



Institute of Actuaries of India

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the Actuary INDIA

INDIAN ACTUARIAL PROFESSION
Serving the Cause of Public Interest

THE MAGAZINE OF THE INSTITUTE OF ACTUARIES OF INDIA

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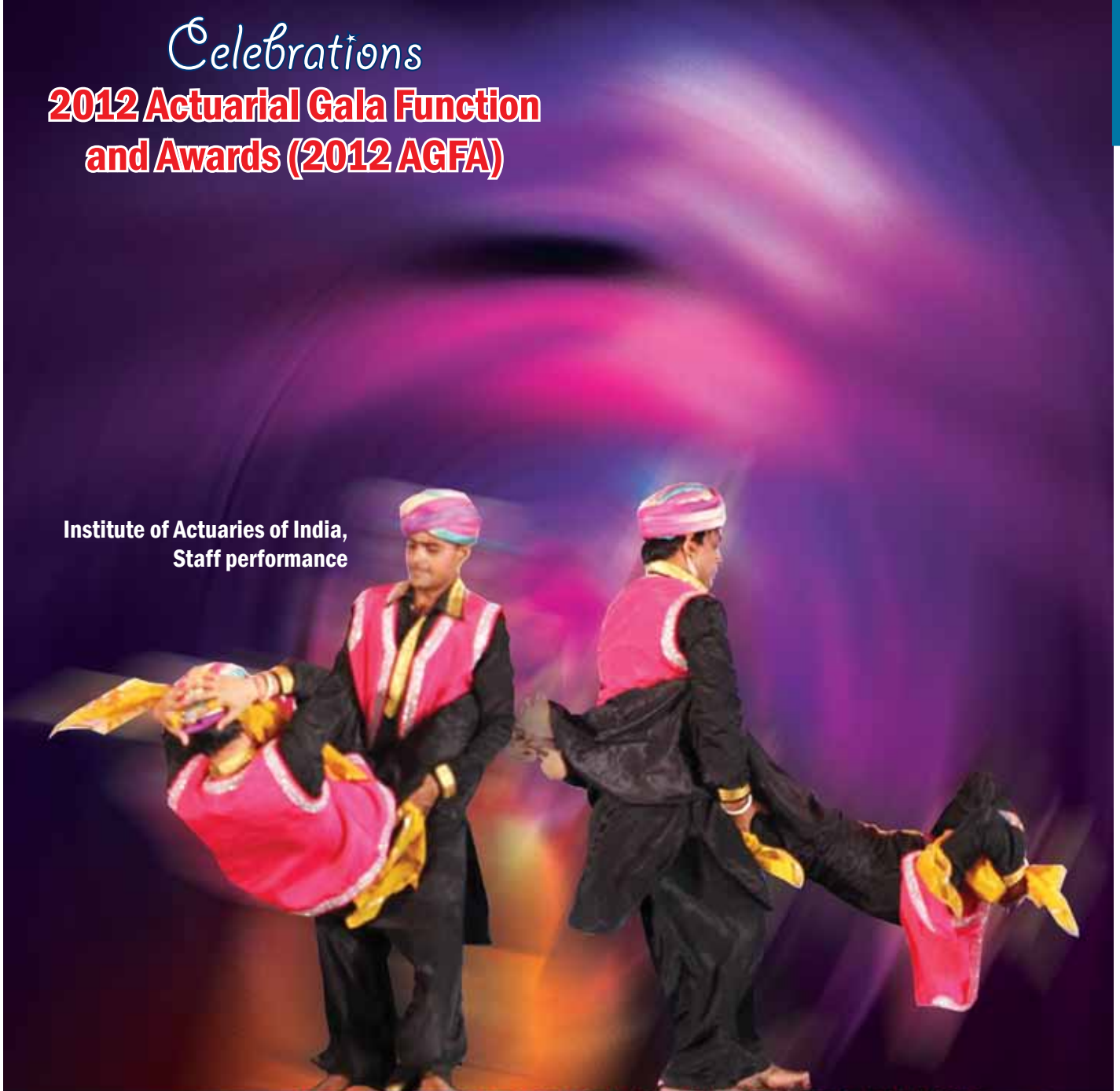
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Celebrations **2012 Actuarial Gala Function and Awards (2012 AGFA)**

