

Pages 24

VOL. V ISSUE 5





COUNCIL OF INSTITUTE OF ACTUARIES OF INDIA, IN ITS MEETING ON 24TH AUGUST, 2012 ADOPTS VISION, MISSION AND VALUE STATEMENT

VISION	MISSION	VALUE
IAI to be globally well recognised professional organisation, developing enduring thought leadership to manage uncertainty of future financial outcomes.	 To educate/train risk professionals To enhance and maintain high professional standards To shape Public Policy and Awareness To engage with other professional/regulatory/government bodies To promote/build IAI as a respected Brand of risk management globally To promote Research, to advance actuarial science/application 	 Integrity Respect for others' views Accountability Continuing learning/Research oriented learning Transparency Be responsive/ sensitive

VISION, MISSION AND VALUE STATEMENT

(Excerpts from the book: Bootstrap leadership - 50 ways to break out, take charge, and move up by Steve Arneson)

Vision & Mission provides purpose and direction to an organization and paves way for road to success

VISION – Vision is the dream – the future state, where you want to go. Think of it as the why – as in, "Why does our group exist?" The vision should be aspirational and motivational; something the team can rally around. Aim high and make it aspirational. A great vision can unify a team and give its members a reason to come to work every morning.

MISSION - Mission is the goal: the objective in front of you. Think of it as the what – as in: "What are we trying to accomplish?" The mission should be challenging and should describe the business you're in and the customers you are trying to serve (whether internal or external). The mission should be connected to the vision; that is, by accomplishing the mission, you move closer towards making the vision a reality.

DEVELOP STRATEGY – Think of Strategy as the how – as in "how are we going to complete the vision?". Strategy describes the specific plans taken to meet the objective, and should be clear and measurable. Good strategy includes detail about how the work will be accomplished, and includes resources, responsibilities, budget, metrics, and milestones.

VALUES - Value statements are often referred to as "guiding principles". A value statement is an expression of a company's or individual's core beliefs. It allows for the company's staff to be aware of the priorities and goals of the company.

The value statement, along with a mission and vision statement forms the corporate culture and climate.



Chief Editor Taket, Nick Email: nicktaket@gmail.com

Editor Sharma, Sunil Email: sunil.sharma@kotak.com

Puzzle Editor Mainekar, Shilpa Email: shilpa_vm@hotmail.com

Marketing Manager Rautela, Binita Email: binita@actuariesindia.org

Librarian Damre, Akshata Email: library@actuariesindia.org

COUNTRY REPORTERS

Krishen, Sukdev South Africa Email: Krishen.Sukdev@absa.co.za

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

Pranshu Maheshwari Indonesia Email: Pranshu.Maheshwari@aia.com

Anshuman Anand Indonesia Email: anand.anshuman@gmail.com

Smith, John Laurence New Zealand Email: Johns@fidelitylife.co.nz

Sharma, Rajendra Prasad USA Email: rpsharma0617@yahoo.com

Cheema, Nauman Pakistan Email: info@naumanassociates.com

Leung, Andrew Thailand Email: andrew.leung@iprbthai.org

Balgobin, Vijay Mauritius Email: Vijay.Balgobin@sicom.intnet.mu

For circulation to members, connected individuals and organizations only.

C O N T E N T S

CONTENTS

VISION, MISSION, VALUE STATEMENT

FEATURES

- Regulatory Framework for Investments -Going by Priority of Needs by C. L. Baradhwaj
- Statistical Techniques in Insurance : Some Issues by D. V. S. SASTRY
- A New Retirement Paradigm
 by Danny L Quant, Simon Herborn,
 Zorast Wadia, Daniel Theodore
- Savings -Type General Insurance Products 23
 by Sharad Bajla & Ankit Goyal

16 LIFE INSURANCE UPDATE

Life Insurance Industry Update by **Vivek Jalan**

18 FROM THE PRESS

Business Standard

General insurance industry logs 19% growth in April-Feb period: The 27 non-life insurers collected ₹ 61,885.11 crore premium in the April-February period of 2012-13.

The Financial Express
 Private life insurance companies
 join hands to fight investment fraud
 via mis-selling.

19 COUNTRY REPORT

Pakistan Insurance Market by **Nauman Cheema**

BOOK REVIEW

- Life Insurance Mathematics Hans U. Gerber Reviewed by K. GANESAN
- Debt The First 5000 Years David Graebe Reviewed by Hardik Thakkar



SUDOKU

UPCOMING EVENTS OF IAI

CAREER OPPORTUNITY

- 13 For Actuarial Expert -McKinsey & Company
- 15 For Multiple Vacancies HDFC Life Insurance Company
- 17 For Life Actuary Srilanka Amana Takaful.
- 21 For Deputy Manager Product & Reporting Team – Reliance Life Insurance Company

Disclaimer : Responsibility for authenticity of the contents or opinions expressed in any material published in this Magazine is solely of its author and the Institute of Actuaries of India, any of its editors, the staff working on it or "the Actuary India" is in no way holds responsibility there for. In respect of the advertisements, the advertisers are solely responsible for contents and legality of such advertisements and implications of the same.

The tariff rates for advertisement in the Actuary India are as under:

Back Page colour ₹ 35,000/- Full page colour ₹ 30,000/- Half Page colour ₹ 20,000/-

Your reply along with the details/art work of advertisement should be sent to library@actuariesindia.org

ENQUIRIES ABOUT PUBLICATION OF ARTICLES OR NEWS

Please address all your enquiries with regard to the magazine by e-mail at library@actuariesindia.org. Kindly do not send it to editor or any other functionaries.

Printed and Published monthly by Gururaj Nayak, Head of the Operation, Institute of Actuaries of India at ACME PACKS AND PRINTS (INDIA) PRIVATE LIMITED, A Wing, Gala No. 55, Ground Floor, Virwani Industrial Estate, Vishweshwar Nagar Road, Goregaon (E), Mumbai-63. for Institute of Actuaries of India : 302, Indian Globe Chambers, 142, Fort Street, Off D N Road, Near CST (VT) Station, Mumbai 400 001. • Tel +91 22 6784 3325 / 6784 3333 Fax +91 22 6784 3330 • Email : library@actuariesindia.org Webside : www.actuariesindia.org

REGULATORY FRAMEWORK FOR INVESTMENTS-GOING BY PRIORITY OF NEEDS

by C.L. Baradhwaj

(This article has been published in IRDA Journal April 2013 Issue and is reprinted with the kind permission from IRDA)

C.L. Baradhwaj gives a vivid account of the various norms under the investment regulations; and goes on to justify the sanctity of each of these regulations towards protecting the policyholders' interests.

Introduction:

The mission statement of IRDA reads as protection of interests and securing fair treatment for policyholders. One of the key areas of regulations for protection of policyholders is monitoring and regulating investments of policyholders' funds by insurance companies. The accumulated total investments held by the insurance sector as at 31st March 2012 stood at ₹16,80,527 cr., out of which ₹15,81,259 cr. belonged to life insurance. 76.60% of the total funds managed by life insurance constituted the traditional portfolio and the remaining, ULIP portfolio.

Sections 27 to 29 of the Insurance Act, 1938 govern the provisions relating to investments of insurance companies. Further, IRDA had notified the IRDA (Investment) Regulations, 2000, as amended from time to time along with various circulars on the subject. Recently, IRDA notified the IRDA (Investment) (Amendment) Regulations, 2013 which made significant amendments to the investment regulations framework. This article discusses the overall regulatory framework for investments with specific reference to the above amendments. These regulations are applicable to Life, Non-life and Reinsurance companies.

Key risks associated with investments:

Concentration risk is about the risk of concentration of investments with one entity or group of entities or a sector. If such a company or group or the industry does not perform well or goes bankrupt, a risk arises on account of exposure to such company, group or sector. Interest rate risk is the risk of instability in market interest rates which impacts the return on investments

Liquidity risk is the inability to fetch liquid money to repay the obligations on time.

This could arise due to poor planning of investments resulting in excessive investments in illiquid securities.

Default risk is the risk of default by the counter-party to fulfill the obligations. This could arise on account of improper evaluation of the counter-party at the time of investment and on a periodic basis.

Approach towards regulation of investments:

Types of investments (based on nature of investments)

The objective behind this classification is to categorise the investments based on the avenues where investments are made and place a ceiling (cap) or floor (minimum) depending on the type of investment. Investments of insurers are categorised into the following buckets:

- (a) Government Securities these are predominantly securities issued by Central Government or State Government which have a sovereign rating and carry a very high safety tag.
- (b) **Approved Securities** include securities issued by an authority constituted under a Central or State Legislature or by a corporation.
- (c) Approved Investments are controlled investments which satisfy any of the conditions mentioned in Section 27A (for Life) and 27B (for Non-Life) of the Insurance Act. Further, IRDA have also specified additional investments as "Approved investments" under the Regulations.
- (d) Other investments these are investments which are 'other category of investments', other than the ones specified above and which are not prohibited investments.

About the Author



baradhwaj@yahoo.com.

C.L. Baradhwaj (CLB as he is popularly called) is currently the Senior Vice President (Compliance), Chief Risk Officer and Company Secretary of Bharti AXA Life Insurance Company Limited. A Company Secretary, a Law Graduate and a Fellow of the Insurance Institute of India, CLB has worked for 10 years in LIC and for more than 10 years in private life insurance companies in the areas of Legal, Compliance, Taxation and Secretarial matters.

 (e) Prohibited investments – investments in Private Limited Companies and investments out of policyholders' funds outside India.

