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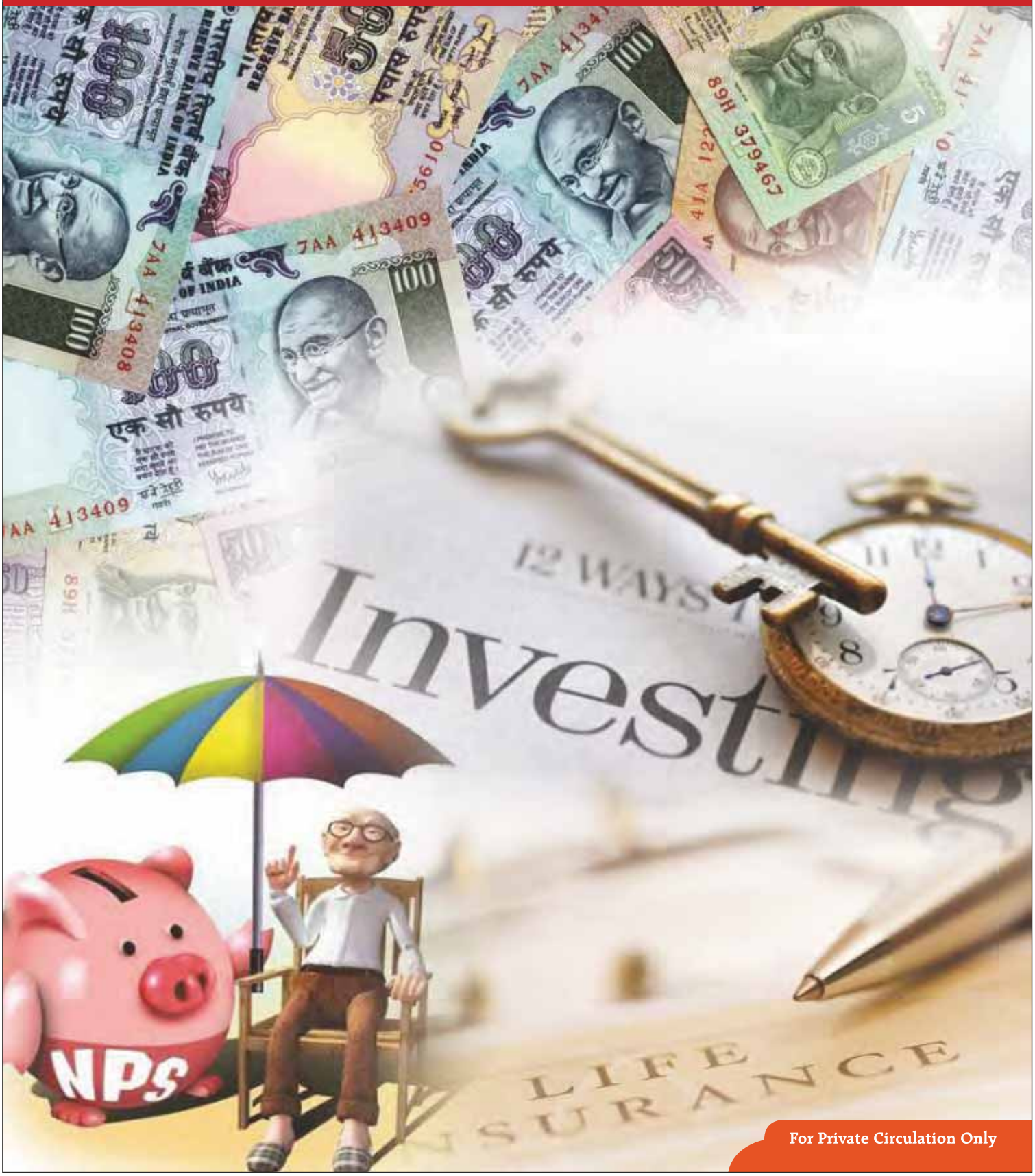
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EMPLOYMENT OPPORTUNITY

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ACTUARY

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2. The decision of the Company will be final and binding in all the matters.
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FROM THE PRESIDENT DESK:
MR. RAJESH DALMIA





Dear Members,

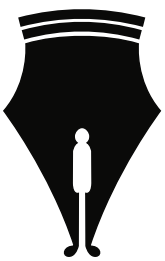
Wish you all a very Happy New Year and hope the New Year brings the ethereal peace in your life. Many a times it is difficult to select an alternative when we get tangled into the web of alternatives with no clear winner. In the last IFS, I heard Anish Thacker saying that usually you know in your heart the right thing to do and yet many a times we end up doing the opposite. If you are clear about your goals of ethereal peace than you should always listen to your heart.

We also end up making a vow even though it gets broken within a week or a month. I hope this does not happen with this vow that I am taking in front of you, the beloved readers. I would reply to all your emails to the president mail box within a week. I am sorry to all those who have not received any reply or received it with considerable delays. I realized this during recent discussions I had with a very close friend of mine. Since, then I am trying to keep up with it.

I must say that most actuarial organizations have not spent considerable time and effort in using technology for education. Even though the technology is available for more than a decade it requires imagination and creativity from teacher community to use the same. I would urge our members to go through a website khanacademy.org or search for khan academy on youtube. You would find that they have uploaded very interesting videos explaining complex concepts to a student. I am requesting our fellow members to see if they can take time out to develop such videos on actuarial concepts as that would be so much useful to our students. It would reach thousands of students and they would be thankful to creator for creation of these. These would be useful forever for any student who needs to study that concept. Please do let me know if you are already doing it so that we can include the same in our curriculum or if you need any support from the Institute in achieving the same. We would be very happy to help you to make these videos. We plan to build a library of such materials which can be useful to our students forever.

You will be surprised to know that Mr. Khan was not a teacher or an academician. He was a hedge fund manager who started developing these videos for his cousins in India. Surprisingly, he found that these are quite useful for a lot of people and the whole academy took shape. I am sure if every member decides to just develop one video on a topic comfortable to him/her then we would have left a fantastic library for the next generation of actuaries who can then keep filling the gaps. We can start the "Pay Forward" movement which would make it easy for the future generation of students.

Please note that I am not associated with khan academy and I am not using this forum to advertise. This is only used as an example to showcase that how technology can be used to enhance the education of future actuaries and students. We also need to start using the same in almost all our activities. Of course, I know that any qualified actuary cannot do without computers and technology as his work is totally dependent on these. However, our students are largely excluded from technology except CA2 course where we introduced computer assisted modeling. We probably need to increase the usage of technology not only in teaching them about it but also using it in our methodology of teaching.



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

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

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FROM THE EDITOR DESK:
MR. D C KHANSILI





I pick up thread from **an interview of Mr. K S Gopalakrishnan, MD & CEO, Aegon Life Insurance Company Ltd. (popularly known as KSG) published in the Actuary India magazine, November, 2015 issue**. KSG has opined- "There are a number of ways actuaries can contribute in the insurance sector. Also opportunities in traditional areas are also growing as the current block of business become older and bigger for many of the insurers". This perhaps he referred to the complexities in business and number of regulatory guidelines/ regulations evolved since 2000 when UL business started dominating the traditional business space and now again reversing trend. One time it was self- regulation committed by insurers during R1 to R3 stagee.gmaintaining solvency ratio at minimum 150% and commitment towards protection of policy holders' interest. Thereafter series of regulations followed particularly in UL business. The major systems- policy administration (PAS), Investment, accounting, actuarial, underwriting, reinsurance, etc were initially set up as per initial business need. Many Insurers had to move to alternative system(s) to manage their growing and changing business in efficient manner.

There are a few examples given herefor the varying guidelines, circulars and regulations. For actuarially funded products, the actuarial funding period was initially 2 years which got reduced to one year and finally such products were disallowed. The frequent changes in systems were necessitated in other areas e.g. different notice period, waiting period, lock-in period, treatment of investment income, guarantees, charges, revival period and disclosures of discontinued fund. Other changes in UL business saw changes in death benefit specifications varying by age and premium, guarantees allowed, commission structure, reduction in yield, top up premium conditions and sum assured fetched by top-ups, partial withdrawal conditions, settlement options, number and limit of charges, changes in NAV computation, MVA conditions, advance premium treatment, splitting of policies, etc.

The competition and regulatory developments forced insurers to have kitty of different products. The latest one 2013 products regulation for unit linked and non-linked both including VIP. Some of the products are closed for sale but these are to be serviced and be valued, e.g. highest NAV guaranteed products. The group term business though mainly sold under one year renewable group term assurance (OYRGTA) and mainly getting valued using UPR method yet there are other group term business e.g covering long term loans which though are sold under OYRGTA plans yet the members would be covered for long period in line of individual business. These products are to be served despite master policy holder exist or not. The fund based products are also adding complexity. Ascertaining completeness in group business and riders is also a challenge in valuation.

The Insurers are under pressure that there are a few employees within organisation in OPS, IT, Actuarial, etc.who have seen development of full regulatory environment, its development and development of company specific business. Insurers are thus interested to see that products are set-up in system(s) as per F&U and terms and conditions of the products, the liabilities are being valued in full, policyholders benefits' pay-outs is being made correctly, etc. To ensure it insurers may depend on internal and external reviewers who may have actuarial, regulations, system, reinsurance, group business, man management knowledge and experience. This is what perhaps KSG sees an opportunity for actuarial professional.

CILA seminar held in the month of November 2015 won many admirers for most of the sessions. The balanced views of regulator, industry, reinsurers, committee members and consultants were highlights of the seminar. The apprehensions of adverse impact on insurance industry due to Bose Committee recommendations was much debated.

The Chief Editor had set tone for economic scenario of future in last issue of the magazine. To work in uncertain environment is prime and traditional job of the Actuaries and must for their existence.

Recent havoc created in Tamil Nadu particularly Chennai by unprecedented rains has created concerns. The non-life industry would be particularly concerned for increase in the claims, IBNR and IBNER claims.

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Look forward to get more participation from readers;

EVENT REPORT

11TH CURRENT ISSUES IN LIFE ASSURANCE

Organised by: Advisory Group on Life Insurance, IAI
Venue: Hotel Sea Princess, Mumbai
Date: 24th November 2015.

The session started with a brief



introduction by **Mr. Sanjeev Pujari** on the objective of the seminar which was to discuss the burning issues facing the industry and topics of current interest. He said that the industry has been through a lot of change with optimism running low in the current scenario with fall in business volumes. The industry has received bad publicity due to accusations of mis-selling and also come under the regulatory scanner on account of the perception of the high costs of running the business. The pressure to reduce the costs has led to the popularity of bancassurance channel on account of its low cost model and ability to reach a wider population at an economical cost. The digital channel has an ability to develop a significant reach but this ability remains untapped. The industry has seen a spurt of regulatory changes in a short span and this has changed the landscape of the industry.