Institute of Actuaries of India,
Staff performance



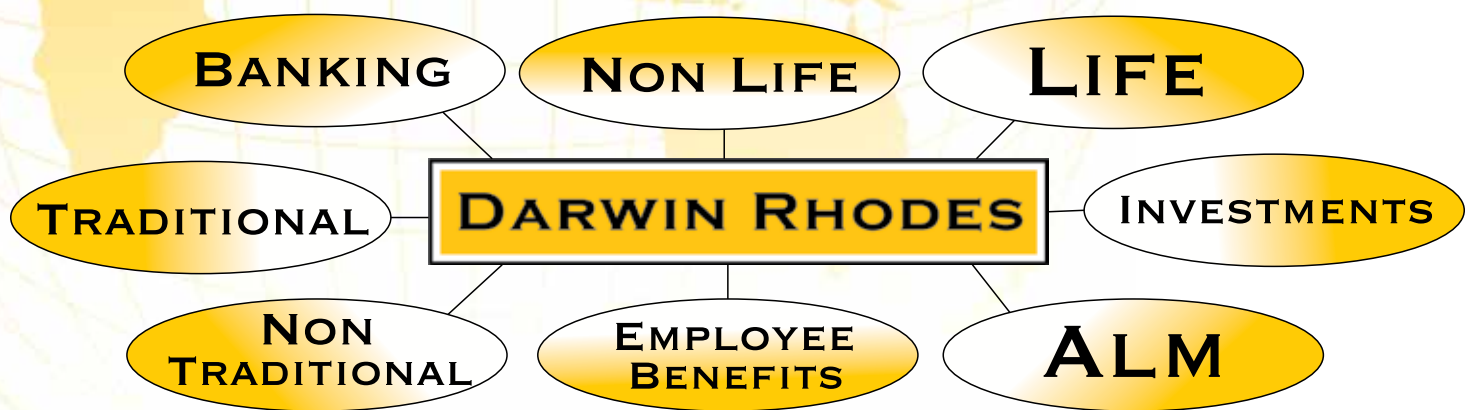
2012 ACTUARIAL GALA FUNCTION AND AWARDS



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FROM THE CHIEF EDITOR

The past year has proved to be one of mixed fortunes for the industry which employs most of our members. In 2011-12, the non-life insurance industry saw handsome premium growth of 23% over the previous year, with the gains being fairly evenly split between the public and private sectors which grew at 22% and 25% respectively.



By contrast, the life industry's weighted new business premium reduced by 3%, with the Life Insurance Corporation demonstrating yet again what a powerhouse it is by growing by 8%, while at the same time the private sector shrank by 18%.

For the life market, there have been some major shifts in the types of business sold. Individual single premiums dropped by a massive 49%, while group single premiums have risen by 26%. Overall new regular premiums have remained roughly flat, but with a large shift of this business from the private sector to the LIC.

Since 2008 the life industry has been beset by a series of difficult circumstances, and it is still hard to see when it will be able to put these behind it and turn the corner.

GDP growth estimates for the current year have been moving steadily downwards to around 7%, and while this is good by global standards, it is sluggish by Indian standards.

The direction that interest rates are headed is still uncertain. With the economy slowing the corporate sector has for some time been asking for rates to come down. But the government's large borrowing programme, the return of inflationary pressures and the Rupee's recent weakness suggest that there will be strong incentives to maintain current interest rates.

In this environment it is difficult to see where increased demand for life insurance products will come from.

When the downturn first came in the life industry some thought that it was just a passing storm, that all they needed to do was keep their heads down and the storm would soon pass. However, it's proving to be quite a long depression, so perhaps it is time to consider the classic Jack Nicholson line "What if this is as good as it gets?". At some point we have all had to accept the wisdom of working with the world as it is, instead of demanding that the world should change to suit us.

But we should always look on the bright side. So we should be thankful we are not in the position of many of our colleagues overseas who are trying to grow their market while their GDP growth hovers around zero, and to maintain their margins while interest rates remain in the 1.5% to 2.0% range.

Nick Taket



Governance and Leadership are the two words that do occupy our thought process implicitly or explicitly, as some of us engage in discharging our responsibilities within the IAI that we have chosen for ourselves: voluntary and non-remunerative. Those who serve on the Council, the twelve persons having been elected through electoral processes and some eighty plus appointed by the President on the fifteen Advisory Groups fall in this category. Unlike many other mature actuarial bodies such as the IFA, IAAust, CAS or SOA, the IAI though long established (in 1944) is small and requires the voluntary non-remunerated persons to serve on the Council and Advisory Groups. This has consequently its own stress and strain.

The Governance is through the Council (in ASI days called Executive Committee) and the twelve elected out of fellow members are supplemented by the four nominated by the Government of India, in the Ministry of Finance, Department of Financial Services. It's another matter that we never had more than two, one being the Joint Secretary (Insurance) from the Department of Financial Services and one from the IRDA; the latter however has not been nominated since 2nd June, 2011.