Investment categories based on type of business:

Investment assets of an insurer have broadly been classified as follows for the purpose of regulating investments:

- (a) Unit reserves of unit linked business – These constitute the reserves against the units of a unit linked insurance business which are dependent upon the investment pattern chosen by the policyholders. Hence these investments are classified separately.
- (b) Pension & Annuity business Pension and Annuity businesses are relatively long term in nature and guarantee annuity over a fairly long period of time and hence require to be treated differently. Group business other than unit linked and one-year renewal Group Term insurance also fall under this category.
- (c) Life insurance business this is the residual category which comprises of :
 - a. Shareholders' funds representing solvency margin
 - b. Participating and Nonparticipating Policyholders' funds

- c. One year Renewable Group Term Insurance
- d. Non-unit reserves of unit linked insurance business.

For a Non-life insurer (including Health business), there is only one category of investible funds – which includes both shareholders' funds and policyholders' funds.

Prescription of floor and ceiling for investment categories (based on type of business)

- (a) For unit reserves of unit linked business – The investments are required to be made in such forms of instruments in such proportion as per the pattern of investment for the fund selected by the policyholders. However, atleast 75% of the investments made as per the pattern shall be in such instruments which belong to 'Approved investment' category.
- (b) For Pension & Annuity business - A minimum of 40% of the funds in this category will have to be invested in Central government, State government or other Approved Securities (out of which 20% shall be Central Government Securities). At the same time not more than 60% is allowed in Approved investment categories. Investments in 'Other investments' are prohibited for Pension and Annuity business.
- (c) For Life insurance business (other than (a) and (b) above) :

Out of the total funds in this category of business:

Mandatory investments:

- a minimum of 50% to be invested in Central or State Government or Approved Securities (out of which 25% shall be Central Government Securities)
- a minimum of 15% to be invested in Housing & Infrastructure investments

Optional investments

- a. up to 50% allowed in Approved investments
- b. up to 15% allowed in "Other Investments"

Note: The pattern of investments is not applicable for Shareholders' funds held in excess of the solvency margin, provided they are kept separately and based on an Actuarial certification filed with the Authority and provided the Shareholders' funds held to support solvency margin are invested as per the investment pattern as above.

Housing & Infrastructure investments:

Bonds or debentures issued by HUDCO or National Housing Bank or Housing

being rated, but is not rated for some reason. Also, the rating must be done by an authorised credit rating agency under the SEBI Regulations.

Classification as Approved investments based on rating:

The following investments shall be classified as "Approved investments" based on credit rating as follows:

S. No.	Nature of Security	Credit rating	Type of investment / Category recognised	Remarks
1.	Corporate bonds or debentures	Minimum 'AA' or equivalent	Approved investments	Nil
2.	Short term bonds, debentures, Certificate of deposits, Commercial papers	Minimum 'P1' or equivalent	Approved investments	Nil
3.	Debt instruments issued by All India financial institutions	Minimum 'AA' or equivalent rating	Approved investments	If investments in 'AA' not allowed, 'A+' allowed with Investment Committee approval

Finance Companies accredited by the Bank for housing finance activities or carrying Government guarantee of a rating of not less than AA only would qualify. If an Asset Backed Security is backed by an underlying housing loan which satisfies the above condition, such a security would also qualify under this category.

If a Central or State Government Security is issued to specifically meet the needs of a sector falling under infrastructure facility, such a security shall qualify for the purpose of investments in "Housing and Infrastructure" investment category.

All investments in Approved investments and "Other Investments" shall be subject to Exposure and Prudential norms, including housing and infrastructure investments.

Investment controls based on rating of instruments:

A credit rating evaluates the credit worthiness of a debtor, especially a business (company) or a government. It is an evaluation made by a credit rating agency of the debtor's ability to pay back the debt and the likelihood of default.

As a general rule, no investment can be in an instrument which is capable of

Minimum and maximum investments based on Credit rating:

(a) Minimum investments in 'AAA', Sovereign or 'P1' rating for Debt instruments

A minimum of 75% (65% in the case of non-life) of Debt instruments (including Government and Approved Securities) shall be invested in instruments with sovereign rating or 'AAA' or equivalent for long term and sovereign debt and 'P1' or equivalent for short term instruments. For unit linked business, at each segregated fund level, the above condition must be satisfied. Investments in Reverse repo backed with underlying corporate bonds, Fixed Deposits, Promoter group Mutual Funds and unrated Mutual Funds must not be considered while calculating the above percentage.

(b) Maximum investments in 'A' or below for Debt instruments:

A maximum of 5% (8% in the case of non-life) of Debt instruments (including Government Securities and Approved Securities) can be invested in instruments having a rating of 'A' or below or equivalent for the long FEATURES

term, out of life insurance fund and unit linked fund for a life insurer (and overall funds of a non-life insurer). However, no part of the Pension and Annuity Fund of a life insurer can be invested in such instruments.

In other words, while investments in long term debt instruments in 'AAA' rated shall be 75% in each category of investments, investments in debt instruments rated 'A' or below cannot be more than 5%, which means the remaining 20% is required at the minimum to be rated between 'AA+' to 'A+'. The rating of the remaining 20% has to be decided keeping in mind the overall limit of 15% for investments in "Other investments" out of Life insurance funds.

In respect of short term debt securities, not less than 75% shall be invested in securities rated 'P1+' and above while short term corporate bonds and debentures rated 'P1' and above shall be rated as 'Approved investments'. This would mean that short term debt securities rated less than 'P1' cannot exceed 15% (limit for 'Other investments').

Listed equities – investments only in "actively traded scrips"

All listed equity investments to be made only in those securities which are actively traded in stock exchanges, i.e. other than ones which are classified as "thinly traded" as per SEBI Regulations.

Investment controls based on Exposure norms:

These norms aim to control the investment risk by limiting the exposure to the company where the funds are invested, limiting the exposure to a group of companies to which the investee company belongs to and also limits the exposure to one industry. This follows the golden principle "do not put all your eggs in one basket".

Exposure norms are applicable to all the three investment categories based on the types of business given above and shall be calculated for the following types of investments:

- (a) Approved investments
- (b) 'Other investments'
- (c) Housing & infrastructure investments

Investee company limits:

There are two limits for calculation of

6 The Actuary India May 2013

exposure norms to an Investee company:

- (a) Overall exposure limit of all the funds of the insurer in all types of securities in a single company
- (b) Security-wise exposure limit for each investee company for each type of investment category

The lower of (a) or (b) above determines the exposure limit for an investee company.

(a) **Overall exposure limit :**

The overall exposure limit is calculated as follows:

- (i) Aggregate all types of investments, viz., equity, debt etc. in a single investee company
- (ii) Aggregate investment assets of the insurer (i.e. addition of unit reserves, pension and annuity including Group and Life insurance funds)
- (iii) (i) divided by (ii) shall not exceed 10%.

In the case of non-life insurers the limit is 10% of their total funds.

(b) Exposure limit based on nature of security for each type of fund:

(i) For investment in equity, preference shares and convertible debentures

The limit is calculated as 10% of the outstanding face value of equity shares of the investee company or 10% of assets belonging to each investment category based on type of business (unit reserves, Pension and Annuity including Group and Life insurance business). For non-life, total investment assets (policyholders' funds and shareholders' funds) are considered.

The lower of (a)(iii) and (b)(i) is the investee company limit.

(ii) For investments in Debentures, loans and other permitted investments (other than mentioned in (i) above)

The limit is calculated as 10% of the Capital, Free reserves, Debentures and Bonds of the investee company or 10% of each investment category based on type of business, as mentioned in (i) above.

The lower of (a)(iii) and (b)(ii) is the investee company limit.

Increase in the limit of 10% based on the size of investment assets:

If the size of investment assets for an insurer touches ₹50,000 cr., the investee company limit (on outstanding face value of equity shares for equity and paid-up capital, free reserves, debentures and bonds for Debt, loans and other permitted investments) stands increased to 12% and if the amount touches ₹2,50,000 cr., the limit stands further enhanced to 15%.

Therefore, even though as per one rule, a limit of 10% for equity shares and 10% for debentures for each investment asset category is allowed, the overall exposure limit under (a) above, would bring down the exposure to 10% of all the funds. On the other hand, even though an insurance company is within 10% on the overall exposure limit under (a) above, it still will have to be within the limit of 10% for equity shares and 10% for debentures separately for each investment asset category. Thus, the investee company limits aims to achieve two objectives:

- Limiting the investment in each type of security, viz., equity, debt in each investee company to 10% of each type of investment category, i.e. unit reserves, pension and annuity and life insurance business;
- Limiting the overall exposure (all investments put together) to one investee company to 10% of overall investment assets.

The above two limits are subject to a further limit of 10% (of 12% or 15% in some cases as explained above) of outstanding face value of equity shares of the investee company (for equity investments) or share capital, free reserves, bonds, debentures (for Debentures, loans and other permitted investments), as the case may be.

Special dispensation for Infrastructure related investments:

Exposure to a Public Limited Infrastructure investment company can be increased to 20% of the Equity capital at face value for equity investments and 20% of equity plus free reserve plus debentures and bonds in the case of Debt. However, this is subject to the overall exposure (all investments put together) at 10% of overall investment assets.

Indian Actuarial Profession Serving the Cause of Public Interest

A special dispensation has also been given to Public Sector Special Purpose Vehicle engaged in infrastructure sector by allowing an investment up to 20% of the project cost, which is categorised as Approved investments, subject to the limit of 10% of overall investment assets

Investment in Immovable Properties:

The limit for investments in immovable property is 5% of the aggregate of life funds, pension and annuity funds and group funds in the case of life insurers and 5% of investment assets in the case of general insurer.

Investments in Promoter Group companies of insurer:

The overall limit for investments in all the Promoter Group companies of the insurer is set at 5% of the aggregate funds of the insurer. Investments in private equities is prohibited. However, investments in subsidiary companies are allowed in terms of the provisions of Section 27A or 27B of the Insurance Act, 1938.

