;
b. there is an imminent need to position the profession in a business context which transcends the traditional and specific actuarial applications.
c. The Institute members increasingly will work across the globe and in global context.

C: Given this background the Institute strongly encourages contributions from the following groups of professionals:

a. Members of other international actuarial associations across the globe
b. Regulators and government officials
c. Professionals from allied professions such as banking and other financial services
d. Academia
e. Professionals from other disciplines whose views are of interest to the actuarial profession
f. Business leaders in financial services.

D: The magazine also seeks to keep members updated on the activities of the Institute including events on the various practice areas and the various professional development programs on the anvil.

E: The Institute while encouraging stakeholders as in section C to contribute to the Magazine, it makes it clear that responsibility for authenticity of the content or opinions expressed in any material published in the Magazine is solely of its author and the Institute, any of its editors, the staff working on it or "the Actuary India" is in no way holds responsibility there for. In respect of the advertisements, the advertisers are solely responsible for contents of such advertisements and implications of the same.

F: Finally and most importantly the Institute strongly believes that the magazine must play its part in motivating students to grow fast as actuaries of tomorrow to be capable of serving the financial services within ever demanding customer expectations.

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STUDENT SUPPORT SCHEME

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

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

An overview of liability insurance

Introduction

Liability insurance is emerging to be one of the most promising verticals for the nonlife insurance sector. Technical knowledge in this area is still evolving. This can be an opportunity as well as a challenge for the underwriting and claims departments. In this article, let us understand what liability insurance is all about, the various forms of liability insurance and the future trends in this field.

What is liability insurance?

Liability insurance provides risk cover that ranges from civil liabilities to third-party liabilities that can arise from bodily injury, property damage or any loss that results due to an act committed by the insured. Liability policy generally covers only civil liabilities and not criminal liabilities. However, contractual liabilities and intentional damage are usually not covered as part of this policy.

The insurance industry is focusing attention on customer-centric growth and listening to the voice of the customer. Therefore, to popularize liability insurance covers in India, it is imperative to create greater awareness about the subject. Between 2010 & 2015, the nonlife insurance sector registered a growth of 17.6% but penetration levels, as well as insurance density, have remained low. Inadequate cover, the absence of product innovations, inadequately developed distribution channels are some of the reasons for the dip in the growth.

Pricing, service quality and trust are now becoming hygiene factors for the insurance sector and therefore insurers need to also focus on different types of innovative products, new verticals such as liability insurance coverage as well as innovative ways of distributing the products. It is expected that the nonlife insurance sector will grow by 15-20% in the next five years and this calls for insurers to offer a balanced portfolio comprising differentiated and standardized products.

Reasons for interest in liability covers in India

Liability insurance is a new line of business in India. The Indian government has made changes in the Companies Act. Domestic companies are expanding their footprint outside the country. A floating population in the IT sector is adding to the risk exposures that companies face. Mergers and acquisitions are also leading to new exposures that will benefit from a liability cover.

Consumer activism is at an all-time high now. Regulatory authorities have become more stringent. More companies will now be forced to opt for a liability insurance cover. Liability covers are popular in the West. Due to globalization, many foreign companies have set shop in India. The growth of the international business is leading to interest in liability covers.

The advent of e-commerce, growing interest in digital marketing, the threat of cyber risks, proliferation of digital payment modes, technology-driven banking are other reasons why businesses need a liability insurance cover. In the future, one can expect new covers like a liability for event management, liability for construction vehicles' etc.

In-depth technical understanding of liability risks will pave the path for innovations in liability line of business.

Specialty risks like Directors' & Officers' Liability, Errors & Omissions, Cyber risks and product recall will need facultative reinsurance arrangements for covering the risks. Facultative reinsurance is purchased by a primary insurer to cover a single risk or block of risks. Other covers are dealt with through treaty insurance in which the reinsurance company accepts all of a particular type of risk from the ceding insurance company.