Session 1 :
Challenges and Opportunities in the Life Insurance Industry
Speaker: **Mr. N. M. Govardhan**



Mr. Govardhan's session centred around the challenges and opportunities in the life insurance industry from the perspective of three prisms viz. The Actuary, The Chief Executive Officer and the Regulator.

The presentation started with a look at the demographics from a qualitative aspect of sociological factors such as education, quality of life, social class, health, digital revolution etc and the way that it would impact the insurance industry. Mr Govardhan presented statistics that showed that the population structure has changed very radically from 2001 to 2020 with a fall in crude birth rates and increase in longevity leading to a decrease in population aged less than 16 years and increase in population above age 16 years. Longevity has affected the living benefit and the interest rate fluctuation has meant crises across the world. Hence the actuary needs to be cognizant of the changing demographic and economic scenario in planning their work

First Prism – The Actuary

The way that products have evolved over the years means that the actuaries are now looking at heath, wealth and protection. Products are required to be structured around regulatory constraints as policyholder's protection gains increasing importance. The customer expectations has changed with customers looking at guarantees even on unit linked products. Increased restrictions on investments with the intention of policyholder protection are likely to translate into lower returns for the policyholders and this could go against the policyholder expectations of an optimal return.

Areas which impacts the actuary's area of work:

- The move to the Solvency II or RBC means a new paradigm as far as capital is concerned. The need for calculating the Economic Capital and the establishment of a risk based framework means a lot of work for Actuaries. Data problems and the method used to calculate the capital requirement present challenges as also opportunities for actuaries.
- The recent requirement to form a with profits committee is expected to ensure that assets are properly allocated between the with profit and non-profit fund. The ambit of this committee is expected to increase in the near future.
- The embedded and the appraisal value present challenges as different values may be placed on the same company by different actuaries. The Institute will hence have to take the lead in developing practice guidelines to ensure uniformity of values reported by different actuaries.
- The Actuary can play an important role in business analytics and risk management.
- Modelling will be an important area of development for actuarial work and the actuaries need to ensure that the scenarios are specific to the local environment.
- Morbidity rates need to be developed based on the experience prevalent in India. This will require actuaries to develop a system of sharing of data with confidentiality being maintained so that these rates can be developed inhouse and companies are more willing to share their data.

Actuaries will need to communicate their findings in a clear and concise manner in order to be seen to be useful to the business.

Second Prism: The Chief Executive

The Chief Executive would be specifically looking into the following areas:

- **Marketing and distribution channels:** The major concern is the high turnover of agents. Marketing executives in life insurance companies have a poor image. There are a lot of regulatory restriction on intermediaries. In order for the distribution channels to be successful they will probably have to be multifarious. Two developments which will have a major impact on the distribution is that bank accounts are now opened at the initiative of the new governments which has reached a

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lot of persons in the villages and the second is the mobile penetration.

- **Competition**: The chief executive has to now look at competition not only within the industry but also outside the industry perhaps in the financial sector or other sectors to keep ahead of the game.
- **Corporate Governance:** Corporate governance is an area where industry can be seen as championing the cause of the policyholder and this would make their voice heard both with the regulator and the government.
- **Topline/ Bottomline:** A balance has to be achieved between the topline and the bottom line so that there is a profit for the company and a performance as far as the policyholder is concerned.
- The chief executive would want to increase their market share.
- Claims management is the key and if the companies keep their promises and service well, this could translate into good future business.
- Good shareholder/embedded value/value of new business.
- Organic and inorganic growth.
- Investments- Give optimal yield to the policyholder and at the same time maintain some prudence and reduce volatility.
- Personnel, publicity and planning.

The chief executive is looking at a paperless office, increasing market share retaining customers and reducing operational cost. Business analytics will help to analyse the areas where action is required.

Third Prism : The Regulator

- The regulations/guidelines should be long standing and not changing from time to time.
- The regulator should be responsible not only for the health of the industry but also the growth of the industry. Corporate Governance is one area that the regulator could look at as the mainstay as far as healthy industry and growth is concerned.
- The regulator should make the actuary so responsible that whatever is filed is accepted because the corporate governance is good, risk factors are being used and the actuary is looking at the product not only from the shareholder but also the policyholder's perspective. It is the actuary's image and his ability to look at it from the policyholder perspective which should make the file and use much more acceptable and easy to use.
- Self governance may be the way forward and perhaps the life insurance council can play a very important role as far as this is concerned.
- Consultation with the industry, chief executives and the actuaries and the regulator would enable a health oriented and growth oriented regime.
- The regulator should give more leeway to the investments so that the industry can be healthy and give a good return. Too many regulations will inhibit investments.
- Taxation is an area where regulator can play an important role.
- The regulator should ensure that there are not humorous restrictions as far as capital is concerned.
  Consultations with the Institute of Actuaries and Chartered Accountants are what the regulator should have and the most important is the consultations with the policyholder's association and NGO's. This is the area which will drive competition, transparency and disclosure and reduce margins.

The demographics in terms of longevity will affect the money back, health and pensions business. Instant service means that the company has to be keep ahead of technological improvements. It is felt that insurance companies could take more risk as far as investments are concerned. In case of pensions since the funds remain with the insurance company for a long time, investments should be more inflation proofed. Inflation proofing means investments in risky assets such as equities and property but this can be managed if the investment team can achieve a healthy balance between risk and returns and still provide a good return to policyholder.

The regulation for pension funds are inhibiting and so many companies are reluctant to enter the annuity market. Companies want to be involved only in fund management. However the future lies in sourcing annuity business with a certain amount of guarantee and providing flexi drawdown. Innovative products should be able combine health, wealth and pensions. Companies should be able to thus retain customer right from the time that they enter the working age and upto their entitlement to pension thereby improving the long standing persistency. This could be a challenge but also a target which can be looked at. Higher automation can help to reduce costs and simplicity of products means that the products can be sold directly through the digital channel. The future of the life insurance industry lies in the growth of traditional products.

Insurance penetration should probably be seen in terms of lives covered rather than GDP growth. Micro insurance will help the companies penetrate the interior pockets of the country.

Session 2: Life Insurance – Regulatory Perspective
Speaker: Ms. Pournima Gupte, Member (Actuary) , IRDAI



Ms. Pournima Gupte started her session by presenting the details of the assessment carried out by the IMF in 2011 on adherence to the core principles of Insurance Association of Insurance Supervisors (IAIS). The results of the review had indicated that of the 28 core principles, compliance was achieved largely in respect of 24 core principles. Non compliance was in respect of four principles viz. supervisory authority, enforcement/sanctions, liability and fraud. She hoped that all the core insurance principles would have been complied with when the next review was due in September 2016.

The Member (Actuary) summarised the changes effected in the Insurance

Amendment Act. The redundant provisions have been removed and the act now provides IRDA greater flexibility to discharge its functions more effectively. The main provision related to capital availability, consumer protection, robust processes, empowerment of IRDA, health insurance and promoting reinsurance business.

Capital Availability:
The foreign equity capital has been enhanced to 49% and this has resulted in a lot of activity. The act also enables raising of capital through innovative means under the supervision of the regulator. The instruments of preference shares and subordinated debt to raise capital can be used to demonstrate solvency. Higher capital would enable greater reach and innovative product development to reach a wider population.

Consumer protection:
Consumer protection has been enhanced through higher penalties for misconduct and misselling. The amendment allows a higher level of penalty to be imposed. Appeals can however be made by the company to securities appellate tribunal against the penalty if deemed necessary. One more provision in the amendment act aimed at enhancing the policyholder protection is wherein no claim can be called in question on any grounds after 3 years from issuance of the policy.

Empowerment of IRDA:
IRDA is now empowered to regulate key aspects such as solvency, investment, expense and commission.

Health Insurance:
The definition of health insurance now includes travel insurance.

Reinsurance Business:
The Act provides for reinsurance companies to open branches in India. This would lead to three classes of reinsurers viz. State owned reinsurance companies, reinsurers with offices in special economic zones & reinsurance with branch offices. The three tier structure would lead to challenges related to protection of the interests of each category of reinsurer.

The member then went on to provide a background of the recommendations of the committee set up in 2011 to discuss the implementation of the risk based capital framework. The committee had recommended a market consistent approach to valuation. The committee recommends a standard approach with the structure and parameters of the stresses to be specified by the IRDAI rather than the use of an internal model. The committee believes that the purpose of the regulator will be served only if the company's standard of governance in the areas of risk management is appropriate to the risks that the company takes. Further refinements to the existing standards would be required to develop fully a risk based methodology. The committee recommended that further analysis work needs to be taken up before implementation of a risk based capital approach.

The member provided an overview on the recommendation of the committee set up recently to review the actuarial regulations. The review covered the following areas:

- **RBC framework:** The committee has recommended the formalisation of the risk based capital norms and calibrated stress level through setting up of a committee drawn from the industry, the actuarial profession and the regulator's office. It is felt that a change towards IFRS should not be made without studying the full impact.

  The member requested the Institute and the Life Advisory Board to take the lead in forming this working committee.
- **Assets. Liabilities and Solvency Margin:** Most of the recommendation of the committee was included in the draft regulation. Any recommendation which was not accepted was discussed in detail with Chairperson and few members of the committee.
  - Assets would be included in the solvency margin calculation if it is readily realisable.
  - No change is proposed for the liability valuation method and it continues to be the gross premium method for par and non-par business. Valuation method for variable insurance business is defined. The use of the UPR method for one year renewable term assurances has been formalised through this regulation.
  - Representations stating that terminal bonus need not be valued explicitly are being examined.
  - Additional reserve for maintenance expense overrun has been introduced if the valuation assumptions for expense do not reflect the current experience of the company. The regulator has received feedback from companies on the holding of the expense overrun reserve and the member felt that there is indeed some merit in the suggestion that expense overrun reserve need not be held by the company in the initial years of operation. The period of initial phase for which the expense overrun reserve need not be held needs to be defined. Another suggestion is that if the company is using the new business closure reserve it can be used for demonstration of the expense overrun reserve.
  - The capping of the mathematical reserve to the higher of the special surrender value or guaranteed surrender value has been formalised in the draft regulation.
  - The minimum requirement to hold at least 150% of the RSM has been formalised through a control level of solvency.
  - The draft regulation does not propose any change in the method of determination of the valuation rate of interest which is at the discretion of the Appointed Actuary.
- **Actuarial Report and Abstract:** There are no major changes in the Actuarial Report and Abstract except the reporting format. The member has invited concerns if the change in format involves substantial change to the IT system. The draft circular on preparation of financial statements includes the Actuarial suggestion that mathematical

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reserve shown in the financials should be excluding cost of bonus. With the implementation of this suggestion surplus shown in the financial statements for PAR business would be the surplus shown in Form I for that financial year.