Investment in Securitised Assets, e.g. Asset backed securities:

The limit is 10% of investment assets for Life insurers and 5% for Non-life insurers.

Exposure to financial and insurance activities:

The exposure to these activities under the industry exposure norms cannot exceed 25% of investment assets. However, this limit excludes bank deposits in terms of Section 27A or 27B.

Limits for Group to which Investee Company belongs:

The limit to a Group to which the investee company belongs shall be the least of the following:

- (a) 15% of each of the investment asset categories
- (b) 15% of investment assets in all companies belonging to the group.

Industry exposure limits:

The limit to the industry to which the investee company belongs shall be the least of the following:

- (a) 15% of each of the investment asset categories
- (b) 15% of investment assets.

Governance related controls:

Investment Committee

Every insurer is required to form an Investment Committee which consists of a minimum of two non-executive directors, Chief Investment Officer, Chief Financial Officer and Appointed Actuary to oversee the performance of the investment function.

Investment Policy

The Board, on the basis of approval of Investment Committee, has to approve an Investment Policy for the company on an yearly basis, with a half yearly review mechanism. The policy shall address the issues relating to prudential norms, liquidity, management of assets and liabilities, scope of internal and concurrent audit and all other internal control of investment operations. It shall ensure adequate return on policyholders' funds and shareholders' funds.

Board shall review fund-wise and product-wise investment performance on a quarterly basis. The Board shall also lay down the norms for investing in "Other investments" category.

Operational level controls:

Segregation of Front office, Mid office and Back office

Every insurer is required to segregate Front office, Mid office and Back office and clearly lay down the roles and responsibilities. The Chief Investment Officer shall report to the Chief Executive Officer. No function falling under any of these three sub units can be outsourced. Further, data servers for the investment management system shall be within India.

Risk Management systems review

The Board shall implement a Investment Risk Management Systems and Process which shall be certified by a Chartered Accountant as per the technical guide issued by the Institute of Chartered Accountants of India. This shall be reviewed once in two years by the Chartered Accountant and the report has to be filed with IRDA.

Further a quarterly internal/concurrent audit is mandated (if Assets under management crosses ₹1,000 cr. concurrent audit by external auditor required). Qualifications and experience for Risk Management Auditors as well as Concurrent Auditors prescribed. Necessary certification shall be taken from them before appointment and filed with IRDA.

Returns, offsite monitoring and onsite inspections

The Regulations provide for filing of various returns on investments which enable offsite monitoring from time to time. Further IRDA also conducts onsite investment audit to ensure that compliance with the Regulations is in place.

Conclusion:

The Regulations envisages protection of the interests of policyholders through the following ways:

- Segregation of Life funds into three investment categories based on nature of business
- (2) Fixation of limits for investments based on G-Sec., Approved investments etc. for each of the investment categories
- (3) Fixation of exposure limits at the investee company, group and industry levels
- (4) Limits for exposure to insurer's promoter groups, immovable properties etc.
- (5) Floor and ceiling for investments based on credit ratings
- (6) Investment governance
- (7) Concurrent and risk management investment audits
- (8) Offsite and Onsite inspection.

While the regulations provide the right framework, the ultimate objective can be achieved only if the insurance companies exercise care and due diligence to ensure that the guidelines are followed at all times.

The views expressed herein are the personal views of the author and should in no way be deemed to be the views of Bharti-AXA Life Insurance Company Limited or any of its associate companies.



STATISTICAL TECHIQUES IN INSURANCE : SOME ISSUES

A ctuaries generally use two statistical techniques, probability distributions and generalized linear models, besides many other actuarial techniques. The nature of the insurance data do not satisfy the basic assumptions underlying the use of the above statistical techniques. Though actuaries use ingenuity in circumventing the difficulties in model building, awareness of the issues involved in the use of statistical techniques will be useful.

Insurance provides financial insurable risks and rely on two fundamental concepts: risk pooling and risk transfer. The fair value of an insurance policy is the discounted expected value of cash flows that provide to the owners of the products . Insurance deals with risks which can be viewed from four perspectives: the occurrence of a loss event, the frequency or count of loss events in a period of time, timing of the loss event and severity of the loss event. The answer to the first is either yes or no. For the second question, it is either zero or a positive integer. For the third question, the answer would be an interval of time usually measured with respect to a fixed point of origin such as the beginning of the contract etc. The fourth tells how much money is spent to cover the loss caused by the risky event. From all the above perspectives it seems that risk is quantifiable. Therefore, it is possible to formalize using statistical methodology. However, the matching of the random variables to the above four perspectives become important. The first one is a dichotomous variable, the frequency is a count variable, the timing is a duration variable and the severity is any continuous positive variable.

In applying econometric analysis or probability distributions the concern is in estimation and drawing inferences on the random variables. For modeling, the first task is to establish the assumptions about the mechanism that generates the risk. The basic guideline being that any risk associated with an individual is either bearing the risk or perceived as risky by another individual. The individual can be a person, a company, an insurance policy or a credit agreement. The individual characteristics are therefore essential part of any model for individual risk by D.V.S.SASTRY

assessment. The statistical summary of such risks is called a score.

There are three approaches for risk modeling. (1) parametric (2) nonparametric (3) semi-parametric. The parametric method consists in choosing a model based on a specific distribution characterized by a set of parameters to be estimated. The non-parametric approach relies on generic parameters such as means, variances, co-variances and quartiles. The semi parametric method bridges the gap and choose the features from both parametric as well as non parametric approaches.

Any loss event in insurance is an output of a random phenomenon generating economic uncertainty. The score is a quantified individual measure of risk based on individual characteristics. The dependence between probability of default (risk) and individual characteristics was established for the first time by Fitzpatrick [1932] for corporate credit and by Durand [1941] for consumer credit. It nearly took 30 years to develop a technique that would allow the guantification of the individual propensity to cause financial losses. Smith [1964] computed a risk index defined as the sum of default probabilities associated with various individual characteristics. Scores are currently determined by more sophisticated methods based on models such as linear discriminant or logit models. In insurance, scores are used to distinguish between low risk and high risk individuals called as segmentation. Segmentation is a basic principle for underwriting and rate making process.

An actuary determines the premium by analyzing data on past losses and expenses associated with loss and combining these with other information. The proficiency of an actuary hinges on fair knowledge of the data , the assumptions and limitations of the techniques used, the properties of loss distributions, and the specification of the expense functions besides many other factors which are determined based on internal data.

A fundamental problem in linear model theory is "a specification problem". By specification problem we mean the

About the Author



dvssastry@gmail.com

DVS Sastry has an M.SC and a Ph.D. in Statistics and worked as lecturer/ Reader at Vikram University, Ujjain at the University of Indore . He moved to Reserve bank of India, Mumbai in 1979 from where he retired as Principal Adviser. During his stint at RBI he worked in department of Statistics and Monetary policy department. After his retirement, he was Consultant in the Monetary policy department. While working in RBI, he was Honorary Visiting professor at Bajaj Institute of management studies and Narsee Monjee Institute during 1982 to1997. After his retirement from RBI, he joined IRDA as Director General in July 2004. He held this position till July 2010. He established research department and a data centre at IRDA. Dr Sastry was a Member / Chairman of many committees appointed by RBI/Government of India/IRDA on many policy issues.

selection of variables to be included in a behavioural relationship as well as the manner in which the variables are related. Herman Wold and Faxter [1957] showed precisely that specification in least square regression coefficients will be small if either of these two conditions hold (1) the disturbance or error term is small or (2) the disturbance is clearly uncorrelated with the explanatory variables. The basic task is how to ensure that explanatory variables are uncorrelated with the error term and the disturbances term is small enough. Insurance data do not satisfy these assumptions.

One has to recognize that insurance losses are heavy tailed and skewed to the right. In most of the insurance applications, estimating the tail of a distribution is of interest. When heavy tails are suspected, accurate information on them become crucial for estimating quantiles which are important in prediction of reserves in insurance. Because extreme data are rare it is difficult to fit tail models and to support parametric model choices convincingly. An approach that is often used is fitting excesses over a high threshold value. Three questions arise

- 1. How to find a threshold
- 2. Which distributions fit well to the small number of observations beyond the threshold and
- 3. How to get a distribution for the entire data with the two above.

For a uni-modal data, Box plots are very popular graphic tools for detecting tails. These are not good tools when data is skewed. When data is from a skew distribution, too many data points will be detected as outliers when Box plots are used. To circumvent these researchers proposed problems, several modifications. These range from skewness adjustment (Mia Hubert and Ellen Vandervieren, 2006) to assigning weights to the data (Dupuis,1999). These adjustments may work for the specific data set but not in general. It is important that in order to find a threshold, understanding the nature of the data is very important. Any developments in this area are useful.

It is in general true that for large part of data, lognormal distribution fits well, but the same does not fit well to the tails. A generalized Pareto model represents the tails appropriately. There are many alternate distributions to GPD and several researchers fitted a variety of distributions. The extreme value distributions are now well documented based on the Fisher - Tippet (1928) theorem which describes the limiting behavior of approximately normalized sample maxima. The theorem has the same status in Extreme value theory as the central limit theorem has in sums. Fisher - Tippett showed that if normalized maxima converges in distribution, the limit distribution must be an extreme value distribution. Subsequent research by de Haan (1974) has shown the applications of these EVD in hydrology, insurance etc. There are a variety of EVDs, and therefore one has to choose from a set of distributions capable of describing the tails. Having chosen the distribution set, one has to fit these distributions and select one based on some statistical test statistic. The usual tests are Kolmogorov-Smirnov, Anderson-Darling and chisquare test, and everyone is aware of their limitations.