The first Council of twelve elected in 2008 had four exiting in 2010, and out of the remaining eight four will exit in September 2012, when the new council meets first time after the election process to elect four new ones will be over. The Council in its meeting held on 5th May, 2012 decided as per rules in this regard to exit A D Gupta, K.K. Wadhwa, T Bhargava and Anil Kumar Singh. The electoral college, consisting of Fellow and Associate members existing as on 31.03.2012 and remaining eligible to vote when the voting begins, will elect by process of ballot paper the four out of the volunteers who put themselves up for election through laid down procedures. Much that happens as activity of the Institute in the two years that a President gets, mainly through the President, is impacted and influenced by the Council, though the dynamism, vision and energy that a President brings in makes a difference.

The election to the Executive Committee of the Actuarial Society and now the Council of the Institute has never been un-interesting throwing up quite a lot of heat and dust, if you like!

The electoral process kicks off this month.

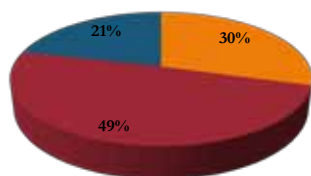


The Global Conference of Actuaries (GCA) has been somewhat an obsession with me. Right from the 3rd GCA in February, 2001 – the GCA name was given then, though retrospectively – till the 14th GCA in February, 2012, I have watched about all and been part of six of these having been President at the time when these were held. The event has immense potential of throwing up learning points if one keeps 'ears and eyes' open. Getting feed back through participant surveys post-event is a very effective tool and we did have good learning points out of 13th GCA surveys which influenced many aspects of the 14th GCA, besides impacting the Institute activities in many ways. The feedback Survey of 14th GCA participants was over last month and we are getting into understanding what the vox-populi wants to say. Some to quote;

The 15th GCA dates:

Q 8 :- What dates would you like the 15th Global Conference of Actuaries to be held over?

10-12 Feb '13 17-19 Feb '13 24-26 Feb '13



The 2012 AGFA:**Some Verbatim Remarks:**

- AGFA should be done on 1st day evening of GCA. This will at least ensure more people attend late afternoon sessions of 1st day of GCA...3 day event makes it too much of a stretch. It should be kept as a 2 day event.
- It should be held early week of Feb considering Jan, Feb and March as crucial months for the insurers.
- The GCA seem to provide very little tangible benefit to the Indian actuaries. The IAI should move away from holding a "global" conference that has very little practical value for Indian profession. It should not permit sponsors to sell their products and services. There is a great need to Indianize the conference. Formatting it as a "global" conference provides a photo op to a handful of people. It produces very little value to the Indian profession for the vast amount of money spent.
- Music of different types to be included and no repeated performances by same artists
- I wanted to know why have the awards for CT series toppers been stopped?... There should be at least some acknowledgement.
- I think its a waste of a Sunday to have the gala event and the awards on the eve of the GCA
- Its truly inspirational and motivating programme for the students and the aspiring Actuaries.

The 2013 AGFA:**Some Verbatim Remarks :**

- 2013 AGFA should be much shorter. I rather take time and listen to a presenter from a bank or other industry to be challenged academically
- I think it should be a 2 day conference with the awards given out between the speaker sessions.
- Too much coverage in Actuary magazine... almost to the extent that it gives impression there almost everything else has lower priority.
- I think it should be held on the night of the first day.
- 1. Date should not clash with any festival days 2. Venue should be easily reachable by train or bus 3. Can be arranged in a bigger place 4. Seating arrangement can be improved
- You should always hold AGFA on the eve of GCA as it can help people working outside Mumbai to combine and attend both these events, otherwise only attending AGFA is difficult for outsiders.
- I think the way, you are encouraging the students by giving math stars awards...similarly u must encourage the young guns of actuary ...by giving awards to topper of CT series...
- Besides this, 25 people replied that the 2013 AGFA should be held on the eve of the 15th GCA.

Awaiting to share with you more feed back in the next issue of the Actuary India.

Let us join hands to make IAI a globally well recognised professional organisation developing enduring thought leadership in managing uncertainty of future financial outcome.

Regards



Liyaquat Khan

8TH SEMINAR ON CURRENT ISSUES IN RETIREMENT BENEFITS (CIRB)

by Sandeep Devasthale

Organized by : Institute of Actuaries of India

Venue : Hotel Sea Princess, Mumbai

Date : 28th April 2012

The 8th Seminar on Current Issues in Retirement Benefits was organized to keep the industry updated about the issues faced by all the stakeholders such as Auditors, HR Personals, Employer and Actuaries etc. The major issues discussed in the seminar were problems encountered while setting up of the assumptions for valuing the Retirement Benefits and recent changes in Financial Disclosures especially the Schedule VI. The session helped to bring all stakeholders on the same platform and discuss the key issues so as to arrive at some workable solution.