The suggestions not accepted by the regulator were:

i) Linking of the control level of solvency to the higher of the RSM and that from risk based capital as more work needs to be done on the risk based capital approach.
ii) Grouping of policies for valuation.
iii) Change in the solvency factors.
iv) Concept of materiality.

Session 3: International Product Landscape – What can we learn.
Speaker: Mr Detloff Rump, Chief Underwriter, Swiss Re Asia



Mr. Detloff Rump said that he would talk about underwriting, claims and touch upon the international landscape for two products viz. Disability insurance and long term care. In addition his presentation would also cover the journey of the customers.
Whilst developing products, instead of looking at what customers want or need, the product development activity is driven by what the distributor wants and can push in the market. Competition also drives product development as also aspect of profitability and regulatory intervention. Most of the times the existing products are tweaked to address the competition and meet customer needs. However it is necessary to look wider and test the existing products through new channels or through revised underwriting rules. In addition to claims trigger and benefit, a lot of risk mitigation goes into the product design. Every company has their own systems for exchanging information between claims and underwriting and this then feeds into the product development cycle.
Underwriting is an important aspect of profitability of the product. Reduced underwriting normally translates into increased claims costs. Reduced underwriting is gaining increasing popularity but reduced underwriting just involves shifting the underwriting from policy issuance to the claims stage. Reduced underwriting will normally be associated with risk mitigation techniques such as low sum assured, exclusion clauses and age limits which may not serve the needs of the customers.

He said that disability insurance has led to bankruptcy of some insurance companies in foreign countries in the past on account of underestimation of the risks and poor claims management. Financial underwriting is a challenge in disability insurance when the prospect is self-employed as actual income may be difficult to ascertain on account of the limited disclosure in their tax computations. The legal environment is important in ascertaining whether claim repudiation would be supported by the system and to what extent. In some countries the definition of TPD has been loosened up. A particular challenge with Total permanent disability is that it is difficult to ascertain even post the waiting period. Mental disability is very difficult to assess but very easy to claim. Most of the mental disorders are self-reported and normally cannot be measured, seen or felt.

Long term care has been tried around the world because there is a need. The long term care trigger is normally the inability to carry out daily activities. Inspite of the need that it satisfies this product did not receive the attention it deserved. In long term care, as individuals go through different stages of care, rehabilitation techniques can ensure that the person stays at a lower level of care for a longer time.

He went on to show statistics which indicated that there is a protection gap on account of high life expectancy and falling birth rates, medical inflation. He concluded by saying that we would help the consumer in living a healthier risk free life. The product development needs a wider holistic approach to ensure that all the elements come into play. There is no doubt that underwriters, claims and actuaries need to work together to make a product successful. Disability care is a mindfeel and long term care needs innovation. The basic thing is to meet the needs without taking incalculable risks.

Session 4: Review of Life Insurance Regulations
Designated members of the review committee: (From left) Mr. Sanjeev Pujari, Mr. Satyan Jambunathan, Mr. D Sai Srinivas, Mr. B. N.Rangarajan



This session started off with a brief introduction by **Mr Sanjeev Pujari**. He summarised the areas of discussion by the committee:

Assets, Liabilities and Solvency Margin

- Review of solvency factors to bring more coherence in the factors. The idea was to build a roadmap towards moving towards a RBC framework.
- The GPV method was challenged as it is not suitable for certain lines such as variable insurance contracts and group term contracts. It was recommended that the method of valuation should be specific to the line of business.
- The recommendation of inclusion of an expense overrun reserve but it was left to the regulator to decide whether it should be made applicable to all companies.
- It was recommended that the concept of materiality be brought in the valuation of liabilities as it was important for mature and big companies.
- Actuarial reporting should be made more specific and concentrate on qualitative aspects.
- AA certificate should be in tune with what is happening on a actual situation.
- The concept of a control level of solvency was introduced.

- Specific mention of the valuation of options and guarantee was made.
- Stress was put on more principle based regulation.

ARA regulations

- Rationalised the classification to par and non par form the risk and governance point of time.
- Certificates were modified
- ARA regulation to include summary statements.
- Recommended grouping of data to save time and for practically considering the future.
- Form I modified for greater clarity.
- Some forms were dropped.

The report also answered questions in respect of whether the regulator should consider imposing a higher solvency margin for company with high expense ratio. Linking the solvency ratio to the performance of the company was not favourable as expense overrun reserve is prescribed in the draft regulation so imposing the requirement for a higher solvency margin would mean a double penalty for affected companies

With a view to improving the governance of with profit products, the committee has recommended the appointment of a with profits actuary on payroll of the company. The committee also feels that there should be a strong governance structure to ensure fairness to the policyholder.

The panel welcomed questions from the audience.

What is the view on reserving for terminal bonus?

To the extent that terminal bonus falls due in the following year, it may be appropriate to reserve for terminal bonus. The reserving for bonus is also a function of the valuation rate of interest the principle being that you reserve for benefits consistent with the valuation rate of interest. It does not matter whether this reserving is in the form of a high RB and a low TB or vice versa. Ultimately the Actuary should be satisfied that reserves are adequate and in line with the valuation principles.

What is the committee views on the use of the combination of the prudential norms for reserving and the factor based scale for solvency.

The answer can vary depending on the line of business and the nature of the product design. Hence it was felt by the committee that there should be a linkage to the risk based approach.

Did the committee not look at the factors to be applied on different lines of business? Should the solvency factors be applied on a per policy reserve or across the line of business?

The committee looked at the motivators or the drivers for the risk in the calculation and not on lines of business. The classifications used were high risk/low risk and high guarantees/low guarantees. On the protection side the factors proposed were based on whether the guarantee was long term or short term. There was no drastic change proposed to the existing regulations.

With the increased popularity of par business amongst companies, there is a growing concern of some of the aspects of par business which is also reflected in the Bose committee report, should there be a clear link between the surrender value and the asset share?

The customer does not understand the concept of asset share and so if you express the surrender value in terms of premium it may not be appreciated by the customer. The only way to pay a higher surrender value is through reduction of acquisition expense and increased efficiency with the intention of reducing costs. Instead of prescribing percentages, the committee felt that there should be an internal governance structure to decide how the surrender would be paid and a range of percentages for payment. Transparency would have to be limited to aid simplicity

We have been picking up from markets abroad without considering its relevance to the social, economic and commercial environment prevailing in India. Is it appropriate?

The important aspect to consider is that do we have the luxury of time. What is important is what the customer expects and whether he gets what he expects. What the customer understands will indeed have some complexity involved for the insurance company.

Session 5: Review of the distribution strategy, reforming existing channels and new channels for distribution – domestic and global trends.

Panel Members: (From Left) Mr. Keshav Sunderraj (Scor Re Asia), Mr. M. Anand (SBI Life), Mr. Shashwant Sharma (KPMG India) Mr. Kamlesh Vora (Kotak Life),



The session started by an introduction of the panel members by **Mr Anand**. He began by putting a question to the panel member on what they thought was a good distribution model, Bancassurance, Tied agency or local architecture. Kamlesh said that he believed that there was no right or wrong distribution strategy. Although bancassurance model has gained popularity, agency still continues to dominate the sales in the industry with a 60-70% share of the market. Banks contribute a significant share of private company business with agency on its way down as many of the players feel that banca is the way to go. Mr Anand however felt that saying that bancassurance is the channel required to revive the industry would be a skewed view. Agency has predominated so far as business is concerned. Around 80% of the bancassurance business comes from top five banks in the private sector and this is despite single attention from an insurer. Mr Shashwant went on to add that banks had the opportunity to be brokers but choose to tie up with a single insurer. Although guidelines require banks to tie up with three companies, banks can still decide on the split between these companies. Unless insurance companies give superior returns to their customers, their long term business model would be at risk. One of the biggest products that banks look at globally is annuities. Globally, the banks also do a lot of work on an advisory role and in this context



they will see how insurance fits into the overall portfolio. Unless banks play an active role and look at the profitability matrix when pushing products the success of the bancassurance channel will not be assured.

Mr. Keshav was of the view that in talking of multiple tie-ups the question to ask is whether the bank sales personnel has evolved in the selling process. The bank needs to involve the customer in the selling process in terms of meeting his needs, financial planning and thereafter product selection based on his needs. Mr Shaswant felt that in terms of taking a leap in business banks need to answer the question as to where they want to play and who their customer would be. Endowment products are difficult to compare across companies and the customer needs more choice. Mr Anand said that with multiple tie-ups, it is about offering customers different perspectives on the same shelf. Multiple tie-ups are not going to be a game changer and jump start the business. New tie-ups will be new setups and so there would be a cost involved where significant premium would have to be paid to gain access to the franchise. There will be additional costs involved in employing personnel, technology etc and this will mean that bancassurance will no longer be cost effective. **Mr Keshav** said that in terms of increasing penetration, some of the good practices followed in the region is policy research and community based research the results of which can be made to feed back into the product development cycle. Also there is customer segmentation in order to match customer segments to products.

Mr Shashwant said that complaints about the business plan assumptions not being borne out may be commonplace as often optimistic assumptions are made whilst formulating the business plan with not much consideration of customer or agent behaviour. To this Kamlesh said he agreed with Shashwant as we seem to expect a different output without doing anything different in terms of engaging the client or factoring in agent behaviour. Secondly we do not also attempt to challenge the fixed cost agency model and attempt to make it more variable. He felt that insurance is about protection and not IRR but the industry has been only thinking about IRR and so that is what the agents also talk about. Unless we change this perspective, impact on volumes may not be seen.

Mr Anand concluded by saying that distribution is an important piece of life insurance business and it is important to see what goes into defining and building distribution. Second part is that whatever you put down as assumption it finally boils down to execution. We need to have a perspective on a time frame and not expect something too soon by making a long term business run with a short term perspective.

Session 6: Report of the "Committee to recommend measures for curbing mis-selling and rationalisation of distribution incentives in financial products"(Bose Committee)
Speaker: Mr S B Mathur, Ex LIC of India, Chairman.