The third issue is fitting a suitable distribution to the complete data set. A natural answer is to mix two distributions.

The problem here is the determination of weights attached to the distributions while mixing. Researchers suggested both fixed weights and dynamic weights. If the individual distributions, (one for the large part of the data and the second for the extreme values), have many parameters, estimating parameters in the mixed distribution becomes difficult. Mcneil (1997) remarked that " it is not simply a question of ad-hoc curve fitting. It may be well that, by trial and error, some other distribution can be found which fits the available data even better in the tail. But such a distribution would be an arbitrary choice, and we would have less confidence in extrapolating it beyond the data ".

Beirlant et al (2001) pointed out the limitations of EVT as "having explained the difficulties and merits with now a day's method from extreme value statistics, we clearly recognize the need for completely parametric claim models that are capable to fit well both the tail and more central parts of the claim domain....".

In my view, modeling approach should attempt in finding a single distribution which could explain the entire data adequately. If such a distribution is not found one can use other techniques like EVT or mixture models.

Geralized linear models include linear models as a specific case. The assumptions of linear models such as normality, constant variance and additivity of effects are removed. Instead, the response variable is assumed to be a member of the exponential family of distributions. Also variance is permitted to vary with the mean of the distribution. Finally, the effect of the covariates on the response variable is assumed to be additive on a transformed scale. The relationship between the random and systematic component is specified via a link function which is differentiable and monotonic. GLMs are widely used in insurance applications because of the nature of the variables and types of the relationships between the covariates. The response function could be nonlinear. Claim analysis using GLM approach requires experience rating. Depending on the underlying claim frequencies and the number of factors being analyzed, credible results can be obtained. When dealing with heavy tailed distributions, the population moments are not finite and hence the usual regression

techniques including GLM cannot be used. From extreme value point of view, the main interest is in describing conditional tail characteristics rather than modeling conditional means. A straight forward approach to tail analysis in the presence of covariate information is to model one or more of the parameters of the univariate model as a function of the covariates. Parametrization can be chosen such that the distribution of the response variable depends on the covariates through extreme value index.

Modeling also becomes difficult if the coverage options available to the policyholders are positively correlated. For example, in the case of automobile insurance, choice is between third party or own damage or both. If someone takes a comprehensive package i.e. both third party and own damage, the covers are viewed as independent and the premiums for this independent covers are added so as to arrive at the premium of a comprehensive package. However, one has to recognize the fact that the more severe the accident, the more damage to both the parties and therefore higher expected claims. A similar example can be drawn from automobile and home owner insurance. Historical decomposition of the factors is one of the techniques used in recent times.

As premium is collected at the beginning of the insurance policy in order to cover the claim at a later date insurance companies invest this premium into various securities thereby carrying different types of investment risks. As such the insurers need to develop a portfolio which gives higher returns and lower risks. The investment models that are available in the literature are guite often used. The models are either deterministic or stochastic. The models could be either econometric model or a time series model. There are two basic categories for stochastic investment models based on economic relationships and thus based on statistical models.

Having recognised the need for the proper understanding of the statistical techniques while applying to insurance, it is advisable that a concerted coordinated effort among actuaries and statisticians will go a long way in the advancement of actuarial science on one hand and arriving a proper price for the insurance products on the other.



A NEW RETIREMENT PARADIGM

A BSTRACT: Across global markets, the last 25 years have seen a strong shift in occupational pension plans fromdefined benefit (DB) to defined contribution (DC). This shift has been precipitated by growing concern over managing the costs associated with a DB plan. Building on a presentation at the 15th GCA, this article promotes a new retirement paradigm wherein DB and DC plans can coexist and complement one another.

From a historical standpoint, it is guite remarkable that DC plans, initially devised as a supplementary retirement savings vehicle, have essentially replaced the DB plan and gone on to become the primary retirement mechanism sponsored by employers. While we acknowledge this extreme reversal in the retirement landscape, we question its stability in the long runon account of thelongevity risknow borne by retireesspecifically, relying on benefits from a DC plan as a primary retirement income source subjects plan participants to their own longevity risk. Quite simply, half of the population will survive beyond its life expectancy and half of the population will not. This creates challenging circumstances for people to manage withdrawals from their retirement accounts. In addition, there is the added challenge of managing investments.

These concerns are not present for the participant of a DB plan because the inherent risks have been transferred to the plan sponsor. Aside from the confidence over mortality (and the assumptions for modeling it), sponsors face similar consternation over the way salaries develop during an employee's career trajectory. Taken along with other factors such as interest rate and operational risk, we have a clear perspective on the shift from DB to DC.

This article is not meant to compare the advantages and disadvantages of DC and DB plans; rather, it is meant to promote a new retirement paradigm where both types of plans can coexist and complement one another. This paradigm will recognise the existing DC plan as the primary retirement vehicle, by Danny L Quant, Simon Herborn, Zorast Wadia, Daniel Theodore

but incorporates a secondary DB plan sponsored by employers to commence at old age. This paper offers this retirement model as a contribution to the solution of the longevity risk problem—and we take the opportunity to explore how it could address the broader risks under a DB plan too.

Introducing the new paradigm

In order for the DB plan to be viable in its role as a supplementary retirement vehicle, its structure will have to be different from that of the traditional DB plan with which many are already familiar. The DB plan proposed here is essentially a *longevity plan*. For the plan to appeal to plan sponsors, it must avoid some of the negative features that have caused many sponsors to abandon DB plans in the first place. First and foremost, it must be perceived as affordable in the eyes of the plan sponsor.

Key features of the proposed longevity plan are as follows:

- Benefits to commence at an "old" age significantly after retirement for instance at age 75 in the Indian context, or 85 in countries with longer life expectancy
- Accrual/contribution to begin midcareer (for instance, 10 to 20 years before retirement),and/or an accrual pattern not linked to final salary
- Simplistic retirement options, i.e. neatly defined ancillary benefits and limited choice on annuity form

About the Authors



danny.quant@milliman.com

Danny Quant FIAis a Consulting Actuary in Milliman's Singapore office.



simon.herborn@milliman.com

Simon Herborn FIA, FIAI is a Consulting Actuary in Milliman's Mumbai office.

Supporting Authors:

Zorast Wadia FSA is a Principal and Consulting Actuary in Milliman's New York office.

zorast.wadia@milliman.com

Daniel Theodore FSA is a Principal and Consulting Actuary in Milliman's New York office.

daniel.theodore@milliman.com

How would this help manage longevity risk?

The table in Figure 1 shows the expected age at death of a 55-year-old and a 75-year-old, based on different mortality assumptions.

While admittedly simplistic in terms of the potential error in predicting mortality experience, it shows that there is

Figure 1: Mortality Experience vs. Central Assumptions*

	Adjustment to central mortality assumptions	Expected age at death for retiree aged:		Expected of annuity age	duration for retiree ed:
		55	75	55	75
Central assumption	100%	78.4	90.7	23.4	15.7
Lighter mortality	90%	79.5	91.2	24.5	16.2
Heavier mortality	110%	77.5	90.2	22.5	15.2
Very light mortality	75%	81.5	92.3	26.5	17.3
Much heavier mortality	125%	76.2	89.6	21.2	14.6
Delta heavy/light		5.3	2.6	5.3	2.6
Delta relative to expected at age 55		6.7%	3.3%	22.5%	11.1%

*Based on Mortality for Annuitants - LIC (a) (1996-98) Ultimate Rates

arguably more confidence in predicting the lifespan of a 75-year-old than a 55-year-old. This confidence is crucial to the agreement of either plan sponsors or insurers in underwriting a pension liability. Meanwhile, a 55-year-old retiree relying on a DC benefit is in the individually invidious position of having to budget for the wide range of potential life spans: i.e. running out of money before age 74 and living beyond age 76.

For the technically minded, in Mortality Table Construction, Robert Batten gives an approximation of the standard deviation of q_{v} (the mortality rate at a given age, x) as $q_{1/\sqrt{\theta}}$, where θ is the exposure, or the mortality rate divided by the square root of the number of trials (i.e. exposure). For older lives, because there are fewer survivors, the q_x is increasing while the exposure is lower. Hence, we cannot expect to be more confident in the annual rate of mortality at older ages. However, because there are fewer lives, the amount by which we could be wrong in the number of years of future survival is lower. And this is good for financial management in terms of the absolute amount of capital at risk.

Having said this, fluctuation of mortality at the end of the table (at extreme ages) may be described as tail risk. At younger ages, where mortality rates are relatively small, even large fluctuations in mortality do not have a significant proportional effect on the number of survivors. However, at extreme ages, proportionally small variations in mortality rates can vastly change the number of survivors. That is, although you may not have anticipated many survivors, it is easy to be off by a multiple. The difference may be a small number, but the result can be funding shortfalls that are off by large amounts. Put another way, people who are old now might not see much change for the short time they have left, but people who survive to be old will have plenty of time to deviate from expectations—hence tail risk. Meanwhile, at low discount rates, this can be very costly, even though the affected cash flows are a long way off.

Further, we cannot ignore the significant risks that:

- The "expected" mortality may not be representative of the specific population of lives
- Mortality improvement may fluctuate over time, shifting expected longterm survival rates
- Sudden shifts may occur in mortality (both up and down), attributable to terrorism, war, or epidemics, as well as new cures and treatments for existing diseases

However, the DB plan that is run for the benefit of a larger group, with more predictable average results, has a better chance of weathering fluctuations than the individual, whose own experience outside of the group is virtually impossible to predict.