The different types of liability insurance policies

In India, we had the Public Liability Insurance Act, 1991 that protected the common citizen from any liability that might occur to him. But unlike America where it is easy to sue people and seek compensation, Indian courts are still not in a position to reduce the cycle time to resolve a court case or a dispute. In most cases, people are simply unaware of whom to complain or how to take forward the process of lodging and resolving a complaint. This situation is fast changing due to increased consumer activism in the era of the Internet where consumers possess a greater degree of awareness about the digital ecosystem.

To reiterate, a liability insurance policy offers cover to business owners, professionals, self-employed people and new age entrepreneurs to deal with compensation claims that can result due to malpractice, injury or negligence.

The different types of liability insurance covers are delineated below:

1) Commercial General Liability (CGL) policy:

A CGL policy protects the businesses against the claims arising out of bodily injury and property damage arising out of damage to premises, losses to operations, losses

resulting from the use of products. It also covers losses resulting due to false claims made by advertisers that have led to personal injury. Let us take an example to understand this better. A customer visits an under construction flat to get an idea about the quality of construction. During such a visit, the customer trips on the floor and suffers a fracture. The CGL policy taken by the construction company will cover the medical expenses of the prospect.

Nestle India Limited had taken a CGL policy with ICICI Lombard General Insurance Company. In 2015, the company faced losses when a regulatory authority reported that the company's flagship product "Maggi Noodles" contained excessive levels of lead and monosodium glutamate beyond permissible limits. This resulted in 30000 tonnes of Maggi Noodles that were recalled from the market and destroyed. The company suffered a financial loss of USD 45 million besides suffering reputational damage due to lack of product integrity and breach of trust. Since Maggi noodles was a leader in this category, the reputational damage led to a deterioration in the category salience. Other noodle products marketed by competitors also faced a dip in their demand.

The insurance company repudiated Nestle India's claim of ₹ 150 crores because the CGL cover does not provide for claims that result from recalling the product from the market. There was no loss to consumers as such except for a noncompliance issue reported by the regulatory authority. Had Nestle India Limited taken a product liability cover, the claim could have been admitted. This was an exposure similar to the one that was faced by Cadbury India Limited when worms were found in their chocolates.

Thus, awareness about what cover needs to be taken is important for a business. This necessitates that there is a greater understanding of the technicalities involved in what could probably go wrong and what sort of cover can be provided. Selection of the right insurance policy is important for both the insured and the insurer.

2) Directors and Officers Liability Insurance:

This liability insurance which covers the directors and officers against the claims made by employees, suppliers, creditors, competitors, regulators, customers, shareholders and other stakeholders. Four employees were dismissed from services due to non-performance. One of the employees was a female and she filed a suit claiming that she was discriminated against based on her gender. An investigation was conducted. It was proved that she was dismissed due to non-performance. The D& O liability policy protected the director against the claims.

3) Professional Indemnity Insurance:

This insurance covers businesses or individuals who render professional advice to clients - be it doctors, lawyers, therapists, beauticians or investment advisors. If clients are unhappy with the advice and if the advice has not led to a beneficial situation for them, they can sue the business. A client approached a business firm that rendered specialist investment advice. The advice turned out to be wrong and the client suffered huge financial losses. The indemnity insurance policy covers the compensation claims filed by the client.

4) Cyber Risk Insurance:

This policy provides cover to a business against losses resulting due to any electronic activity engaged by the business. When there is a cyber-related security breach, the losses are covered by the policy. An employee who was dismissed from a bank stole the names, addresses and other details of customers to give it to a fraudulent person. The customers who were affected filed a complaint about sharing confidential details about their bank accounts. The cyber risk insurance policy enabled the company to settle the claims.

5) Commercial Crime Insurance:

A Commercial Crime Insurance policy offers to protect the businesses against the losses due to third-party fraud or employee fidelity. It protects the business against employee dishonesty, theft, burglary, forgery etc. An employee who was in charge of a storage yard that contained an inventory of cables stole bundles of cables that were later discovered by the police in a scrap yard. The employee was arrested. The inventory was damaged. The crime insurance policy protected the business against the loss caused due to robbery.