In the inaugural address, Liyaquat Khan President, Institute of Actuaries of India, informed about the initiative taken by Institute for India to conduct similar sessions at other places other than Mumbai and Delhi. This has helped reaching out to a lot of Actuaries and Other Professionals located in different parts of the country and update them about the recent development in employees' benefits. He also emphasized on the professional conducts to be followed while providing actuarial services. He pointed out that Actuaries should understand what client wants as regards valuation of Retirement Benefits and client also should understand what Actuaries are doing. He also mentioned that time has come for the Institute to promote itself in other countries especially in South Asia and also should think about Branding itself as one of the Global Actuarial Institute.

In the first session on "Exempt Provident Funds : Understanding the impact of implied guarantees", the speaker **Anuradha Sriram**, Benefits Director – Towers Watson, touched upon various aspects applicable to quantifying the implied guarantee. She explained



Anuradha Sriram

the topics covered in GN 29 including various methods that can be adopted to calculate the guarantee. The major issue in calculation of the guarantee deterministically is setting up the assumptions especially the guarantee rate floor that will be applicable in future.

The next session was on the current changes as regards on "Schedule VI".



Mayur Ankolekar

Mayur Ankolekar, Consulting Actuary – Ankolekar & Co, explained the logic and also the formulae to the participants how to bifurcate the Retirement Benefit Liability between Current and non-Current. The Schedule VI changes were discussed for funded and non-funded schemes and also the applicability of the same along with AS 15 to various companies. There was discussion on the funded gratuity plan whether employer's obligation would be limited to required contribution or payment of benefits.

Arpan Thanawala shared his thoughts in session three on topic "AS 15: Employee Benefits – a journey through determination of values". He discussed mainly the issues not taken up in

About the Author



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Sandeep Devasthale is Deputy Chief Actuary currently working with SBI Life.



Arpan Thanawala

AS 15 and about non availability of any guidance on some of the issues mentioned in AS 15.

Post-lunch session started with Round-Table discussion on "Actuarial Assumptions Setting – Approaches and Impacts". The Panel Members



P. Ramesh

were **P. Ramesh**, Chairman – Deloitte, Saket Singhal – Practice Leader, RFM – AON Hewitt, J.S. Salunkhe, Advisor – Mercer, Paritosh Basu, Group Controller – Essar Group and Sandeep Thacker, VP (Finance, Admin and HR) – Commonwealth Bank of Australia.

R. Ramesh in his opening remark mentioned about the heavy dependency on Actuaries for measurement and disclosures of Retirement Benefits in Financials. Measurement and



Paritosh Basu

disclosures requires assumptions. Assumptions are a matter of judgment and have a great impact on measurement. He showed his concern about the impact on Financials every year due to increase or decrease in valuation of Retirement Benefits. **Paritosh Basu** mentioned about the need for collaboration on the part of all stakeholders to come together to stabilize the assumption. The change in the Employee Benefit has financial implications hence employer should have a say in setting assumptions and impact of change in assumptions. J. S. Salunkhe emphasized some of the factors such as Salary Escalations and attrition rate of employees is under control of the Employer. The setting assumptions should be the responsibility of the Employer and Actuary will assist the employer to choose the right assumptions that are consistent with respective Guidance Notes and AS 15 jointly. Saket Singhal suggested that Employer, Auditor and Actuary should determine the required assumptions. He opined that the relation between the



Sandeep Thacker

discount rate and other assumptions is more important than just discount rate alone. **Sandeep Thacker** felt that the assumptions should be true and fair from Company's point of view and in the interest of investors. He also felt that it is often very difficult to explain the economic and demographic assumptions set in valuation to the top management.

During this whole discussion it was felt necessary that while setting assumptions all stakeholders should collaborate and then finalize the assumptions. The change in liability of Retirement Benefits can be used as a tool for CTC management for the organization to minimize volatility on Financial Statements.



Saket Singhal

In the fifth session, **Saket Singhal** shared his experience and views on Issues around employee benefit liabilities and treatment thereof at the time of "Sale, Purchase, Mergers and Acquisitions".



Sandeep Srikhande

Sandeep Srikhande, SVP & Head of Group Insurance – Kotak Mahindra Old Mutual Life Insurance, presented features of various Group Products available in the market.



Suresh Sindhi

The seminar ended with vote of thanks by **Suresh Sindhi**. He thanked the Institute for organizing such an informative seminar and participants for their valuable time and inputs.