The avoidance of excessive salary risk

A DB plan based on final salary has predictive difficulties and manipulation issues. These issues have exacerbated the shift from DB to DC. Within the new paradigm, traditional final-average-pay plans should not be considered, given the difficulty in predicting the salary at retirement from the date employees commence their careers and potential benefits-leveraging features (i.e. sharp, selective escalation in the years nearing retirement). However, if the salary link is to be retained, one solution may be to start the accrual mid-career when the future salary inflation is more readily predictable. This is based on the premise that the potential for accelerated promotions has already occurred for the relevant employees. By mid-career, one's position in the business or industry hierarchy has been established and the majority of employees will see salary increases broadly in line with inflation until retirement.

To illustrate this, Figure 2 shows the typical salary progression of various employees from their dates of hire up until retirement age. We see a sample of three individuals who might be described as:

- The underachieving worker who makes his or her way through a working lifetime getting belowaverage increases
- The average worker who gets some promotional increases in early career
- The high achiever who is awarded significant increases through promotion and fast-tracking

All are taken to the point when eventually their annual increments are similar, having reached their seniority potential.





Figure 2: Salary Progressions, Career

⁻ Average Worker - High Achiever - Under Achiever

Figure 3: Salary Progressions, Age 40-55



The first chart in Figure 2 shows the annual increments and the second chart shows the potential end salary, assuming they all started at the same salary at the beginning of their careers. We see dramatically different ending salaries. For the sponsor of a DB plan, the funding of their respective benefits has very different financial consequences.

However, seen from, say, age 40, the charts would appear as shown in Figure 3, using the same vertical scales. Now the financial consequences are seen to be similar whichever employee you observe. The design of a new DB system to cope with longevity risk would be doubly attractive if it also helped deal with the salary inflation risk.(Note that we are now observing the salary progression from the same starting salary at age 40 to illustrate the range of potential salaries at retirement age-hence the final salaries are not the same as those shown in Figure 2).

An alternative (or perhaps complement) to mid-career accrual commencementis career-average-earnings or unit-accrual plans. Such plans avoid the potential for selective pay increases near retirement that would cause the accrued benefit to suddenly jump. We design a formula for the plan that bases benefits either over a person's career-average earnings or over a person's service career.

Less investment risk for both sponsor and participant

One consequence of traditional DB plans that plan sponsors dread is the volatile funded status that can result from the mismatch between assets and liabilities. The diminished salary risk in a careeraverage/unit-accrual plan helps mitigate this volatility. The residual interest rate risk can be prudently managed by using liability-driven investment (LDI) strategies. A plan sponsor wanting to stay invested in equities while still reducing market risk can consider tailrisk hedging investment strategies. Coupling a low-cost design with the appropriate investment strategy can help to greatly lessen cost volatility and make plan funding more predictable.

Another positive investment aspect of the proposed retirement paradigm relates to the plan participant's DC holdings: because retirees are receiving guaranteed employer-funded benefits from the longevity DB plan, they are free to adjust their investment strategies with respect to benefits accruing from their DC plans. This allows participants with a higher risk tolerance to invest more aggressively in their individual savings accounts.

Keeping it simple

To make the proposed longevity plan attractive, it should be kept simple. Many plan sponsors cite a lack of appreciation and understanding among their employees when it comes to DB plans. It is true that many participants do not understand how their DB plans work and therefore show a lack of initial appreciation. Employee education on retirement planning can be helpful to a degree, but ultimately it is the plan's design that will have the most meaning. As suggested above, the proposed longevity plan will be simple in design.

The main purpose of the proposed longevity plan is to provide a lifetime income stream to retirees. From this context, longevity plans should limit benefits only to situations involving retirement. Retirees could rely on their benefit under the DC plan as a mechanism for providing additional choice on benefit forms, such as the balance between annuity and lump sum benefits. Limiting optional forms in this way keeps the retirement theme in focus.

Conclusion

The combined retirement income from governmental social security programs, employee DC plans, and a supplementary DB longevity plan can mark the second coming of the threelegged stool concept-a concept that has much wisdom. Traditionally, it was governmental social security programs, the DB retirement plan, and personal savings that made up the three-legged stool. We have seen the shift from DB to DC plans. We have also seen the prevalence of government-run or -mandated DC arrangements replacing social security programs, often in the absence of universal coverage in retirement. Consequently, the formerly distinct three legs are now a blurred single accumulation. Many see little difference between the choice of growing their personal savings and contributing toward their retirements via a DC plan, notwithstanding the fiscal incentives that might be available.

This paper has outlined the longevity plan concept and demonstrated its value relative to its cost. The opportunities here are for:

- Employers to have more confidence in the sponsorship of a DB plan
- Insurers to design annuities for retirees at more advanced ages with lower capital requirements
- Governments (and future generations) to avoid being left to support those who cannot support themselves in retirement

To emphasise the last point, if retirees cannot adequately support themselves, they will need to turn to forms of social welfare funded by the federal government. It should be recognised that if some type of longevity plan solution is not made available then social welfare programs will eventually take the place of the "lost" DB plan (after all, welfare conceptuallyis just a DB plan). Thus, the question is not whether federal regulations will someday allow for this conceptual idea to become a reality. The need for lifetime income via longevity plans, if not obvious already, will certainly become clear once the majority of Baby Boomers experience their later years of retirement. The question now is really more a matter of when these issues will be addressed.



Non-cooperation is the quickest method of creating public opinion.

- M K Gandhi

McKinsey&Company



Career Opportunity with McKinsey

McKinsey & Company has developed actuarial expertise in US Healthcare domain to provide US health insurance companies with advanced actuarial solutions that help them optimize their revenue and profit given the changes brought on by US Health reform. This business also provides the clients with advanced analytics solutions.

Looking for passionate actuarial experts who see the opportunity that US health reform presents and are excited to help us in growing this business. Role of actuarial experts includes building World- class tools for product design, pricing, forecasting, risk adjustment, competitor analysis ,building up actuarial analytics.

Kind RoleModel Collaborator Empathises Shares Imaginative ProblemSolver Approachable Integrity Inspired Passionate Signative Integrity Explorer Flexible Giving

Where is it located?

This team is located in Gurgaon, with hubs in New York and Chicago. We have number of openings for candidates with analytical and modeling expertise at Gurgaon. Who Can Apply?

Candidates with at least 1-2 years of work experience in actuarial domain (preferably health insurance) with minimum 4-7 actuarial exams, preferably CT4, CT5 and CT6. Exposure to modeling /coding is a must. Ability to use statistical software packages such as SAS, SPSS, R and database software packages such as SQL or any other coding language is preferred.

Interested candidates who have not applied in the last six months, please forward your CV with complete details of your actuarial exam credits and academics to <u>yogita_arora@mckinsey.com</u> and <u>ritu_kalra@mckinsey.com</u> by 30th June'13.

SAVINGS - TYPE GENERAL INSURANCE PRODUCTS

by Sharad Bajla & Ankit Goyal

ABSTRACT : Savings-type policies are extremely popular in *Life Insurance* markets worldwide but are virtually unknown in *Non-Life* sector. This paper intends to give an introduction to savings-type policies in general insurance industry, taking a cue from the success of such products in the Japanese market.

eneral insurance savings-type General instruction date back to the 1960s when they were first introduced to 'Fire' and 'Personal Accident' lines of business. Since then, these products have seen enormous growth and have evolved to other lines of business with numerous features. In FY2011, the savings-type premium component amounted to ¥612 billion (approx. INR 34,000 crores) out of ¥7,992 billion (approx. INR 4,40,000 crores) of direct premium written by the Japanese general insurance industry.

Savings Type Policy

This is a long-term policy which performs dual functions of **protection** which indemnifies the insured against covered risks and **savings** where the policyholder can receive a maturity refund. The main characteristics of the policy are:

- Indemnity cover;
- Maturity benefit if no major loss is reported;
- Term ranging from 3-30 years.

Noticeably, this is very similar to the operation of 'Endowment Assurance' in the life segment.

'Major' loss is defined in the policy document and it varies by type of

The premium can be broken down into two components – insurance premium and deposit premium. Insurance premium contributes to claim costs, commissions, expenses and profit. Deposit premium is the savings portion which accumulates to the benefit of the policyholder. The maturity fund comprises the deposit premium and the interest at a guaranteed rate. In addition, companies sometimes pay a dividend depending on the performance of their investments.

Illustration

To elucidate the working, the following table considers a savings-type fire insurance policy.

Example	e: A savings-typ	e fire insurance polic	y		
Term		10 years			
Sum Assured		INR 50,00,000	INR 50,00,000		
Insurance Premium		INR 10,000 per annum			
Deposit Premium		INR 90,000 per annum			
Guaranteed Return		10%			
Major Loss Defined as		Loss >30% of Sum As	sured		
	Case 1 No Loss	Case 2 Non-Major Loss	Case 3 Major Loss		
Non-Major Indemnity		2,50,000	2,50,000		
Major Loss Indemnity			20,00,000		
Maturity Refund	15,77,805	15,77,805	-		



insurance. For instance, for personal accident insurance, it means an accidental death or severe disability. The maturity refund is paid only if the policy matures without any major loss.

The table shows the amounts paid to the policyholder in three different scenarios. If no losses are reported during the policy term, the accumulated value of deposit premiums is paid to the policyholder. If a

Selling the Idea

The key factor that drives the sale of savings-type products is that they are viewed as an investment rather

About the Authors



sharad.bajla@towerswatson.com

Sharad Bajla is an Associate member of IAI and is working as an Analyst in P&C team at Towers Watson.



ankit.goyal@towerswatson.com

Ankit Goyal is a student member of IAI and is working as an Analyst in P&C team at Towers Watson.

non-major loss occurs the claim amount

is paid as well. On the occurrence of a

major loss the policyholder is indemnified

and no maturity refund is paid.

than a cost. This makes general insurance products more acceptable in an environment like India where the population has a large propensity to save.