Mr. S. B. Mathur as member of the Bose committee report presented the draft recommendations of the Bose committee report constituted to look into measures to curb misspelling and rationalisation of remuneration across financial products. The committee constituted of nine member team from various sectors. He presented a brief of the broad recommendations of the committee which were:

- Separation of the investment and risk portion.
- Commission to be paid only on the pure protection portion.
- Exit to be simple and non expensive.
- Similar structure with regard to service tax, stamp duty and rural & social sector norms.
- One page disclosure explaining key benefits signed off by buyer and seller.

The intention is to bring uniformity, prevent overpayment of commission and sell the right product to the customer. The committee also recommended respective regulator to regulate distribution by banks. For insurance companies tax benefit is proposed only on the insurance portion, cost of surrender to be reasonable, asset allocation in case of ULIP's to be disclosed on the site, lapsation profits not to accrue to companies in case of traditional products and split of premium into mortality and savings for traditional products. For mutual funds the committee recommends the provision of a free look period, lower caps over a period of time and disclosure of trail commission at the point of sale.

It was felt that such recommendation may spell the death knell of the insurance industry. A senior actuary has requested Mr Mathur to advocate to the committee on behalf of the insurance industry to look into the implications of these measures on the industry before considering implementation. The senior actuary was also of the view that the Appointed Actuaries need to be more proactive and provide their views on the committee recommendations through a proper representation made via the Chief Executive Officer.

Session 7: Towards a risk based capital approach
Speakers: Mr Kunj Maheshwari (Towers Watson) and Mr Kailash Mittal (KPMG)



The session started with a brief overview by **Mr Kunj Maheshwari** (Left) of the discussions to follow which was to see what has already happened and what needs to be done to get to a risk based capital approach. He said that in this journey one needs to look at what possible models can be adopted, when the RBC implementation can be carried out, what are the key considerations and what the transition roadmap would look like. In this context the LIAG circulated a

questionnaire to solicit views on RBC with responses received from 15 companies.

Initial steps had already been taken in 2009 when a report on economic capital required all companies to calculate economic capital as part of the annual actuarial regulatory reporting. In 2014, there was a report on the roadmap on how to implement RBC and talks about prequantitave assessment that the industry needs to take part in so that by 2017 RBC could be implemented A recent review of the regulation takes the view that there should be no immediate major changes but proposes a solvency underpin with risk based capital.

The basic measure is that we need to have a solvency margin that would promote a culture of risk management that is specific to the company and reflect the company's products, risk, asset portfolio with the capital reflecting these. **Mr. Kailash Mittal** (Right in previous photo) added that in this context, one of the responses to a question floated by LIAG on current solvency regime indicated that 50% of the appointed actuaries were comfortable with the current regime as it is easy to understand and consistent across companies. The demerits of the current regime mentioned were different factors were used for different lines with no consideration of actual experiences , qualitative considerations such as good corporate governance was ignored and no weightage was given to investment risks. It was also noted that 2/3 of the respondents were maintaining additional capital of their own initiative and 2/3 followed a Solvency II standard formula.

Mr. Kunj Maheshwari then went on to mention that many countries have moved to a capital regime that reflects the individual circumstances of the company and so in moving towards this kind of regime we would have the advantage of the processes and methodologies already used ofcourse adopted to be suitable to the local experience. We have however yet to decide on the type of model to adopt. The RBC roadmap committee put the onus on the regulator to come up with standard shocks. In this context, a core working group can be the focal point of dialogue between the regulator and the actuaries. In coming up with the standard stresses, the technical experience of the multinational partners can be leveraged. The risks are relative to the best estimate experience which has changed in the last five years. This raises the question as to whether the shocks in a developing industry should be based on absolute levels where best estimate is developing and where the best managed company can start mirroring the experience of the worst risk managed company. Tail events could lead to a well managed company degenerating into a poorly risk managed company because of management changes, attrition etc. We need to bear this in mind when we how to assess the calibration of the key risks.

Mr. Kailash then drew the attention of the audience to the response to another question raised by LIAG. When companies were asked the question as to what would be a suitable RBC framework, many responded by saying Solvency II framework. The modification proposed to the Solvency II framework were simplicity, calibration to the Indian context, change in operational risk calculation in the Indian context and reduction of subjectivity in the calculation. It may be noted that although Solvency II was conceptualised in 2004 it has taken a long time for its implementation which is expected in 2016.

Finally companies were of the view that RBC framework should be implemented in a phased manner with the current solvency margin running concurrently although they did voice their concerns on the high factors under the current regime.

The session ended with a vote of thanks from **Mr. Ramakant Malpani.**



PEOPLE'S MOVE



Mr. Nirmal Nogaja

Nirmal has moved from Exide Life Insurance to HDFC Life Insurance on 15th Dec 2015. He had joined Exide Life 5 years back and worked as Head - Pricing for 2 years and Head - Shareholder Reporting for 3 years. Before joining Exide Life, he has worked with Tata AIA Life for 4 years in pricing team. He is joining HDFC Life as AVP Actuarial. He is a chartered accountant qualified in 2004 and practiced for 2 years before joining actuarial profession.



NPS – Understanding the tax benefits & disparities

What is National Pension System?:
New Pension Scheme [subsequently rechristened as National Pension System] (in short NPS) is a government approved pension scheme for Indian citizens in the 18 – 60 age group [minimum entry age is 18, maximum entry age is 55 and contributions will continue up to age 60]. Earlier Government of India used to provide a definite (assured) pension to its employees after retirement which was based on employee's length of service and average emoluments or final pensionable salary [Basic pay + DA + Stagnation increment + Non-Practising allowance] drawn during the last 10 months immediately preceding the date of retirement. From 1st January 2004 Government of India discontinued this assured pension and in its place made it mandatory for new government employees (except armed forces) to contribute to the NPS with matching contribution by the Government. This is a move from a **Defined Benefit Pension Scheme (DB Scheme) to a Defined Contribution Pension Scheme (DC Scheme).** Most of the State Governments have also moved their pension system from DB Scheme to DC scheme thereafter. NPS is India's answer to US' retirement scheme 401(k). Pension Fund Regulatory and Development Authority [PFRDA] is the regulator for the NPS.

NPS was open to all citizens on a voluntary basis from May 2009. The objective was to move from pension-less to pensioned society. NPS is a voluntary, defined contribution retirement savings scheme designed to enable the subscribers to make optimum decisions regarding their future through systematic savings during their working life. NPS seeks to inculcate the habit of saving for retirement amongst the citizens. It is an attempt towards finding a sustainable solution to the problem of providing adequate retirement income to every citizen of India and moving from a pension-less to pensioned society.

NPS is an easily accessible, low cost, tax-efficient, flexible and portable [across employers, across sectors (government or private) and across locations] retirement savings account. Under the NPS, the individual contributes to his retirement account and also his employer can co-contribute for the social security/welfare of the individual. NPS is designed on defined contribution basis wherein the subscriber contributes to his account, there is no defined benefit that would be available at the time of exit from the system and the accumulated wealth depends on the size of contributions made, period of contributions and the income generated from investment of such wealth.

The greater the amount of the contributions made, the greater the investment returns generated, the longer the term over which the contributions are made and the fund accumulates and the lower the charges or expenses deducted, the larger would be the eventual benefit of the accumulated pension wealth.

Contributions (Individual contribution as well as co-contribution by the employer) + Investment Growth (Performance) – Charges = Accumulated Pension Wealth

Focus and Objective of this article:
NPS, has been a highly discussed topic right from its launch. Its availability, returns, charges, fund managers and many more things have formed part of heated discussion in the personal finance space. NPS is a great investment vehicle, especially for retirement. **However, let's restrict this discussion to only the tax benefits that NPS offers to its subscribers.** Apart from this, we'll also discuss the tax disparities the NPS has with other retirement saving products like EPF and PPF as well as the tax and other disparities the different NPS models have among themselves based on the employment status of the NPS subscribers.

Different Models of NPS:
NPS has the following four models as on date with different target subscribers. NPS – Government Sector Model, NPS – All Citizens Model, NPS – Lite (Swavalamban) Model, NPS – Corporate Sector Model and NPS – Atal Pension Yojana (APY) Model.

Investment Choice and Asset Allocation Guidelines:
The NPS offers two choices to invest subscriber's money as follows. Active choice - Individual Funds [Equity (E), Corporate Bonds (C) and Government Securities (G) Asset classes) and Auto choice - Lifecycle Fund.

Disparity in Equity Asset Allocation in various Models:
Subscribers of all NPS models (except Government Sector, Swavalamban and APY Models) can choose to invest their entire pension wealth in C or G asset classes and up to a maximum of 50% in equity (Asset class E) or can also distribute his pension wealth across E, C and G asset classes, subject to such conditions as may be prescribed by PFRDA. For subscribers of Government Sector, Swavalamban and APY Models the asset allocation to equity (E) is capped at 15%.

Compulsory Annuitisation of Part NPS Corpus:
The contributions made by an employee and the employer get accumulated in the Tier I account and the value of such corpus depends on factors like quantum of money deposited (size of contributions), contribution period, the asset classes opted by the employee for investment and the returns generated by the pension fund manager. Once the employee completes the 60 years of age, he/she has to compulsorily purchase an annuity for an amount equal to minimum of 40% of the accumulated balance in the NPS account (save when the accumulated corpus is less than Rs.2 lakh). In case an individual wish to withdraw the money before completion of 60 years of age, he/she can do so; but in that case he/she will have to purchase an annuity utilizing minimum of 80% of the accumulated corpus at the time of withdrawal. The annuity needs to be bought from a life insurance company [annuity service

provider] which is registered with IRDA (Insurance Regulation and Development Authority). The compulsory annuitisation of part NPS contribution condition is to remove the "adverse selection" problem for the annuity service providers.

Please note that, it is not mandatory for the individual to withdraw the whole corpus left after purchase of mandatory the individual to withdraw the whole corpus left after purchase of mandatory annuity in one go immediately. The subscriber may opt to withdraw the balance amount in a phased manner. However, there is a need to withdraw a minimum of 10% of the net accumulated corpus after purchase of annuity every year. This account has to be closed once the individual reaches the age of 70 years.

Tax benefits for contribution to Pension Plans:

Income Tax Act provides for various deductions under Chapter VI-A for Contribution to Pension Plans. These Deductions are available under Section 80C, Section 80CCC & Section 80CCD and can be claimed at the time of filing of the income tax return.

Sec. 80C:
Covers contributions to Pension Plans offered by MFs [ie MF linked Retirement Plans (MFLRP)] apart from other investments like Life Insurance Premia, NSC, PPF, PF/GPF/EPF, ELSS of MFs, Tax Saving FDs of Banks and Post Office, housing loan principal repayment, children's tuition fees etc.