SVETLANA CAVOSKI VISITED IAI OFFICE ON 4TH MAY 2012

Ms. Cavoski is the Certified actuary at Kompanija Dunav Osiguranje ADO. She is a Member of the Serbian Actuarial Association (a full member of the IAA) as a president of the Superior Council and an individual member of the IAA (Actuaries without borders - AWB).

ICAI WIRC SEMINAR ON ACTUARIES

by Shweta Shah and Vishal Narang

Organized by : The Western India Regional Council of the Institute of Chartered Accountants of India.

Venue : ICAI Bhavan, Mumbai.

Date : 21st April 2012

The seminar covered topics like Actuarial Approach to Enterprise Risk Management, Stock Option Models, Employee Benefits and Non-life Reserving.

It started with an inaugural speech by **Liyaquat Khan, President IAI**. He talked about the importance of the Actuaries and Auditors working closely to benefit their stakeholders and the public at large. He also briefed the audience on how the actuarial profession has grown in size and importance.

Session 1: Actuarial Approach to Enterprise Risk Management

The first session was presented by **Rajesh Dalmia**, Hon. Secretary, IAI. He spoke about the ERM framework which captured the critical building blocks that were identified from the successful implementations in the insurance industry.

- ❖ Overall Governance Arrangements.
- ❖ Decision and Planning Support.
- ❖ Risk Identification.
- ❖ Risk Assessment & Measurement.
- ❖ Risk Monitoring & Management.
- ❖ Risk Reporting & Management Information.
- ❖ Data, IT, Infrastructure.
- ❖ Policies, standards, people, culture

He also threw light on the concept of 'Economic Capital' – The amount of capital required to keep the balance sheet solvent on a going concern basis under a stress event. He listed a few stress events like Enterprise risk, Underwriting risk, Market risk, Credit risk, Operational risk etc.

These risks can be modeled using techniques such as Dynamic Financial Analysis, Financial Condition Report, Value at risk (VAR) or Tail VAR, Interest

rate models, Credit risk models, Scenario analysis etc.

He said to achieve the desired future state and maturity level an execution plan can be utilized. It may start with laying the foundation of ERM program with robust governance framework supported by an identification of risk and setting a risk appetite agreed by senior management and key functions, followed by prioritization of risks that matter, quantification of risk and arriving at a risk profile and ultimately agreeing on a mitigation plan. Once the plan has been agreed and implemented the same has to be consistently embedded as business as usual.

Session 2: Reserving in Non-life Insurance Company

The second session was presented by **Mehul Shah**, Secretary, Advisory Group on Non-life Insurance, IAI. He started by showing a typical cash-flow of a general insurer. Then he listed down various types of reserves e.g. Unearned Premium Reserve, Case Estimates / Reserves, Incurred but not reported, Incurred but enough reported, Premium Deficiency Reserve, Catastrophe Reserve. He explained the life cycle of a claim reserve. It showed how the reserves were created from the accident date to recoded date to settlement date and finally how the claim is closed. After this he gave a brief on Principles (Actuarially Sound, Inherent Uncertainty, and Purpose of Reserving) and Method of Reserving (Uniform Earning Pattern, Marine Insurance, and Uneven Earning Pattern). He showed how to estimate IBNR/IBNER by the method of triangles. He spoke about the reserving trends in India.

The following were the key points:

- ❖ Provision as percentage of NEP has gone up to 72% from 65% in case of public sector companies.

About the Authors



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Shweta and Vishal are Student member of institute of Actuaries of India.

- ❖ For Private sector, provision as percentage of NEP has gone down to 58% in FYE 2010 as compared to 66% in FY2006.
- ❖ Given that the premium rates have witnessed reduction in the range of 20% - 90%, the above trends makes us believe the relaxations in the reserving strength

Session 3: Share Option Models

The third session was presented by **Mayur Ankolekar**, Consulting Actuary. An option is a contract manufactured from a replicating portfolio comprising of theta shares and cash. No matter how the portfolio moves during a period, other things being constant, an option writer will never suffer a loss. He explained how the Binomial model and the Black-Scholes model can be used for option pricing. Binomial model is a mathematically simple, but surprisingly powerful method to price options. If the volatility is known, the size of up and down jumps can be estimated. In Black-Scholes model he started by deriving the Black-Scholes differential equation using Ito's lemma followed by derivation of the Black-Scholes option pricing formula. This involved plenty of calculus. He showed various graphs which all showed that normal distribution was not the best fitted model and this is the major drawback of the Black-Scholes model. He then compared the two models and explained their limitations. Both models

assumed no arbitrage and zero trading costs and taxes.