Compared to traditional insurance, the pure insurance premium component from a savings-type policy is more competitive as the cost of major loss is partly recovered from the accumulated deposit premium. The issue of moral hazard can be abridged as negligent behaviour of the policyholder will result in loss of maturity refund. The larger premium amounts and long-term nature of the product gives insurer an opportunity to adopt a more flexible investment policy, thereby, improving returns and marketability.

The Indian general insurance market is in a rapidly evolving state where new ideas and products are considered regularly. The immense success of such products in Japan & Korea yields reason enough to consider potential benefits such products could have for insurers in our country.

References:

- Yasukazu Yoshizawa & Daniel C. Goddard, "The structure and Pricing of Savings-type policies in Japan"
- Klaus Wallner, "Commodity Bundling In Japanese Non-Life Insurance: Savings-Type Products As Self-Selection Mechanism"
- General Insurance in Japan Fact Book 2011-2012, The General Insurance Association of Japan

OPPORTUNIT





Your visiting card will have one more thing with your name. Pride.

HDFC Life, one of India's leading private life insurance companies, offers a range of individual and group insurance solutions. Our product portfolio comprises solutions, which meet various customer needs such as Protection, Pension, Savings, Investment and Health. In line with our aggressive growth plans we are constantly looking for team members to partner us in our growth and achievements. So come, **be the life in HDFC Life**.

We are currently looking to fill the following vacancies in our Actuarial Team:

AVP/VP (Reporting) – The role holder will be responsible for MCEV reporting, Business Planning, Regulatory reporting, Experience analysis and With Profits Management valuation. Our requirement is for a Qualified Actuary with 2 years PQE, total of 5+ years actuarial experience

Manager/Sr Manager (Pricing) - The role will be responsible for product pricing, filing, systems implementation and testing, benefit illustrations, policy documents etc. Knowledge of IRDA product regulations, strong analytical and managerial skills essential. We would prefer candidates with minimum 10 actuarial examinations and 4 years of actuarial experience. Sr Actuarial Analyst (Reporting) - The role will be responsible for managing special projects (e.g. IPO) in addition to other adhoc planning/reporting activities. The candidate should be capable of managing projects independently. Good analytical, documentation and communication skills essential. We would prefer candidates with minimum 8 actuarial exams and 3 years of actuarial experience.

To apply:

e-mail your resume to natasham@hdfclife.com (Please mention your area of interest in the e-mail) A comprehensive list of hiring requirements is also available online at http://www.linkedin.com/company/hdfc-standard-life-insurance/careers



LIFE

he life insurance sector continues to struggle to return to positive growth amidst continuing regulatory activity. As per latest figures released by the Insurance Regulatory and Development Authority (IRDA), the life insurance industry recorded a year-on-year decline of 15% in weighted new premium income (10 per cent of single premiums plus 100 per cent of regular premiums) in FY2012-13. The aggregate growth rate was primarily pulled down by the 21 per cent fall in weighted new premium collections of the Life Insurance Corporation of India (LIC), largely due to the sharp contraction in group non-single premium income. Private players were relatively more stable and recorded a decline of around 4 per cent in weighted new premiums in FY2012-13, compared to the decline of 17 per cent registered in FY2011-12. On an unweighted new premium basis, both the LIC and private players recorded a contraction of approximately 6 per cent. Meanwhile, the life insurance portfolio mix continues to shift towards conventional non-linked life products; and away from pensions and linked life products largely as a result of tightened regulation around these product

A host of regulations have been released in recent months, the most notable being the finalisation of the much-debated linked and non-liked product guidelines, which will be made effective 1 July 2013 and 1 October 2013 for group and individual products respectively. The regulations specify minimum death benefit, enhanced minimum guaranteed surrender benefit and commission caps linked with premium paying term, among other requirements. These regulations will have a significant impact as they may require insurers to withdraw or refile several existing products which are not compliant with the new guidelines. Broadly, the industry view is that the new requirements are likely to squeeze profit margins considerably and also adversely impact new business volumes due to lowered commissions.

categories since late 2010.

Additionally the regulator has also issued reinsurance regulations for life insurers under which it has mandated life insurance companies to reinsure a

LIFE INSURANCE INDUSTRY UPDATE

certain percentage of sum assured on each policy with domestic reinsurers (currently only the General Insurance Corporation of India) as specified by the Authority, with the maximum being 30 per cent. Regulatory reporting retention limits varying between ₹100,000 and ₹3,000,000 have been specified varying by age of the insurer and type of product and insurers will need to report their reinsurance programme if their total reinsurance premium to the total premium received exceeds 2 per cent for all savings products and 30 per cent for all term insurance/health products. In response the Global Federation of Insurance Associations (GFIA) has raised concerns to the IRDA that limiting the reinsurance ceding and choice of reinsurer will constrain insurers' freedom to limit risk exposure, result in higher capital requirements and eventually act as a disincentive for new entrants into

> In a move to grant greater investment freedom to insurers, the IRDA has increased the equity exposure limit in a single company from 10 per cent to up to 12 per cent or 15 per cent, depending on the size of the controlled fund. In addition, the regulator has also released an exposure draft under which it has proposed that a risk charge be imposed on debt investments of insurers, varying by the credit-rating of the securities following which the required solvency margin will be lowered from 150 per cent to 145 per cent. The same exposure draft stated that a committee has been constituted to suggest a roadmap for Risk Based Capital (RBC) implementation in the Indian insurance sector with reference to the study of RBC approach of advanced countries, Solvency II implementation by some Indian life insurers and draft Solvency II requirements.

the life insurance sector.

Owing to weakening market performance as well as internal restructuring exercises carried out by a number of domestic and foreign insurance groups, the market is active on the mergers and acquisitions front. With the exit of ING from the Indian insurance market, majority shareholder Exide Industries has acquired the remaining 50% stake in its joint venture

About the Author

by Vivek Jalan



vivek.jalan@towerswatson.com

Vivek Jalan is Director – Risk Consulting at Towers Watson, India and leads the life insurance consulting practice.

ING Vysya Life from ING Group N.V. and other domestic shareholders. Future Group has agreed to sell 22.5% stake in Future Generali Life to Industrial Investment Trust Ltd. HSBC is looking to sell its 26% stake in Canara HSBC OBC Life and it is reported that the two publicsector stakeholder banks may also consider disposing off their respective stakes if a suitable price is offered.

On the distribution front, the regulator is actively taking steps in order to increase insurance penetration, particularly in semi-urban and rural areas. Noting that brokers are concentrated in Tier-I cities and to widen distribution avenues in lesser penetrated areas, the IRDA had constituted a committee on sub-broking which has now submitted its report which includes the criteria required to be fulfilled in order to qualify as a subbroker. The IRDA is reportedly also looking for ways to provide a structured career path to agents to lower attrition rates; one of the suggested measures is to provide higher incentives to senior agents and allow them to mentor and train junior agents.

At the same time, insurers are also seen to be increasing focus on Tier-II and Tier-III cities to maintain growth levels. A number of insurers have expanded their advisor base into areas other than metropolitan cities and have indicated focus on rural areas in their business plans. The online medium as a sales channel continues to gain momentum and insurers are seen to be reviewing existing networks as the use of technology has decreased the need for physical offices.

Finally, the decision on the much awaited hike in Foreign Direct Investment limit in insurance to 49% from the current 26% remains pending as the recent Budget session ended ahead of schedule amidst uproar over emerging scams.





Vacancy for Life Actuary

Do you believe in the spirit of achievement and revel in overcoming challenges? Amana Takaful is looking for the right people who are self-driven and ambitious to be part of its plans for growth and expansion.

We are the flag bearers of the Takaful way of insurance in Sri Lanka and with a fully fledge subsidiary in the Maldives as well. Our zeal for progress has also taken us into the areas of asset management, fund management, consultancy and education in addition to the successful insurance operation that has earned the respect and admiration of the market.

Description of role

- Perform analysis on organizational product and financial data with a view of understanding trends and details of costs, business, claims etc and make recommendations to optimize profitability
- Develop and price new products that will help the organization achieve a higher level of performance
- Coordinate with the Appointed Actuary for statutory and other work such as valuation and Reserving, RBC and GPV

Candidate

The ideal candidate will

- Have a basic degree in Statistical Mathematics or Actuarial Science from a recognized university
- Be part qualified in professional Actuarial examinations of the Indian, British or American Actuarial Association
- Have a good understanding and practical experience in Actuarial work in an insurance company, including hands on experience in RBC and GPV
- Have related work experience of at least 5 years in a reputed insurance company the last 2 years of wich should be in a
 managerial capacity
- Possess strong analytical skills and ability to work through tasks in a logical manner
- Have good presentation and leadership skills and excellence in written and oral English

The above position comes with an attractive remuneration package and company fringe benefits that will suit your skills and experience.

Send in your resume with the position applied for mentioned in the subject of the email with 2 non-related referees to the address mentioned below.

Head of Human Resources,

Amana Takaful PLC (PQ 23),

98, Bauddhaloka Mawatha, Colombo 04. Email: farhan@takaful.lk



B f



General insurance industry logs 19% growth in April-Feb period

The 27 non-life insurers collected ₹ 61,885.11 crore premium in the April-February period of 2012-13.

The general insurance industry grew by 19.34% in the 11 months of 2012-13 fiscal led by SBI General which recorded over three-fold growth in gross premium as compared to last fiscal. The 27 non-life insurers collected ₹61,885.11 crore premium in the April-February period of 2012-13.

Of the total premium, the share of 21 private sector players stood at ₹26,655.35 crore while ₹31,196.3 crore were contributed by four public sector players –New India Assurance, National Insurance, United India and Oriental Insurance.

In percentage terms, while the public sector companies could grow premium by 16.87%, 21 private sector players logged a premium growth of 22.78% during the period.