Sec. 80CCC:
Covers contributions to Pension Plans offered by Life Insurance Companies.

Sec. 80CCD:
The Section 80CCD allows deduction for contributions made by the employee/individual and the employer towards NPS account.

Tax benefits for contribution to NPS u/s

80CCD:
This article mainly focuses on deductions allowed under Section 80CCD.

Section 80CCD(1):
Deduction for Contribution to NPS Scheme by the Individual/employee
Sec. 80CCD (1) covers deduction for contribution to NPS by salaried individuals [Employees] as well as non-salaried individuals [Non-Employees]. The tax deduction allowed u/s 80CCD(1) is:-

- In case of an employee: up to 10% of his salary [BP+DA] for the financial year with a maximum limit of Rs.1.5 lakh.
- In case an non-employee [self-employed person]: up to 10% of the Gross Total Income in the financial year subject to a maximum of Rs.1.5 lakh.

Gross Total Income includes sum of all incomes computed as per provisions of the Income Tax laws, before any deduction is allowed to an individual in respect of various items broadly covered under Section 80C, 80CCC and 80D etc. However deductions in respect of interest paid for the housing loan is deducted before arriving at the figure of gross total income for calculating the limit of 10%.

Sec. 80CCD(1B):
Additional contribution of up to Rs.50,000/- by employees/individuals towards NPS from FY 2015-16 as per this new sub-section inserted in the budget 2015-16. So total tax free contribution by employees/individuals towards NPS from FY 2015-16 will be Rs.200,000/-.

Sec. 80CCE:
Covers the total deductions allowed u/s 80C, 80CCC and 80CCD(1). As per Budget 2015-16, the total limit u/s 80 CCE stands at Rs.150,000/- plus additional Rs. 50,000/- for NPS taking total limit u/s 80CCE to Rs.200,000/-.

Section 80CCD(2):
Deduction for Contribution to NPS account of the employee by the Employer [tax deduction available both to the employee and the employer]

Tax benefits to employee:

Sec. 80CCD(2) covers deduction for contribution to NPS account of the employees by the employer [for which the employee gets extra tax deduction over and above Sec. 80C/80CCC/ 80CCD(1)] which can be up to 10% of employee's salary (BP+DA) but without any ceiling unlike Sec. 80CCD(1). However, there is onlyone restriction that only up to 10% of the salary (Basic + DA) only qualifies for deduction without any monetary limit.

Please note that the deduction under section 80CCD(2) available to employees for the NPS contribution made by their employers into their NPS accounts is over and above the deduction of Rs.2 lakh available to the employees for their self contributions to their NPS account and other investments made under Sec. 80C + Sec. 80CCC + Sec. 80CCD(1) + Sec. 80CCD(1B).
It works wonders for those who are in highest tax bracket, as there is no absolute limit up to which one's employer can contribute towards one's NPS account for claiming the deduction as long as this is within the limit of 10% of your salary. Thus many HR Consultants and Tax Consultants advise the prospective employees to get their salary restructured so as to include 10% component of their salary as contribution to NPS. This will provide a separate window for tax saving and investment.

The point to note here is that the amount of 10% contributed by an employer will be treated as salary under Section 17 and will form part of Form No. 16 issued to an employee. However, the employer will grant deduction for his contribution under Section 80CCD (2) before deducting any income tax from the employee. So, for all practical purposes employer's contribution to the NPS account up to 10% of salary becomes tax free income in employee's hand and gets invested in NPS.

Tax benefits to employer:

Contributions made by the employer (up to 10% of Basic + DA) to the NPS account of an employee is allowed as a permissible business expense under Section 36 (1) iv (a) of Income Tax Act 1961 and so the employer is eligible for a corporate tax deduction on this contribution.

Thus benefits u/s 80CCD(2) under NPS Corporate Sector Model is a win-win situation for both the employee and the employer.

Summary of tax benefits to individuals under NPS

Tax benefit to employee:

Individuals who are employed and contributing to NPS would enjoy tax benefits on their own contributions as

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well as their employer's contribution as under:

(a) **Employee's own contribution** - Eligible for tax deduction up to 10% of Salary (Basic + DA) under Section 80 CCD(1) within the overall ceiling of Rs.1.5 lakh under Sec 80 CCE plus an additional tax benefit of 100% for additional NPS contribution up to Rs.50,000/- u/s 80 CCD(1B) beyond the Rs.1.5 lakh limit u/s 80 CCE thus taking the overall limit up to Rs.2.00 lakh.

(b) **Employer's contribution** – The employee is eligible for tax deduction up to 10% of Salary (Basic + DA) contributed by employer under Sec 80 CCD(2) over and above the limit of Rs.2.00 lakh provided u/s 80 CCE.

Tax benefit for self-employed:

Eligible for tax deduction up to 10 % of gross income under Sec 80 CCD (1) with in the overall ceiling of Rs.2 lakh under Sec 80 CCE.

Differential Tax treatment of NPS on net lump sum withdrawal of corpus after purchase of annuity on maturity @ age 60 or on pre-mature withdrawal before age 60 based on subscriber's employment status:

Tax benefit on any investment is considered under three stages of contribution, accrual (accumulation) and maturity (or withdrawal). Based on the taxation feature at the three stages investments are classified as EEE (Exempt, Exempt, Exempt), EET (Exempt, Exempt, Taxed) and ETE (Exempt, Taxed, Exempt) etc. In all the NPS models [be it Government Sector, Corporate Sector or All Citizen], the first two stages of investment are tax exempt without any distinction, ie, subscribers of all models get tax deduction at the first stage on their contributions made during a financial year from their taxable income as per the prescribed limit(s) on their own contribution as well as on the employer's contribution and at the second stage the returns accrued on their investments are also tax exempt/free.

Taxation on the death of NPS Subscriber before age 60:

In case of untimely death of the NPS account holder before completion of 60 years of age, the nominee can withdraw the entire corpus in one lump sum accumulated at the time of death of the account holder without any compulsion to buy annuity. The money received by the nominee or legal heirs is fully exempt from tax. This applies to all classes of NPS subscribers.

Taxation of Corpus used to buy annuity:

The portion of NPS corpus utilised to buy annuity is tax exempt for all classes of NPS subscribers.

Taxation of annuity:

The annuity which an annuitant receives periodically is taxable on yearly basis as per the tax slab applicable to individuals. This annuity will be considered as taxable income and hence will be added to other taxable income — such as pension income, employment income, or interest income—and the annuitant has to pay whatever tax is due on the total amount every year as per the marginal tax rate. But, as per the current tax slabs any income of up to Rs.3 lakh (basic exemption limit for persons above 60 years but below 80 years) is fully tax free. This applies to all classes of NPS subscribers.

Taxation of net lump sum withdrawal of corpus after purchase of annuity:

One key aspect about the taxation of NPS needs particular attention. This is the taxation of net lump sum withdrawal of NPS corpus after purchase of annuity. The tax treatment on lump sum withdrawal of NPS corpus after purchase of annuity [either on maturity at age 60 or pre-mature withdrawal before age 60] is different for different subscriber based on his employment status. NPS withdrawals will be treated as income in the year of withdrawal with the marginal tax rate applicable on the entire withdrawals.

Taxation Status of Government Sector Employees:

For government employees who contribute to the NPS, the commutation withdrawals are fully exempt from tax without any limit. That is, for government employees NPS is an EEE investment product.

Taxation Status of Private Sector Employees/Corporate Sector NPS Model:

(a) **Employees Not receiving Gratuity Benefit:** For those private sector employees whose employers offer the NPS, withdrawals from the scheme enjoy some tax exemptions under Section 10(10A). If an individual does not receive gratuity, up to 50% of the total corpus will be tax free on commutation.

(b) **Employees receiving Gratuity Benefit:** If gratuity has been paid, only 33% of the total corpus is tax-free on commutation.

Illustrative Example:

Let us look at the tax implications for an individual who has a corpus of Rs.2 crore when he retires. Of this, minimum 40% (or Rs.80 lakh) will go into buying an annuity. Assuming that he does not receive gratuity, 50% of the corpus (or Rs.1 crore) will be tax free. So, he will be taxed only for Rs.20 lakh. If he has received gratuity, only Rs.66 lakh will be tax free and he will be taxed for Rs.54 lakh. But savvy investors can minimize the tax by staggering the withdrawals over 4-5 years.

Taxation Status of Individuals & Self-Employed Persons/All Citizen NPS Plan, NPS Lite & APY Model (Personal NPS Plan):

An individual who does not have a corporate NPS account but invests in the NPS directly [personal NPS plan] like Self-employed persons, salaried individuals of private sector, unorganized sector is not eligible for the tax exemption under Section 10(10A). For all of them the lump sum withdrawal on commutation is fully taxable.

Author's Comments:

On the one hand, tax exemption under Section 10(10A) is positive. Even so, the tax treatment is discriminatory. Private sector employees do not get the same tax benefits as government employees. For the subscribers under government sector model NPS is an EEE investment product whereas for the subscribers under all other models NPS is an EET investment product. The commuted corpus has part tax exemptions only for NPS offered by an employer under corporate sector model. Under current rules, an individual who does not have a corporate NPS account but invests in the NPS directly is not eligible for the

tax exemption at all for the commuted corpus under Section 10(10A). This makes the NPS taxation unfair to the self-employed persons, unorganized sector workers and NPS subscribers under all citizen model. They don't even get the exemption enjoyed by employees in the private and government sectors.

Overall NPS is by far a much superior retirement vehicle than any of the other options. But for a scheme that was primarily envisaged to bring the self-employed into the pension fold, NPS needs to offer uniform tax treatment to all participants irrespective of the nature of their employment. For this to happen, the NPS should be brought under clause 23(aab) and make the tax treatment the same for all. If this anomaly in the taxation of NPS is rectified and the tax benefits under Section 10(10A) are evenly offered to all, NPS will become the most preferred vehicle for retirement planning.

Taxation disparities b/w Non-Government Sector NPS Model and other Retirement Products like EPF and PPF:

The dominant retirement products in India, the EPF and PPF, offer tax exemption at all three stages: contribution, growth and withdrawals. In other words EPF and PPF are EEE investment products whereas for the non-government NPS model NPS is an EET investment product.





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Would the adoption of the Ind AS 19 from 2016-17 advance changes to investment policy of Post Employment Defined Benefit Plans?

Mayur Ankolekar charts the likelihood and offers pointers from behavioural finance.