Session 4: Indian Accounting Standards: AS 15 and Revised Schedule VI

The fourth session was presented by **Akshay Pandit**, of M/s KA Pandit, Actuaries and Consultants. In his presentation he talked about the actuarial assumptions, both demographic (e.g. mortality, attrition

and retirement rate) and financial (e.g. Discount rate, salary escalation rate and Expected return on plan assets) which the actuary and the company needs to make and how they lead to actuarial gains and losses. He showed how each assumption change would affect the liability. Apart from that he showed how the disclosures are to be made. Finally he briefed on the revised schedule VI. Schedule VI requires the short term liability to be disclosed along

with the total gratuity liability. He also explained how the current and non-current liabilities are calculated under the Funded and Non-Funded schemes.

All the presentations had an interesting question and answer session. To conclude, it was a well structured seminar by the ICAI and all the participants had something to learn.



LETTERS FROM READERS

Dear Readers,

You can send letters / comments on articles, reports, or any other aspect of the magazine to binita@actuariesindia.org.

Binita Rautela



From **J. R. Joshi**, a fellow Member

Date : 31-12-2011

Dear Liyaquat,

1. Oh, what an imposing introductory address you have delivered during the inaugural function of the 14th Global conference of Actuaries, on 20th February. My hats off to you, Liyaquat!
2. You have exhibited rare courage in fearlessly exposing the present set of problems impeding the IAI's march toward its mission, vision and values.
3. How to get the structure modified to remedy the attention? The pity of it is that today our country is dithering everywhere – all across economic, financial, educational, social and even sports and cultural fields, India is facing downfall. There are too many PM's besides the nominal one. Mediocrity prevails; vision is absent. I do not have in sight end of the tunnel. By god's grace, Insha'Allah I mean, it may come and I may still be on earth to witness the revival!
4. Again, my congratulations for the assignment of introduction done in excellent fashion.
5. Did you notice that the magazine has ended the matter abstract your speech to follow the following:
 "The highest courage is to dare to be yourself in the face of adversity. Choosing right over wrong, ethics over convenience, and truth over popularity...these are the choices that measure your life. Travel the path of integrity without looking back, for there is never a wrong time to do the right thing."
6. What an appropriate way to end your address

J. R. Joshi, Pune

A RAMBLE THROUGH THE AFRICAN PENSIONS JUNGLE

By Tapiwa Maswera

*Is this a risk which I see before me,
The handle toward my hand? Come, let me clutch thee.
I have thee not, and yet I see thee still.
Art thou not, fatal vision, sensible
To feeling as to sight? or art thou but
A risk of the mind, a false creation,*

Risk is as elusive as the dagger of Macbeth's soliloquy. Your instincts tell you that risk is real, something you can instinctively perceive, reach for and grab by the handle. It presents itself in such simple ways and forms, your instincts tell you that you can tame it. It is hard not to trust your instincts. And yet trusting your instincts is as fatal as a fascination with taming any of Africa's big five.

The story of Pension Funds in Africa is a tale about taming risk

The State Scheme

The state is invariably the biggest employer in all African countries. In some countries, the state employs more people than the entire private sector, so the decision whether the state scheme is funded is very significant for the development of the Pensions Industry. Whether funded or not, the state scheme is the mighty elephant bull, deceptively gentle, but capable of massive destruction of property and human life. Ours is a confidence industry, it thrives on credible promises. The State scheme sets the tone for the Pensions industry as a whole. The ordinary state employee cannot conceive a situation in which the State Scheme can fail to pay pensions. But this sense of comfort is misplaced.

In Africa, State Scheme differs from countries like Zimbabwe and Malawi which run unfunded defined benefit schemes, to Botswana and Lesotho which have closed their old unfunded defined benefit schemes and replaced them with funded defined contribution schemes. In between these are countries like South Africa and Namibia which run the old funded defined benefit schemes.

Is there a clear appreciation among African state planners of the risks that go with the way they have chosen to structure the state scheme? For example in most of the smaller countries (Namibia, Swaziland, Botswana), the state scheme constitutes over 90% of the pensions industry. When any risks to the pensions industry are defined, the State scheme takes the lion's share.

A funded state scheme in a country where

the government employs the bulk of all employed people is a huge monster. It can grow very rapidly and overtake the country's GDP. The chief Executive Officer of the government fund controls more assets than the President of the Country. A deficit in a funded defined benefit scheme can easily become a destabilising influence on the country's economy.

But there are even bigger ramifications politically. Funding the State scheme can create an entity with more money, clout and credibility than the government. The political role of such a powerful state financial institution on a monolithic African political landscape can be intriguing. Without adequate governance, a funded African State Scheme can easily degenerate into the ruling party's ATM.