6) Carrier Legal Liability Insurance:

This insurance covers the insured for the physical loss or damage to goods or merchandise caused by fire/ accident to the vehicle while the goods are in transit. It also provides cover for the losses of the goods when they are possessed by the insured.

A logistics service provider was in the business of transporting consignments of companies from one location to another. During one such transit, the goods were damaged due to an accident. This policy helped the service provider to recoup the financial losses.

7) Product Liability Insurance:

The product liability insurance covers the business against the claims arising with respect to its products resulting due to poor quality/ poor performance. The claims can result in either because of personal injury or due to damage to property caused by the usage of the product. A fairness cream resulted in rashes and black marks on a woman's face. The woman filed a suit and her medical costs were covered by this policy. In another example, a paint manufacturer imported cardboard material needed to produce color charts for different paints. The cardboard supplied by the vendor was of inferior quality.

This resulted in the final coat of paint appearing a shade lighter. The paint manufacturer suffered losses and sued the vendor. The vendor had already taken a product liability cover and this helped him to cover the losses.

8) Trade Credit Insurance:

This insurance helps the business owners to protect their accounts receivable from loss due to credit risks such as protracted default, insolvency or bankruptcy. A company that manufactured fire hydrant systems had supplied material worth ₹ 10 crores to a company that was in the business of fire detection and protection systems. This company was unable to pay the money for raw material procured because their client went bankrupt. The manufacturer was able to recover a portion of his dues due to the trade credit insurance policy.

Deciding the premium amount for Liability Insurance

Unless the technical aspects of liability risks are properly understood, it is difficult to arrive at a premium amount that is commensurate with the risks to be covered. The base rate is used as a benchmark and then additions are made based on specific requirements/ needs of clients. The risks are properly estimated to ensure that the correct amount of premium is arrived at. As is the practice, the higher the risk, higher is the premium charged. In addition to this, claim history, size of the risk and company's risk management measures play a pivotal role in arriving at the premium amount.

Liability Insurance Claim Process

The claims process varies from one company to the other. There is generally a form to be filled along with all supporting documents. However, in the case of liability insurance, complexities are involved as there may be court cases/ arbitration/ out of court settlements. Also, uncertainty about when the claims will be filed can be a huge handicap for the insurance company.

Future Trends in Liability Insurance

Foreign reinsurers feel that the liability risks scenario in India is not yet mature. However, one cannot underestimate the liability exposures like D&O policy that can lead to different kinds of claims. As the GDP of economies across the globe grows, one can expect a growth in liability insurance in the days to come. Economic growth will invariably lead to a growth in the need for liability insurance.

Foreign shareholders will expect that manufacturers and exporters are suitably covered by insurance for negligence and wrongful acts. China and India are two economies where the demand for liability insurance is gradually increasing. This provides a great opportunity for foreign insurance companies to work closely with domestic insurers to share their knowledge base.

China now has an established insurance market for liability products. Demand for reinsurance is also growing. India's growing economy will lead to increased product liability covers. Pricing will continue to be a challenge in India because arriving at the profit margins can be a daunting task. There is a crying need to make product liability cover mandatory. But this continues to be a grey area.

Not many insurers are offering coverage for reputation risks. Asia continues to be a production hub for many brands. Production cost in Asia is competitive compared to that in America and Europe. Automobile giants have recalled their products following complaints of product-related performance issues. This has led to increased demand for product liability covers which are needed to protect capital.

India is presently a service-led economy but as manufacturing picks up steam, awareness about liability insurance is expected to increase. Many losses and claims are now getting resolved out of court because the costs of litigation in India are huge. Court proceedings can take forever to get resolved. This has led to the “mediation” route. The new companies law has made provisions for setting up a court for handling insurance claims.

Liability insurance thus provides an exciting opportunity for the insurance sector to grow their topline.

Reference
http://www.asiainsurancepost.com/non_life-news/china-and-india-have-seen-growth-demand-liability-insurance

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United Kingdom

Brexit

The uncertainty caused by Brexit continues to be a huge issue for UK insurers and this uncertainty seems likely to persist for some time yet.