"A moment comes, which comes but rarely in history, when we step out from the old to the new, when an age ends, and when the ..." Rings a bell? The epiphany, however, is in the provisions of the new IFRS adaptation guided Ind AS 19 on employee benefits. The transition from the present AS 15 on employee benefits to Ind AS 19 is planned phase-wise from financial year 2016-17.

The Ind AS 19 would usher in many recognition- and disclosure-related changes in respect of Post Employment Defined Benefit Plans (DB plans). Prominent among these is the treatment of actuarial liability- and asset-side gains and losses, and for this specific discussion, the asset-side actuarial gains and losses.

Both gains and losses would now not be charged to the Profit and Loss Account (P&L). In other words, under the Ind AS 19 gains and losses beyond the normal expected rate of return would not be a P&L charge, but can be parked in the Balance Sheet under the Statement of Other Comprehensive Income. The Other Comprehensive Income is an ongoing Balance Sheet item clubbed under "Reserves and Surplus." It aims to stabilise the P&L, among others, from the whirls of asset-side fair value change.

This article aims to answer four questions:

- What does stepping out from the old AS 15 to the new Ind AS 19 mean for companies with funded pension and gratuity obligations?
- Would company management and fund trustees become more adept at investing in more volatile, higher expected return-delivering assets?
- Does the new Ind AS 19 encourage funds to realize capital gains or losses?
- How would the investment guidelines for retirement funds support a more appropriate asset liability matching strategy?

Stepping out to the new

Company management and trustees have, deservedly so, argued for steady asset returns on employee benefit plans. Even while the liability side dishes results disharmonious with expectation, trustees have taken solace in the predictability of asset movement. Traditional plans with smoothed bonus became popular. A small variation in year-on-year asset returns has been customary. Duration matching from investing in market linked bond plans gained mindshare, often a result of education.



Even while the liability side dishes results disharmonious with expectation, trustees have taken solace in the predictability of asset movement.

And trustees evolved into appreciating the net gains/ losses (i.e. the net result of liabilities and assets) from changes in interest rates.

In substance though, as company managements overly worry about the annual P&L charge of DB plans, asset-side volatility was shunned. And the year's P&L charge was a greater propeller to investment strategy than the meritorious matching of assets with the nature, term and currency of liabilities.

Overcoming past bias

DB plan liabilities, being linked to final salary, are significantly driven by earnings inflation, which in turn depends on economic inflation. As the nature of liabilities is real and its term long, an appropriate asset-matching can manifest from investment in long-term, real assets. The past bias of P&L charge precluded employers and their trustees from exposing the portfolio to long-term, real assets– which are synonymous with intra-year volatility.

The knock-on effect of the new accounting treatment should, in merit, trigger an ideology of investing in long-term, real assets.

The recognition-related accounting policy in Ind AS 19 is likely to comfort the concerns on intra-year asset fair value change. Biases last longer than we be necessary to overcome these.

Emerging evidence on confirmation bias in the field of behavioural finance has many pointers to position the communication. Pension actuaries can render useful service in educating companies and trustees that in respect of long-term real assets, expected returns and realized returns have a greater chance of converging if assets are invested for the long-term. In behavioural finance speak, paths of nudging trustees about the 'not to worry' position of intra-year asset volatility would have to be travelled.

No trade for gain

The new Ind AS 19 (like the AS 15) measures assets at their fair value. Recognising income, either in the Profit and Loss Account or in the Other Comprehensive Income, does not depend on whether the income is actually realised. So trustees would not be incentivised to trade in order to realise the accrued gains or losses. The approach is likely to reward a metronomic investment philosophy and reduce the overall cost of investment.

In behaviourial finance speak, paths of nudging trustees about the 'not to worry' position of intra-year asset volatility would have to be travelled.

Tuning in the investment guidelines

DB funds in India, prominently the approved gratuity trusts, are allowed to invest as per the directions of Rule 101 of the Income Tax Rules, 1962. The investment can be in the form of contribution to group gratuity funds of



an insurer or if managed in-house by the trust, the pattern should comply with Rule 67 of the Income-tax Rules, 1962. Arguably trustees of approved gratuity funds (and in the same vein, approved superannuation funds) can invest in a range of assets including an exposure to insurer-managed equity-oriented funds.

The Insurance Regulatory and Development Authority's investment guidelines [Clause 6 of the Insurance Regulatory and Development Authority (Investment) Regulations, 2000] provide a cap of 60% exposure to domestic equity shares. Clause 7 of the exposure draft of these Regulations, if enacted, could permit investing an even higher proportion of a unit-linked fund in equities.

Equity investment, in view of its promise of real returns from a long-duration asset class, presents an option worthy of evaluation. Emerging international evidence on Liability Driven Investment (LDI) endorses investment in real assets, and a 'core and satellite' investment strategy.

Swing the balance

Asset-Liability Management could dramatically change in Indian Defined Benefit Plans, accommodate an LDI approach and more risky but real investment strategy in view of the new IFRS adapted Employee Benefit accounting from financial year 2016-17.

The ability to look beyond the horizon which is often reinforced in actuarial training would be valuable as the old AS 15 clears ground for the new Ind AS 19. I encourage my colleagues in the profession to see what opportunities arise in the challenges of communication with pension trustees and scheme advisors. Perhaps we can take cue from the famous midnight speech at the start of this discussion.

About the Author



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Mr. Mayur Ankolekar is a Fellow of the Institute of Actuaries of India.

18TH GCA STUDENT EVENT

Dear Student Members,

IAI Student Event scheduled on 1st & 2nd February, 2016 includes 120 minutes session specially meant for the Students community. You will recall that this program in previous GCA's was much appreciated by all and there was a demand for more such sessions at future conferences. Keeping in view your request, the session is arranged on both the days and this time again IFOA will be interacting with all of you.
We have planned a session on "'Top ten study and exam tips" by Darrell Chainey, and few more interactive sessions with fantastic prizes, these sessions are not to be missed! Register now at http://actuariesindia.org/gca/registration.htm.

Please note that the number of students for registration is limited to 400, so hurry up and Register Now. Do visit 18th GCA website regularly for latest updates http://actuariesindia.org/gca/HomePage.htm.



STUDENT COLUMN

PRICING THE EFFECT OF 'REGULATION : MAXIMUM REDUCTION IN YIELD' UNDER UNIT LINKED PRODUCTS

Background:

The introduction of Linked regulations, 2013 brought significant changes to Unit Linked Products(ULIPs) . It forced Insurers to withdraw the then existing ULIPS & introduce products in compliance with the new regulation.

The article looks at one of the key elements that may pose significant problems to the Insurers in future- **The Actual Reduction in yield due to charges should be less than Maximum Reduction of yield.**

Introduction:

Now we give a brief overview of some sections of Linked regulations, 2013 pertaining to the topic:

Chapter 8, Section 37 briefs the following:

a) Specifies Maximum reduction in yield due to charges (hereafter MRIYC); ranging from 400bps for duration 5 to 300BPS for duration 10 & 225 BPS for durations 15 y & above for surrenders and maturities.
b) Specifies MRIYC for maturities at 3% for term 10yrs & below & 225 BPs for 11 year onwards.
c) Actual Reduction in yield must be less than MRIYC. It has to be complied for all investment returns. Insurers have to demonstrate the compliance at F&U stage to IRDAI for 6% p.a., 8%, 10%, 15%, 20% & 25% p.a.
d) Non negative claw back additions (hereafter NNCA) has to be added to the fund to ensure compliance to a & b above.

Chapter8, Section 38 requires each policyholder to receive a certificate showing contributions, deductions & final payment. It also requires that the certificate thus given to the policyholder acts a confirmation letter that section 37 (a) & (b) has been complied with by the Insurer.

Chapter 11: 46 a, b , c & d: deal with ensuring proper system is in place before the product is launched to ensure policy payments to customer, reserve calculation . More importantly, the board or a risk committee has to certify the establishment of systems & process.

Chapter 18, Section 65 gives IRDAI the power to inspect affairs of the Insurer on compliance to regulations.
Section 37(c) stipulates compliance to MRIYC for certain constant investment return. However, in reality the investment returns would never be constant over the duration of contract. Therefore, it becomes imperative that we look at the uncertain nature of investment return & check whether compliance to MRIYC is ensured under various different scenarios.

Therefore the topic of article boils down to:

1. The Insurer has to comply with MRIYC at each policy level retrospectively.
2. There is a possibility that Actual RIY is greater than MRIYC thereby triggering the payment of NNCA.
3. Prudential risk management theory requires every insurer to reserve for the cost at the beginning of the Contract to ensure shareholders are not required to inject capital in future.

This is an attempt to calculate the cost of point 2 above. Also the article lists various drivers of the Cost which were derived from the investigation. The article does not discuss about other elements of product design.

Investigation:

Product features of one Product from 4 major companies selling ULIPs as on date were examined. It was ensured that all the products are of Regular premium payment mode to ensure consistency. Products are given alphabetical names for anonymity.

Given below are some of key differentiating aspects of charging structure of the 4 products:

Charging Aspect	Product A	Product B	Product C	Product D
Premium allocation charge	Yes	Yes	No	No
Administration charges	Yes/ expressed as fixed per policy increasing by 3% each year	Yes/ expressed as % of premium	Yes/fixed per policy throughout the term	No
Whether Fund management charge is applicable?	Yes/ expressed as % of fund	Yes/ expressed as % of fund	Yes/ expressed as % of fund	Yes/ expressed as % of fund
How Fund management charge is expressed	Same for all funds	Same (kept at maximum allowed (i.e.1.35% p.a.)) for most of the funds.	Different % based on asset allocation within the fund	Same for all funds but kept at maximum allowed (i.e.1.35% p.a.)
Sales channel	Agency	Agency/ online	Online	Online
Loyalty additions	No	Yes/Insurer gives certain % of fund as loyalty addition at certain durations if the policyholder has been paying premium regularly	No	No

The process:

- Some charges are daily, some are monthly & some occur at premium payments. To capture all the charges & premium payment so as to calculate net yield for each policy requires powerful I.T. infrastructure. For example, IRR calculation may be readily available in software applications. However, most of software applications use numerical methods (ex: newton raphson method, etc) with iterations to calculate IRR. Such iterations need a starting rate (something like 'guess' in Ms excel) which cannot be programmed. This is just one of numerous difficulties that Insurers may be facing. Discussing the technical aspects would be a digression.
- Simplified Unit fund projection based on product features was done to serve the purpose of the article.
- Unit fund was projected from date of inception to point of maturity with investment return allowed to vary based on stochastic simulation.
- Monte Carlo techniques were used to project asset returns. A brief note on Monte Carlo simulation techniques is given below:
  - Projection of asset returns were performed for 3 funds namely bond fund (maximum allocation in bond & money markets), balanced fund (even split between bond, equities & money market) & growth fund (maximum allocation in equity).
  - It was decided to use Vasicek's model to project returns on bond fund, Autoregressive(1) model to project returns on balanced fund and Geometric Brownian process to project returns on growth fund.
  - The parameters for the above models were obtained from historical NAVs for the past 10 years of one of the well known mutual funds. Mutual fund NAVs reflect both investment income & change in capital values thereby proving apt to project asset return values.
  - 4000 simulations were run under each fund, each again being repeated for different terms & different annualized premium
- Calculation of Gross yield & net yield was done as per IRDA' guidelines in the Linked Regulations, 2013.
- The difference was then compared against MRIYC which is based on table given by IRDAI.
- **Wherever Actual RIY exceeded MRIYC, "Non negative claw back additions (NNCA)" were calculated as per the Linked regulations, 2013.**
- Out of the 4000 simulations, any simulation with a cost was noted along with NNCA corresponding to the simulation. Number of simulations with a cost divided by 4000 would give the proportion of times the cost would bite.
- Also, expectation of NNCA under all such simulations would give the average NNCA (This a conditional expectation given that there is cost)

Results:

An important note: Before looking at the results below we need to understand that not all the policies would reach maturity. The cost obtained below has to be modified for Present value & probability of survival till maturity to find the cost at point of Sale. Also, the results heavily depend on the parameters (i.e. mean, volatility and alpha) used in the model. Further, the asset allocation of companies may be different from that used in the Model.

Results are given in the form of 6 tables. Tables 1, 3 & 5 present the proportion of times Actual RIY exceeds MRIYC out of 4000 simulations. Tables 2, 4 & 6 present the Average NNCA given that the Actual RIY has exceeded MRIYC.

Age 35 term 10

Table 1

	AP = 24000 p .a				AP = 70000 p .a			
	A	B	C	D	A	B	C	D
Bond fund	0%	0%	0%	0%	0%	0%	0%	0%
Balanced Fund	0%	0%	0%	0%	0%	0%	0%	0%
Equity Fund	1.59%	1.41%	2.6%	0%	0.25%	1.40%	1.18%	0%

Table 2

There was no requirement for a table as there was negligible cost in respect of policies with term 10 at maturities.

Age 35 Term 15

% of times the Regulation would bite at maturity:

Table 3

	AP = 24000 p .a				AP = 70000 p .a			
	A	B	C	D	A	B	C	D
Bond fund	0%	0%	0%	0%	0%	0%	0%	0%
Balanced Fund	0.8%	0.2%	0%	0%	0.13%	0.2%	0%	0%
Equity Fund	11.75%	2.54%	15.68%	0%	3.64%	2.53%	13.04%	0%

Average Cost per policy at maturity given that there is cost:

Table 4

	AP = 24000 p .a				AP = 70000 p .a			
	A	B	C	D	A	B	C	D
Bond fund	0	0	0	0	0	0	0	0
Balanced Fund	4375	7200	0	0	12,807	20,996	0	0
Equity Fund	17,734	22,853	3,667	0	65,605	68,858	13,975	0

Age 35 Term 20

% of times the Regulation would bite at maturity:

Table 5

	AP = 24000 p .a				AP = 70000 p .a			
	A	B	C	D	A	B	C	D
Bond fund	0%	0%	0%	0%	0%	0%	0%	0%
Balanced Fund	0.71%	0%	0.8%	0%	0.30%	0%	0.4%	0%
Equity Fund	10.27%	3.13%	21.94%	0%	4.18%	3.09%	17.7%	0%

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Average Cost per policy at maturity given that there is cost:

Table 6

	AP = 24000 p .a				AP = 70000 p .a			
	A	B	C	D	A	B	C	D
Bond fund	0	0	0	0	0	0	0	0
Balanced Fund	12,556	0	12,294	0	47,804	0	3,454	0
Equity Fund	42,354	36,236	1,80,674	0	3,09,255	1,07,054	5,38,600	0

Main findings:

1. Percentage of times actual RIY exceeds MRIYC is nil for bond fund. The reason is obvious. Since the volatility of bond fund is small, the result would be similar to the cost with "zero volatility". Scenario with "Zero volatility" would have already been tested at the stage of product design as per IRDAI's stipulation in chapter 8, section 37(C).

2. Volatility plays a significant role as can be seen that the Percentage of times actual RIY exceeding MRIYC is higher in Equity Fund compared to balanced fund.

3. It can be generally observed that higher the average premium lower the cost of RIY biting. Average Annualized Premium is important only if charges are fixed per policy ex: fixed admin charges. Of course, minimum premium is also important from the point of view of cross subsidy between small ticket size & big ticket size polices. Other aspects of design are not discussed in the article.

4. Volatility of fund is important only when charges are not directly proportional to Unit fund. For ex, applicability of premium allocation charge & fixed admin charges would make volatility vital. This is shown by the result that the cost of actual RIY exceeding MRIYC is nil for all funds under product D which has only FMC.

5. Abrupt y-o-y change of fixed charges would increase the cost of Actual RIY exceeding MRIYC. For example, y-o-y shift from 5% to 4% & then 3% in premium allocation charges would cost less than a structure of 7% in the first year, 4% the year after & 2% then onwards . Smoother the rate of change, lesser the cost.

6. Gross IRR would influence the amount of payment given to Policyholder at maturity. IRR of 20% would give a larger cost per policy than a 10% IRR.

7. Due to increasing funnel of doubt, both the values would increase (viz. the % of times the cost bites & the average cost) as Term increases. Further MRIYC for 10 yr term is 3% whereas it is 2.25% for 15 & above terms. That would also contribute to Cost for 15 year & more term being higher than the cost of 10 year term.

8. Giving loyalty additions (apart from Unit fund) increases the net yield without increasing the gross yield thereby reducing the cost of Actual RIY exceeding MRIYC.

Based on the results of tables 1, 3 & 5, % of times actual RIY exceeding MRIYC is very significant for Equity Fund. We have not checked the cost for surrenders at different durations. That may be the subject for another article.

Readers are requested to use the Tables above to appreciate the Impact of volatility & product charging structure on the Cost of MRIYC regulation and not on the actual Value given in the above tables as the values are depended on the parameters used.

It has to be re-iterated that any estimated Price of a risk is just a perception of future loss. There is a possibility of such a risk biting insurers more or less than the above predictions. The fact that such a risk is new to the Industry makes the risk more potent. Hence the impact of MRIYC regulation is one of the aspects of ULIPs that Insurers cannot ignore.

Implications & Conclusions:

Succinctly speaking, MRIYC regulation has resulted in policyholder getting a greater share of the gross yield. However, there has been a significant impact on Product design & Profitability parameters.

As discussed earlier, prudential management would impel Insurers to reserve for the risk thereby constraining capital. There is a risk of actual impact being higher than the amount reserved for. Therefore, this particular aspect of regulation has increased both the cost of capital (due to higher uncertainty) and the required capital (in the form of additional reserves).



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18TH GCA SPEAKERS



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Sanjeeb Kumar
Vice-President,
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Dilip C. Chakraborty
Chairperson, 18th GCA
Organizing Committee,
India



Sunil Sharma
Appointed Actuary &
CRO, Kotak Mahindra
Old Mutual Life Insurance Ltd.
(KLI), India



Fiona Morrison
President, IFoA, UK



Derek Cribb
CEO, IFoA, UK



Darrell Chainey
Managing Director, ActEd, UK



N. M. Govardhan
Actuary and
Former Chairman,
LIC, India



Manalur Sandilya
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K. Sriram
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Mayur Ankolekar
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Chief Executive of
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Gavin R. Maistry
Chief Actuary & CRO,
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Ashish Taneja
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Vikram Jain
Actuarial Analyst,
Swiss Re Services India Pvt Ltd.



Sachin Saxena
Senior Vice President
Product Solutions Management,
Max Life, India



Saket Hishikar
Student, IAI

For more details, please visit http://actuariesindia.org/gca/speakers.htm
This list provides the details of speakers at the time of publication of 'the Actuary India'.
Some more speakers are expected to participate in GCA. The details of speakers will be included in next month's issue.

UPDATE - LIFE INSURANCE

The LIAG (Life Insurance Advisory Group) is responsible for addressing issues in respect of life insurance that are either referred to it or it considers appropriate to address and advise the Council for appropriate action.

The Life Industry has undergone significant changes in terms of both business dynamics as well as in terms of the Regulatory framework. The actuaries working in the industry particularly the Appointed Actuaries have had to face severe challenges so as to face up to the demands on account of these.

The LIAG, over the last few years has worked towards supporting the actuaries, so that they are able to function appropriately in this time of change. It has interacted with the Regulator providing inputs to proposed regulatory changes. It has also carried the views of the actuaries to the Regulator. The Product Regulations of last year was one area where the Group has worked very closely with the Actuarial community.

In order to strengthen the actuarial best practice within the Life Companies, a few GNs/APSs have been put in place and a few more are also in the due process. To mention a few, there have been GNs on Reserving for Guarantees in Life Insurance business, Management of Participating Business and Determination of Embedded Value etc. A few are currently in due process which cover areas such as the With Profits Committee etc.

The other areas where the Group works on is reviewing and updating the Actuarial Practice standards and GNs so as to keep them abreast of the industry requirements and regulatory changes. In this context, some of the APS/GNs are currently being reviewed including APS2, GN 6 etc.

The Group is also actively engaged in designing and carrying out Continuing Professional Development Programs including seminars and workshops for enhancement of skills of members in the Life Practice area. **The CILA Seminar is the flagship seminar that the Group conducts. The last one was held on 24th November 2015.**

The 2nd Capacity building seminar was held on the 3rd of June. The objective is to impart actuarial skills of technical nature through these seminars. The topics selected are generally on the emerging areas of actuarial practice, to which our members would not have been greatly exposed to. The topics covered during this seminar were on Asset Liability Management and Predictive Modeling in Life Insurance.

The Group aims to hold more of such seminars in future.