SBI General collected ₹653.17 crore registering a growth of 209.71%, the highest among the private sector players, while Star Health & Allied Insurance witnessed negative growth of 30.26% at ₹740.39 crore.

During the period under review, market leader New India Assurance with 7% market share collected premium of ₹8,956.48 crore, an increase of 17.21%. It was closely followed by Chennai-based United India with premium collection of ₹8,311.44 crore.

In the private sector, ICICI Lombard with the largest market share collected a premium of ₹5,655.27 crore. The second largest player, Bajaj Alliance collected ₹3,528.24 crore during the period.

HDFC Ergo General Insurance collected ₹2,201.77 crore, followed by Tata AIG with ₹1,903.29 crore. Reliance General collected ₹1,853.26 crore.



THE FINANCIAL EXPRESS Sat, 27 Apr 2013



Private life insurance companies join hands to fight investment fraud *via* mis-selling

Amid a continuing Sebi probe into investment fraud syndicates active in the national capital

region, six private life insurers have joined hands to fight the menace of misselling of insurance products through spurious calls made by fraudulent agents.

Capital markets regulator Sebi earlier this month unearthed a syndicate of fraudulent agents operating in the national capital, wherein a large number of people could have been defrauded in the name of mutual fund and insurance products purchased by their deceased family members.

Sebi widened its probe after preliminary investigations, conducted with the assistance of the Economic Offences Wing of Delhi Police, indicated an organised attempt by several people to defraud the gullible investors.

As Sebi is continuing its probe, six private insurers – Reliance Life Insurance, ICICI Pru, HDFC Life, Birla Sun Life, SBI Life and Aegon Religare – have formally filed a complaint with the Economic Offences Wing (EOW), seeking its help to act against the spurious callers, sources said. In their complaints with the EOW, the private life insurance companies have sought action against offenders who make spurious calls to customers with false promises on loans or other investment products to dupe them.

Their modus operandi typically involves the customers being asked to surrender their existing insurance policies and shift to some new products for better returns. The agents, in the process, earn hefty commissions or at times dupe the investors of their entire investment values.

When contacted, Reliance Life Insurance confirmed the development and said that the insurance companies have given presentations to EOW about the modus operandi of fake callers.

As per their presentations, these fraudsters are operating from make-shift call centres in the Delhi NCR.

The preliminary investigations by the insurers also found that some of these persons were previously associated with insurance companies, directly or indirectly.

Typically, these persons use pre-paid mobile numbers or calling cards to



contact gullible investors, while some people operate as field staff to collect documents and cheques.

Sensing a large-scale fraud, the insurers and their regulator IRDA have also begun sensitising the public on the matter though emails and SMSes on a regular basis.

According to Reliance Life Insurance CEO Anup Rau, there are strict compliance policy and processes to help identify and act against spurious callers trying to mislead customers.

"We have been regularly alerting our customers through SMS and emails against falling prey to any person or entity making superficial offers of high returns, loans, bonus or gains," he said.

In a recent public notice, IRDA also warned customers against fake entities calling on behalf of insurers.

The country's biggest insurer, state-run LIC has also warned its customers and the general public about fraudulent agents, through newspapers and other channels.

FROM

COUNTRY

COUNTRY REPORT – PAKISTAN INSURANCE MARKET

Acquisition News

GI Insurance Limited (IGI) has acquired 81.97 percent of shares of MetLife ALICO Pakistan through a share purchase agreement in January 2013. Through this agreement, IGI will acquire the entire holding of MetLife ALICO in its Pakistani operations. The take-over transaction took place at ₹20 per share, which was nearly ₹14.75 lower than the market price of the MetLife ALICO at the time of transaction. The successful finalization of the deal is subject to regulatory approvals and completion of the requirements of local laws.

Several other players including Adamjee Life Assurance, EFU Life and TPL Direct Insurance expressed interest in buying out MetLife ALICO's Pakistan operations.

This purchase is being viewed positively in the market as IGI Insurance is part of well reputed Packages Group. With proper focus and strategy, the company can become a significant player in the life insurance market.

New Developments on the Regulatory Front

- 1. New Takaful rules were introduced in 2012 replacing the earlier version of 2005. A major change is that the new rules allow conventional insurers to operate through Takaful windows. The rules specify risk management and rating procedures Takaful operators, provide for separate solvency requirements for each participant Takaful fund and suggest establishment of Central Shariah Board, However, soon after the release, the High Court restrained SECP from implementing these rules as a result of serious objections raised by existing Takaful operators against window operations.
- SECP has recently implemented "Fit and Proper Criteria" under the "Sound and Prudent Management Regulations" for insurers operating in Pakistan. The intent

of this criterion is to promote good corporate governance. As per the regulations, individuals running the insurance companies must he competent with adequate qualifications and knowledge of the insurance business. This includes CEOs/principal officers, directors and relevant key executives of the insurance companies. The criteria should help the insurance sector to meet increasing challenges of globalization and reduce chances of mal-administration. At the same time, this may create a problem for new entrants in the life insurance market due to dearth of individuals in the local market fulfilling the criteria.

- SECP has recently issued draft 3. Accounting Rules and Regulations for the Life and Non-Life Insurance companies. The draft has been introduced with the aim to account for developments and changes in the IFRSs since the last accounting regulations were introduced earlier in 2002. SECP hopes that these regulations will help protect the interests of the policyholders and promote development of the insurance sector. It envisages that the new regulations will introduce more transparency and establish enhanced disclosure requirements. It may however be advisable that introduction of new accounting regulations is delayed in view of the expected finalization of IFRS 4 Phase II, since it may cause significant confusion amongst the players as well as investors.
- 4. SECP is currently working to develop the health insurance market on proactive basis. For this purpose, SECP has issued a concept paper which will ultimately be used to formulate TPA regulations. The concept paper is currently under review by all the stakeholders. SECP however needs to take a holistic view on development of

health insurance as merely having a regulatory framework for TPA's may not be sufficient for development of health insurance market.

5. Bancassurance constitutes more than 80% of private sector sales in Pakistan. There have been increasing misselling complaints for this sales channel and the persistency has also remained relatively low. With this in view, SECP conducted a market survey of bancassurance business in 2012 and has recently issued а consultation paper for Proposed Bancassurance Regulatory Framework. Among various other things, the proposals include rationalization of bank's remuneration structure bv introduction of commission clawback provision, restriction on recycling of life insurance policies, minimum financial underwriting, introduction of insurance needs analysis document, etc. Insurers generally feel that SECP needs to consider ground realities as some of changes may be difficult to implement in letter and spirit, and may not achieve the desired outcomes.



About the Author



info@naumanassociates.com

Nauman Cheema has been a fellow of the Society of Actuaries since 1982 and is the Chief Executive of Nauman Associates, a firm of consulting actuaries based in Lahore, Pakistan. The firm provides consulting services in all major areas of actuarial practice to clients in Pakistan and other markets including UAE, Saudi Arabia, Kenya and Kazakhstan BOOK



LIFE INSURANCE MATHEMATICS -Authored by Hans U. Gerber

Book Number : B 13122 Status : Available at IAI Library

Reviewed by: K. GANESAN Email: ganesan.k@licindia.com

he book is written by Professor Hans U. Gerber, Ph.D., ASA, a renowned research scholar in the field of financial mathematics. He has published more than 100 papers primarily in risk theory, applied probability & mathematics of finance. He won several prizes for his publications; these include Centennial Award of IAA and the annual prizes of the SOA in 1990's. He was the past president of the Institute of Actuarial science of the University of Lausanne. His other books on insurance include Introduction to Mathematics risk theory& Actuarial Mathematics.

In 1986, Swiss Association of Actuaries decided to promote the concept of actuarial mathematics and attract younger generation to this profession. This book, funded & sponsored by SAA with the above objective, was written by the author & published in 1986, The second edition of the book released in 1997, was translated in several languages including Chinese & Russian.

The book is written with the objective of introducing the basic concepts of Life Insurance Mathematics to the young aspirants studying life insurance and actuarial science in colleges. It introduces the two core concepts of Life insurance mathematics viz "The theory of compound interest rates" and" the theory of probability" in the initial chapters. It moves to the elementary concepts of Life Insurance and the traditional types of insurance plan including life annuities. It derives formulae for the benefits, premium and the reserves for these plans. The book further expands the subject by discussing the multi decrement models and the use of reinsurance. As it progresses further, the reader gets an understanding the loading concept for insurance expenses. It concludes with the introduction statistical methods available to estimate the probabilities of death and to determine the distribution of claim cost in a portfolio.

In this first two chapters, the formulae for nominal, effective, force of interest, discount rates have been derived. Equations for finding values for Annuity certain. perpetual payments with payments remain uniform or varying have been dealt with. The formulae derived for valuing the "two parameter variable" perpetuity is interesting. The derivation of IRR using lower and upper bound, the formulae for preparing repayment schedule of debt have also been covered. Probability of survival, the expectation of future life time, force of mortality are the concepts introduced in the second chapter and it explains some of traditional survival models such as De Moivre, Gompertz, Makeham, & Weibull used in life insurance mathematics.

In the next three chapters, the author writes the formulae for valuing benefits payable on survival, death and derives the pure premium for providing the benefits under the whole life, endowment and term assurance plan. The premium equation for variable benefit payments, varying frequency of payment of premium, payments starting at nonintegral ages have also been given. The author underlines the importance of using stochastic interest rates to understand the variability of the benefits and premium.

Building up of reserve is introduced in the chapter 7. The chapter starts with the illustration of the progression of the reserve over the term between an endowment policy and a pure term assurance policy. The formulae for calculating reserves at various durations for endowment, whole life policies have been given in this chapter. The continuous model for building up reserve have also been discussed. The technical gain as explained in this book can be considered an introduction to the concept of analysis of surplus, as it splits the gain only into two components viz" investment" & others.""