The UK Government has finally published its long awaited White Paper on the Future Relationship between the United Kingdom and the EU (see link below).

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/589189/The_United_Kingdoms_exit_from_and_partnership_with_the_EU_Print.pdf

On financial services, the paper proposes a new "economic and regulatory agreement" and abandons the former plan for a system based on mutual recognition where the UK and EU would have recognised each other's banking, asset management and insurance rules. More regulatory autonomy is proposed at the expense of less access to EU markets.

As a consequence of all of this uncertainty, and with the deadline of 29 March 2019 looming for when a deal must be agreed, many firms are pressing ahead with their plans and often on the basis of a hard, or no-deal, Brexit.

Solvency II - EU

EIOPA, the European regulator, has now issued its second set of advice to the European Commission on its review of the Standard Solvency Capital Requirement (see link below).

https://eiopa.europa.eu/Publications/Consultations/EIOPA-18-075-EIOPA_Second_set_of_Advice_on_SII_DR_Review.pdf

Amongst a range of proposals, the Risk Margin's Cost of Capital is to remain at 6%, despite heavy industry lobbying by the European insurance industry to reduce it, and the interest rate risk stress is to be strengthened in order to properly allow for negative interest rates. This latter change may increase capital requirements materially, though it will be phased in over a three year period.

Solvency II - UK

The UK regulator, the PRA, recently announced that the Solvency II Risk Margin is to stay as it is. This is despite the PRA previously acknowledging that the Risk Margin's design is flawed, damaging and is capable of being fixed. It is widely accepted that, for UK annuity business, the Risk Margin is too large and also too volatile in a low interest rate environment. The European Commission has also declined to undertake any substantial new review of the Risk Margin before 2020, all bad news for the UK annuity market.

The PRA's letter confirming this decision is shown in the link below, for information:

https://www.bankofengland.co.uk/-/media/boe/files/prudential-regulation/letter/2018/solvency-2-risk-margin.pdf?la=en&hash=05985706972EDF270B47C561CC308F0E8FDE1A59

The PRA continues to consult and work on other elements of Solvency II, with equity release mortgages being a particular focus at the moment and, specifically, the use of these assets in Matching Adjustment asset portfolios for UK annuity business. Areas of concern for the PRA are that insurers may not fully understand the risks associated with these assets and insurers may be overestimating expected yields.

The two links below provide more colour on these issues and concerns.

https://www.bankofengland.co.uk/-/media/boe/files/prudential-regulation/letter/2018/solvency-ii-equity-release-mortgages.pdf?la=en&hash=31902C11282C69E81357B83E9FE5294D0E9E18D8

https://www.bankofengland.co.uk/prudential-regulation/publication/2018/solvency-ii-equity-release-mortgages

Market

The difficulty of writing traditional guaranteed insurance business in a low interest environment, in conjunction with a capital-heavy risk based solvency regime like Solvency II, is driving corporate activity in UK and Europe. For example, we have seen:

- Large blocks of UK annuity business sold to specialist annuity consolidators, with many providers ceasing writing new annuity business.
- In UK and Germany, we have seen writers of traditional insurance business closing to new business and being sold to specialist consolidators, sometimes backed by private equity funding.
- The once iconic Equitable Life, the oldest mutual life assurer in the world having been founded in 1762, finally threw in the towel and is selling itself to the consolidator LCCG. With profits policies will switch to investment linked as a requirement of the deal and this allows Equitable to distribute its remaining surplus to the existing policyholders, rather than it being tied up to cover capital-heavy guarantees under Solvency II.

Asset Allocation

There is a strong theme of insurers and asset managers constructing asset solutions that are efficient from a risk, and so capital, point of view.

Particular areas of activity include:

- Protected equity ideas where systematic derivative strategies are used to give downside protection and capital reductions on equity investments, subject to the approval of regulators.
- Use of proactive strategic asset allocation and diversification strategies to construct risk-efficient portfolios.
- Increasing use of technology to identify efficient asset solutions by solving complex optimisation problems.