EMPLOYMENT OPPORTUNITY



UPDATE - ENTERPRISE RISK MANAGEMENT

The Advisory Group on Enterprise Risk Management (ERM-AG) has been setup with an overall objective of providing expertise within the Institute of Actuaries of India (IoAI) on matters relating to the risk management practice area, and to promote, support and champion the interests of practice area members in accordance with the IoA's strategic objectives, by focussing on the following key areas:

- **CPD** - seek to provide CPD opportunities that meet the needs of members
- **Conference** – to be responsible for the development of programme planning for the practice area annual seminar, Seminar leading to CERA Qualification, Capacity Building and GCA
- **Education** - to monitor education needs/developments and needs of the practice area, to improve take up rate for ST9 and support to students taking ST9
- **Fostering a sense of community** amongst members of all constituencies in the practice area
- **Research and thought leadership** - to stimulate the advancement of actuarial science and provide a focal point for research in the practice area, and cross practice initiatives. To include member-led and strategic research relevant to the practice are
- **Public affairs** - to promote external stakeholder awareness of, and confidence in, the work of the practice area and the IoAI, and to identify emerging issues, including horizon scanning, and hot topics of relevance to the practice area and address these with appropriate action
- **Standards** – To provide input to help the IoAI ensure the development and maintenance of robust technical standards and non - mandatory resource material for the practice area

In recent months, the ERM-AG has been active in its advocacy role, providing feedback on white papers issued by global professional bodies. In early December, the ERM-AG also organised the 4th Enterprise Risk Management Seminar of the IoAI that provided a platform to share hands-on experiences and challenges faced by practitioners whilstimplementing ERM to the wider profession. The seminar was received very positively and provided participants with best practices gleaned from different industries and geographies.

A key endeavour of the ERM-AG is to increase awareness and take-up for the Chartered Enterprise Risk Actuary (CERA) qualification. IoAI is s accredited to award the CERA qualification to members meeting the required criteria. Members of the IoAI can be certified provided the member: a) is a fellow and have passed ST9 as one of the ST subjects for Fellowship or Fellow members who have passes ST9 as an additional subject; and b) have attended and successfully completed ERM seminar. Currently, the ST9 paper as well as the CERA-qualification seminar is not conducted directly by the IoAI and the ERM-AG is working conscientiously to make that happen! In the meantime, we encourage all members – students and fellows alike – to consider CERA as a value additive option.

ERM remains a relatively nascent field – and thus, the importance of education and research increases manifold. Consequently, the ERG-AG has taken cognisance of the relative development of this practice area and is looking to actively promote awareness in the actuarial community. To meet all the multifarious objectives of the group, we have sub-divided ourselves into four sub-working groups as follows:

- **Education CPD, Career Support and Development Subgroup** – Responsible for Education, CPD and Fostering a sense of Community
- **Research sub-group** – Responsible for research, thought leadership and Standards
- **Risk Conference sub-group** – Responsible of for all Conference related matters
- **ERM Awareness sub-group** – Responsible for creating awareness within the actuarial community, including current and future job opportunities in the area of Risk Management.

We hope the planned actions and activities over the coming months and year result in fostering a healthy engagement of the actuarial community in the ERM practice area and look forward to active participation of all members of the Institute in promoting the same.

On a final note, recognising the importance of ERM, the International Association of Insurance Supervisors (IAIS) has included as an Insurance Core Principle the need for ERM stating that the supervisor must establish ERM requirements fors olvency purposes that require insurers to address all relevant and material risks. As global practice develops, we may have further regulatory push in India as well, and this may be a development that the profession may wish to actively participate in as well.



SUCCESS STORY



Mr. Ranjan Gupta
(CA2 TOPPER)

1. Congratulations! Mr. Ranjan Gupta, for being Topper in CA2 Exam held in August 2015. Tell us about yourself, your educational background and your hobbies

Thanks for the wishes! I am currently working as an Actuarial Consultant in Enterprise Risk Management team of ICICI Prudential Life Insurance (Mumbai). I am a Chartered Accountant and hold Bachelor's degree in Management from Panjab University. I have cleared 13 actuarial exams. I always keep Albert Einstein's words in my mind–"Education is not the learning of facts, but the training of mind to think". To train my mind better and get a wider perspective, I have also done some certification courses like Diploma in International Financial Reporting (DipIFR), Financial Risk Management (FRM-Level 1) and Certified Information System Auditor (CISA). I love to spend quality time with my parents, work out at the gym, watch live plays and follow world leaders like Narendra Modi and Elon Musk.

2. How did your parents, family and friends contribute to your success?

Just like the roots of a tree are an integral part of its growth, similarly the values inculcated in me by my parents and family has laid a strong foundation in my growth as an individual. My friends have always been by my side. Their support and love has always been very encouraging. Under the leadership of great professionals at ICICI Prudential, I have been provided with ample opportunities to grow both personally and professionally.

3. How many hours of study on average per day did you put in to top the CA2 result where in only 16 candidates passed out?

My day to day work in office gave me good exposure to build the models and communicate with various stakeholders involved in the insurance business. I practiced the sample papers under exam conditions and focused on every aspect covered in the material. The training held on the day before the exam along with 2-3 hours per day on average helped me in gaining confidence for this exam.

4. How much time do you think one requires for serious preparation for this examination?

Acted has recommended 50 hours for this course, however according to me it is the quality of time spent rather than the number of hours. Since CA2 involves practical application of the actuarial concepts thus I tried to focus on the application of the course in my day to day work. While attempting the sample papers under exam conditions I tried to achieve the right balance between the time spent on the development of the model and its adequate documentation. Additionally, I used to get mock exams reviewed by my colleagues and take their valuable feedback.

5. Did you face any difficulty while studying this subject?

The course for CA2 has been structured very well and its objectives are clearly defined. Time management is one of the key requirements of this exam. Initially with a few mock exams it was challenging for me to complete the documentation within the stipulated time however the practice of the sample papers gradually helped me in better time management.

6. CA2 is a 7.5 hour long exam which examines documentation, analysis and reporting skills of the candidates within the given timeframe. What was your strategy to cover all these aspects while preparing for exam?

I believe that time management and application of this exam in my day to day work were my key strategies. Since it is a lengthy exam, one needs to be focused for duration of 7.5 hours. The exam requires building the model along with adequate documentation of the assumptions, methodology and findings of the model. The practice of the past year papers under exam conditions had helped me immensely to keep the model simplified, incorporate reasonable checks for the validating the model results and appropriate documentation of these results.

7. How this exam has helped you at professional level?

The Actuarial profession involves application and communication of the modeling techniques and results. The preparation of this exam has helped me in documentation of the model and results, keeping the relevant stakeholders in mind. I try to ensure that the documentation is well understood by the stakeholders based on their respective background.

8. How do you think you can add value to the Actuarial Profession?

Robert Ingersoll once said ,"We rise by lifting others". I believe that one should just not focus on gaining qualification and degrees but also on application of the gained knowledge and skill set to add value. I would like to contribute to exam counseling, seminars and sessions facilitated by the Actuarial Society. Through this platform I would like to take the initiative of associating with IAI in conducting online survey of Actuarial employees in India. The survey will include questions related to job satisfaction, skill set acquisition and work life balance. The result of this survey will be available to the public on IAI website. This will not only help fresher's and experienced employees to select the right employer but will also encourage healthy competition among the Actuarial employers to have top ranking.

9. What was your purpose while selecting this course - Core Application Model Documentation, Analysis and Reporting?

After having gained experience in Life Insurance Company of about 3.5 years I felt that it was the right time for me to take this exam. Apart from this, CA2 exam has helped me in moving a step closer to become a qualified Actuary and grow professionally.

Mark your Date 1-2 Feb 2016
18th Global Conference of Actuaries | Renaissance, Mumbai
Indian Actuarial Profession
Serving the Cause of Public Interest



PUZZLE NO 241:
There are 5 ships in a port:

1. The Greek ship leaves at six and carries coffee.
2. The Ship in the middle has a black chimney.
3. The English ship leaves at nine.
4. The French ship with blue chimney is to the left of a ship that carries coffee.
5. To the right of the ship carrying cocoa is a ship going to Marseille.
6. The Brazilian ship is heading for Manila.
7. Next to the ship carrying rice is a ship with a green chimney.
8. A ship going to Genoa leaves at five.
9. The Spanish ship leaves at seven and is to the right of the ship going to Marseille.
10. The ship with a red chimney goes to Hamburg.
11. Next to the ship leaving at seven is a ship with a white chimney.
12. The ship on the border carries corn.
13. The ship with a black chimney leaves at eight.
14. The ship carrying corn is anchored next to the ship carrying rice.
15. The ship to Hamburg leaves at six.

Which ship goes to Port Said? Which ship carries tea?

PUZZLE NO 242:
Find a 10-digit number where the first digit is how many zeros in the number, the second digit is how many 1s in the number etc. until the tenth digit which is how many 9s in the number.

Answers to puzzles:

Puzzle No 237: 100 steps
Puzzle No 238: 291 - 322
Puzzle No 239: 5.9
Puzzle No 240: Five

CORRECT SOLUTIONS WERE RECEIVED FROM:

Puzzle No 237:

1. Mercy Amalraj
2. Neel Chheda
3. Shilpi Jain
4. K S Pujari
5. Khushendra jain
6. Amit Bohara
7. P. Sankara Narayanan
8. R. Vasudevan
9. R. Mythili
10. V. V. N. K. K. Sarma
11. Prasham Rambhia
12. Hemant Rupani
13. Vithika Shah

Puzzle No 238:

1. Mercy Amalraj
2. K s Pujari
3. Khushendra jain
4. Amit Bohara
5. P. Sankara Narayanan
6. R. Vasudevan
7. V. V. N. K. K. Sarma
8. Prasham Rambhia
9. Hemant Rupani
10. Neel Chheda

Puzzle No 239:

1. Prasham Rambhia
2. Divyansh Saraogi
3. Ankit Kapila
4. Meenakshi Tewari
5. Ishan Bhasin
6. Nikita Prabhu
7. Sahil Kataria
8. Ankit Thakkar
9. Abhishek Dudhwewala
10. R. Mythili
11. Hemant Rupani
12. Shilpi Jain
13. Rini Patel
14. Ankit Samdaria
15. Aayush Agarwal
16. Mohit Bhandari
17. Gaurav Shah

Puzzle No 240:

1. Prasham Rambhia
2. Divyansh Saraogi
3. Ankit Kapila
4. Pariv Shah
5. Ishan Bhasin
6. Nikita Prabhu
7. Sahil Kataria
8. Ankit Thakkar
9. ParthVira
10. Abhishek Dudhwewala
11. R. Mythili
12. Hemant Rupani
13. Rini Patel
14. Ankit Samdaria
15. Aayush Agarwal
16. Mohit Bhandari
17. Gaurav Shah
18. Rakesh Kumar Sharma
19. Vira Parth

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