In a small country, capital markets may not have the capacity to meet the investment needs of the state scheme. So very often the state scheme has to invest its assets outside the country. Thus far from being a stabilizing influence on the economy, the state scheme can easily become the biggest exporter of capital. Politicians have not been slow to notice this. Many countries have imposed local investment requirements. The domestic economy is usually unfortunately smaller than these domestic investment requirements. So the returns on these assets are usually not what they should be.

If a funded defined contribution State Scheme is zoo equivalent of an elephant, deceptively gentle, dangerous

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Tapiwa Maswera is a Fellow of the Institute of Actuaries (UK), Society of Actuaries (USA) and the Actuarial Society of South Africa. He is the founder of Acumen Actuaries and Consultants and is currently working on two African projects – the Harmonization of the Pension Funds Industry in the SADC region and the conversion of pensions from the Zimbabwe Dollar to the US dollar in Zimbabwe.



but caged, then a funded defined benefit scheme is a wild elephant in a game reserve, dangerous but contained. An unfunded state scheme is like a wildly roaming massive elephant bull, with the potential to feed the whole village but more likely to destroy the village if expert help is not sought. Understanding that Pension Funds pay benefits and are repositories of large amounts of money without understanding their role in the economy is more dangerous than understanding that an elephant bull can be a source of meat without understanding that the African weapons of choice, the spear and the bow and arrow are unlikely to pave access to it.

(b) National Social Security Schemes in Africa

The National Social Security Scheme



is normally the other pillar in Africa Pensions Provision. Zimbabwe and Angola have one. Lesotho and Namibia are exploring how to implement one. The Philosophy behind a National Social Security Scheme is simple. Create a pension scheme for all those employed people who are not part of the private occupational pension scheme. The economies of scale associated with the creation of such a scheme would allow especially the lowly paid to access some form of retirement provision.

In practice this is not what often happens in most African countries which have a Social Security Scheme. The establishment of National Social Security Schemes have cannibalized the pensions industry and in some cases destroyed existing private occupational

Pension Schemes. The National Social Security Scheme is sometimes positioned to compete directly with private provision, even while it relies on compulsory contributions. When you guarantee anything, you lose efficiency. A social security scheme may reach more people but is not a viable alternative to a vibrant and active private sector.

Most African countries with a National Social Security Scheme have set it up in such a way that there is no option to contract out of the Social Security Scheme. Creating a Social Security Scheme without allowing Funds to contract out is like a zoo that locks up a herd of gazelles and a lion in the same cage. The gazelles may gallop faster than the lion in the wild, but in the cage they will be gulped sooner than it takes the lion to digest proceeds.

The National Social Security Scheme is sometimes exempted from regulation and the pension laws of the country. This creates a wild monster that is not accountable to anyone. As much as gazelles can outrun elephants, in the wild, the lion can still use stealth to decimate them. The question is no longer whether the gazelle can outrun the lion; the question is whether the ecosystem can sustain both lion and gazelle over the long term. If not, then in the

long run, the gazelles will all be eaten by the lion after which the lion itself starves to death. The African economic landscape has very few ecosystems that can sustain both the pension form of lion and the pension form of gazelle. Both die in the end.

Politicians have a tendency to overestimate their ability to protect the poor. In practice, the value destroyed in creating politicised vehicles for delivering pensions to the poor often do not justify the benefits. Such vehicles can be short term vote buying gimmicks with dangerous long term consequences.

In theory the model is simple. Put aside money, earn interest on it and pay pensions when members retire. In practice most African inflation rates, investment markets and incompetence make it impossible to earn a positive real rate of return. Assets are then generationally shifted in a de-compounding process that nominally continually shifts assets to future generations at the expense of retiring members. Thus the Fund grows huge, while members retire in poverty.

Some countries have managed to make pension provision possible for the poor by creating economies of scale by other means. In South Africa, Bargaining Councils, Unions, even industrial sectors have been identified and been successfully used as vehicles for pension provision to the lower income groups

(c) The Defined Benefit Fund

Private Pension Provision in Africa was originally the preserve of big multi-nationals. The typical Fund was defined benefit with only higher income employees eligible. The higher paid earned enough to make pension provision economically viable. Expenses were so high that provision for low



income groups was not viable.

The biggest entry barrier to the pensions industry was systems. You needed mainframes which cost millions to handle data. And of course a pension industry whose benefits were simply defined in terms of final salary reduced the information you needed to hold. Enter Moore's law! The costs of handling data has hurtled down so fast, a competent man with a laptop can do more in one day, what a whole army of clerks took a whole year to do.