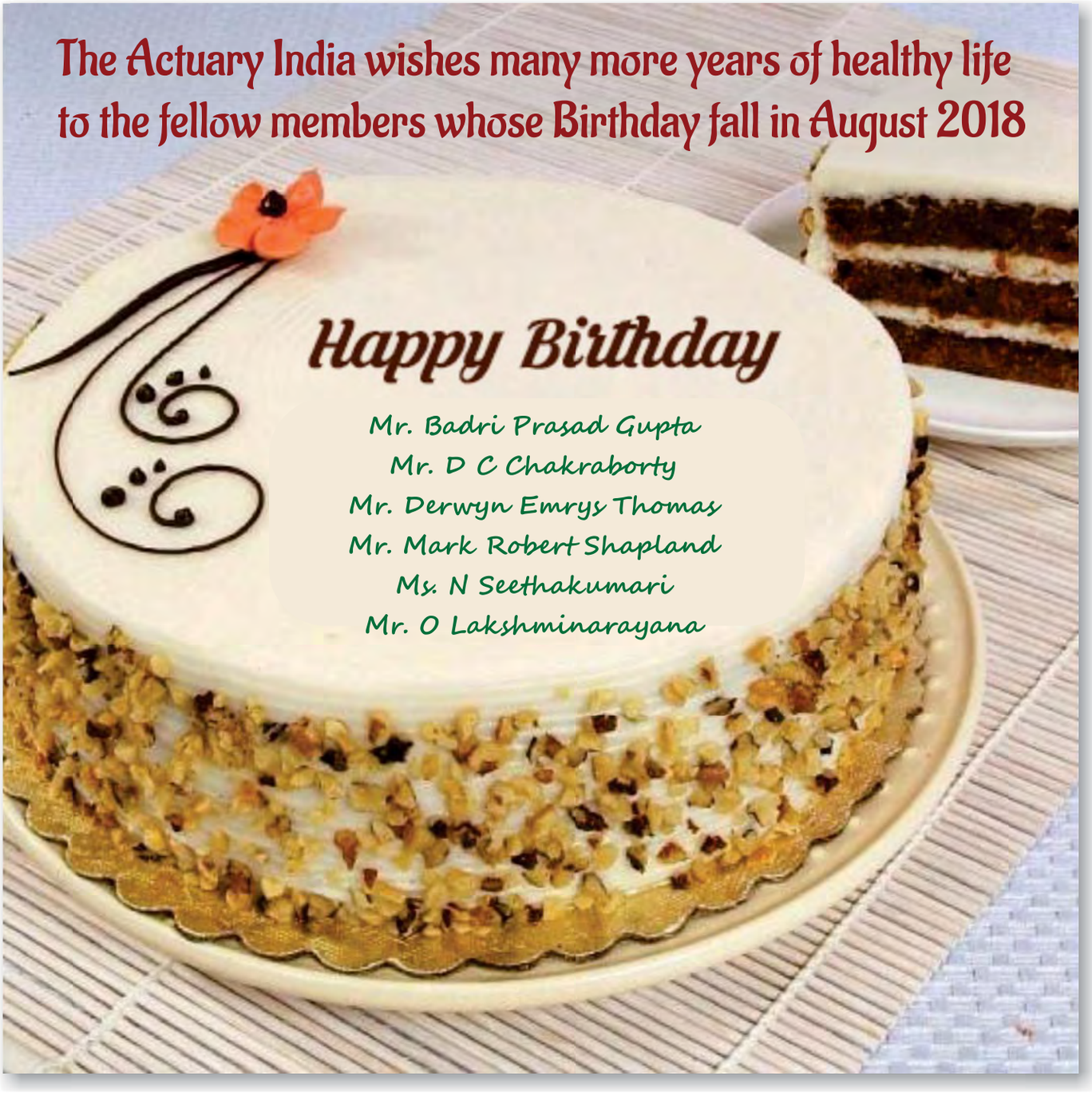
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Vintage is our Vantage



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