The author introduces briefly the multi decrement models and the join life status in chapter 8. He develops formulae for assurance and survival factors using discrete and continuous models. The distribution of total claim amount in a group portfolio have been considered in the next chapter. Two popular approximations viz Normal compound approximation. Poisson approximation are used in explaining the loss distributions in the portfolio. The impact of reinsurance on the claim cost, under stop loss reinsurance treaty have also been discussed.

Chapter 10 exclusively discusses concept of loading for insurers expenses. Expense loading for the formulae purpose have been classified as Premium related, Sum assured related and Per policy and formulae for gross premium and reserve have been derived for whole life and endowment policies. In the final chapter, the statistical methods available for estimating the probabilities of death, its variance have been discussed. The MLE, confidence intervals, the Bayes estimator have also been used to interpret the results.

Lots of exercise with the key have been included at the end of each chapters . There is a separate set of questions included in each chapter for the readers to attempt through spread sheet. The recursive formulae have been simultaneously discussed in each chapter and this may help the reader to understand the concepts discussed and build cash flow models using spread sheets. However, there is no attempt by the author in this book to explain the concepts introduced in this book as a result the reader may get a feeling of over dosage of mathematical concept of life insurance.

The book is written with the limited objective of introducing the life insurance mathematics to the younger generation. It may also help readers , naïve to life insurance mathematics to get a feel of the terms referred in the field of actuarial science. Young students who pursue actuarial science at college level may find that the exercise given in the book interesting and challenging.



Indian Actuarial Profession Serving the Cause of Public Interest



DEBT

Authored by David Graeber

Not available in IAI Library

Reviewed by: Hardik Thakkar Email: hardik84@gmail.com

A II actuarial professionals, I am sure, must have some memory of telling someone (mostly "marketing managers" and "junior colleagues" if our study material is to be believed) to "step back and look at the bigger picture"; now when an anthropologist decides to write a book on the topic of debt that we so regularly encounter in our work it is our turn to look at the bigger picture.

A word of caution on this book, this one has a very few numbers & charts that we are so used to and while the name of the book is "Debt", the "Debt" as we know it in its current form comes in very late in the book. But this precisely is also the beauty of the book. Mr Graeber starts In the first few chapters the author questions the validity of common preconceived notions about origins of debt and its relation with coinage system, particularly those popularized by Adam Smith's work. Personally, I was surprised that how many of such pre-conceived notions I myself carried, consciously or otherwise.

from the start, so to speak.

This is followed a series of interconnected essays on the on how religion, coinage, slavery, notion of honor, notion of free markets and role of women have interacted and impacted our way of being with credit systems, and sometimes the lack of it, at near center of these interactions. These essays are the best part of the book, drawing from variety of cultures and historical archives. A wide range of periods of human history are covered and these essays provide context lot of thought process behind some of the ancient texts. A lot of this might ring home for Indian readers, especially those of this generation who might wonder about the cultural attitude towards debt.

Continuing on these topics, the authors builds up a narrative across three millennia bringing us where we are today in the last few chapters.

In my opinion it is this last part, the narrative build up across time, which is the weakest link in what is otherwise a very good book to expand your world view. We are talking about a very, very long time and it is very easy for someone who has a theory to "recognize" those patterns and weave them together. Also, the treatment of the modern period in this narrative feels a little clouded by the author's personal beliefs.

All in all, a very good book to expand your horizons, I intend to read more works by the David Graeber in the future after this.

CAREER OPPORTUNITY

Reliance

Life Insurance

Required **Deputy Manager** for Product & Reporting Team

If you want to be part of a dynamic work atmosphere that offers a steep learning curve, this is the place to start! A great opportunity to benefit from a diverse work culture and avail guidance from experienced professionals awaits you!

Experience & Skills: The person should have at least 3 years of actuarial experience in a life insurance company along with completion of CT series. The person should have relevant experience either in Product team or in Reporting team.

Role: Both product and reporting are challenging roles. The regulatory regime is undergoing dramatic changes and the candidate would be working on cutting edge tools and concepts to manage these changes.

Remuneration: Will not be a constraint for a right candidate. The position is based in Mumbai.

If interested, please contact utpal.anand@relianceada.com with your CV and a cover letter.

Reliance Life Insurance Company Limited (Reg. No 121). Insurance is the subject matter of the solicitation.



BOOK



Shilpa's Puzzle

Puzzle No 191:

Tennis is a sport in which you can take a container which is half full of balls, add another ball, and still have a container which is half full. True or False? How?

Puzzle No 192:

Three quarters of a cross and a circle complete,

Two semicircles set on a straight line to meet,

A triangular pot placed on two legs so neat,

Then two semicircles and a circle complete.....?

Solutions to the puzzles:

Puzzle No 187:

She uses a rectangular box measuring 36 by 48 inches, which has a diagonal length of 60 inches.

Puzzle No 188:

Possible answers are 24,502,500; 25,502,500; 52,881,984; 60,481,729 and 99,980,001.

Correct solutions were received from:

Puzzle No 187:

- 1. K. S. Pujari
- 2. Graham Lyons

Puzzle No 188:

- 1. K. S. Pujari
- 2. Anupam Kwatra
- 3. Shilpi Jain
- 4. V. V. N. Kiran K. Sharma



shilpa_vm@hotmail.com



puzzle No. 10 for the month of April 2013

HOW TO PLAY

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

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



Many Happy Returns of the day the Actuary India wishes many more years of healthy life to the following fellow members whose Birthday fall in April 2013

S. CHIDAMBARAM	P. I. MAJMUDAR
N. M. GOVARDHAN	N.G. PAI
P. C. GUPTA	A. R. PRABHU

WAKELING ANDREW THOMAS

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

Solution of Sudoku Puzzle No.9 published in the Month of March 2013

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

н	Δ	R	D
	л	I١	D

- Sudoku Puzzle by Vinod Kumar

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

UP COMMING EVENTS





UPCOMING EVENTS OF IAI

Title	Organized By	Event Start Date	Event End Date	Venue
19 th India Fellowship Seminar	Advisory Group on Professionalism, Ethics and Conduct	13-Jun-13	15-Jun-13	Mumbai
2 nd ERM	Advisory Group on Enterprise & Risk Management	26-Jun-13	26-Jun-13	Gurgaon
8 th CIHCI	Advisory Group on Health Care Insurance	11-Jul-13	12-Jul-13	Mumbai
2 nd Capacity Building in Life Insurance	Advisory Group on Life Insurance	20-Jul-13	20-Jul-13	Mumbai
2 nd IFRS	Advisory Group on Accounting and Solvency-Insurance and Pension Funds	14-Sep-13	14-Sep-13	Mumbai
10 th CIRB	Advisory Group on Pension, Other Employee Benefits and Social Security	20-Sep-13	20-Sep-13	Mumbai
4 th Capacity Building General Insurance	Advisory Group on General Insurance	25-0ct-13	25-0ct-13	Mumbai
2 nd CIGI	Advisory Group on General Insurance	26-0ct-13	26-0ct-13	Mumbai
9 th CILA	Advisory Group on Life Insurance	29-Nov-13	30-Nov-13	Mumbai
20 th India Fellowship Seminar	Advisory Group on Professionalism, Ethics and Conduct	5-Dec-13	7-Dec-13	Mumbai
2 nd Capacity Building in HCI	Advisory Group on Health Care Insurance	12-Dec-13	12-Dec-13	Gurgaon

The above mentioned schedule is tentative and may be amended as per the institute planning. More informations available at http://www.actuariesindia.org/subMenu.aspx?id=33&val=Upcoming_Events_within_India

THE ACTUARY INDIA – EDITORIAL POLICY (VER. 2.00/23RD JAN 2011)

Version history;

Ver. 1.00/31 01 2004 Ver. 2.00/23rd Jan. 2011

- A: "the Actuary India" published monthly as a magazine since October, 2002, aims to be a forum for members of the Institute of Actuaries of India (the Institute) for;
 - a. disseminating information,
 - b. communicating developments affecting the Institute members in particular and the actuarial profession in general,
 - c. articulating issues of contemporary concern to the members of the profession.
 - d. cementing and developing relationships across membership by promoting discussion and dialogue on professional issues.
 - e. Discussing and debating issues particularly of public interest, which could be served by the actuarial profession,
 - f. student members of the profession to share their views on matters of professional interest by way of articles and write-ups.
- B: The Institute recognizes the fact that;
 - there is a growing emphasis on the globalization of the actuarial profession;
 - there is an imminent need to position the profession in a business context which transcends the traditional and specific actuarial applications.
 - The Institute members increasingly will work across the globe and in global context.
- C: Given this background the Institute strongly encourages contributions from the following groups of professionals:
 - Members of other international actuarial associations across the globe
 - Regulators and government officials
 - Professionals from allied professions such as banking and other financial services
 - Academia
 - Professionals from other disciplines whose views are of interest to the actuarial profession
 - Business leaders in financial services.
- D: The magazine also seeks to keep members updated on the activities of the Institute including events on the various practice areas and the various professional development programmes on the anvil.
- E: The Institute while encouraging stakeholders as in section C to contribute to the Magazine, it makes it clear that responsibility for authenticity of the contents or opinions expressed in any material published in the Magazine is solely of its author and the Institute, any of its editors, the staff working on it or "the Actuary India" is in no way holds responsibility there for. In respect of the advertisements, the advertisers are solely responsible for contents of such advertisements and implications of the same.
- F: Finally and most importantly the Institute strongly believes that the magazine must play its part in motivating students to grow fast as actuaries of tomorrow to be capable of serving the financial services within ever demanding customer expectations.