Suddenly well capitalized insurance companies are no longer the only good guys in town. It suddenly makes economic sense to have a defined

specialist asset managers also began in earnest. The morphing of insurance companies into specialist risk and asset managers continues and with it the death of the specialist actuarial consultancies.

4. The Unclaimed Benefit Fund

The Unclaimed benefit Fund has its roots in migratory labour practices. Large trade Union controlled Funds



and have not yet claimed their benefits. These funds use all sorts of data bases (Home Affairs, Credit records) to trace their members and pay them their benefits.

5. The Beneficiary Funds

Once upon a time in the African jungle, lions attacked a killed a buffalo cow but the calf though injured somehow survived. The buffalo herd got together, used their horns to lift the poor injured calf onto its feet, and supported the limping calf between themselves as they disappeared into the distance. Humans should be able to do better!

Further evolution of the retirement Fund landscape has seen the creation of yet another kind of Fund. Southern Africa especially has seen mortality rise over the last decade or so due to HIV AIDS. This has led to an increase in the number of orphaned beneficiaries who are usually paid a lump sum benefit. Paying the benefits of orphans requires care and can be time consuming.

A new breed of Funds has therefore emerged that consist exclusively of the beneficiaries of deceased members. These Funds seek to ensure that lump sum benefits are not squandered immature beneficiaries.



contribution scheme and maintain the entire contribution record of the member. Risks can now be defined, quantified and managed much more easily. And suddenly the defined benefit fund is as endangered as the rhino.

And so the great migration from defined benefit to defined contribution schemes began, and with it the creation of smaller more efficient specialist pension administrators who are not tied to any insurance company. The emergence of

always had large components of migratory labour that went back to their villages after their contracts expired. In some cases these members have come to constitute quite a sizeable population of members who have not claimed their benefits. Like the leopard you do not really know where the members are.

This has seen the creation of Funds whose membership consists entirely of members who have left the Fund

DRAFT VISION, MISSION AND VALUES STATEMENTS of IAI

VISION

IAI to be a globally well recognized professional organization developing enduring thought leadership in managing uncertainty of future financial outcomes.

MISSION

1. To educate/train risk professionals
2. To enhance and maintain high professional standards
3. To shape Public Policy and Awareness
4. To engage with other professional/regulatory/government bodies
5. To promote/build IAI as a respected brand of risk management globally
6. To promote research to advance actuarial science/application

VALUES

1. Integrity
2. Respect for other's views
3. Accountability
4. Continuing Learning/Research Oriented
5. Transparency
6. Be Responsive/Sensitive



THE POTENTIAL OF MICROINSURANCE

AM's Best's Special Report on Micro Insurance Market Review; March 5, 2012.

Throughout the world's emerging markets, insurers increasingly are inclined to include microinsurance in their long-term strategies. Microinsurance has challenges – ranging from adverse selection to lack of profitability – that are enough to discourage inclusion of this business in short-term planning. However, increasing global interest in high-growth markets necessitates global insurers to understand this business model. Therefore, this report provides an overview of this type of business, describes the typical participants and discusses its potential.

There is no standard, accepted definition of microinsurance; as such, this report will generalize it as insurance that is accessed by the lower economic echelons of a population. Microinsurance serves to improve coverage of basic human necessities in terms of business lines such as health, life, funeral, property and agriculture. Such micro policies transfer risk from low-income individuals – who do not have access to traditional insurance – to a group. Typical characteristics of microinsurance are:

- Low-cost transactions;
- Simple risk coverage;
- Low net-worth clients; and
- Community involvement.

The characteristics of low-cost transactions, simple risk coverage, and low net-worth clients are similar to those once found in home-service or industrial-life policies around the turn of the 20th century in the United Kingdom and United States. These policies were more prevalent after the industrial revolutions and evolved into more traditional lines that contributed to a virtuous cycle of protection, savings and increased wealth. Present-day emerging market economies that are cultivating micro-insurance would like to see a similar evolution.

Products and programs are designed for a particular segment of the demographic pyramid (see Exhibit 1). The population with an approximate income level falling in the lowest income range receives humanitarian assistance and tends to be out of reach for commercially viable microinsurance programs. Those in the highest income range typically have

access to traditional insurance. To these populations, insurance's purposes include access to health services and sustaining families or villages in event of a natural disaster. Swiss Re places the microinsurance market segment, in terms of gross domestic product (GDP) per capita, at the approximate range of \$1.25 to \$4 per day. In a 2010 Lloyd's study, people in this segment identified the following risks as their main concerns:

1. Illness
2. Death
3. Natural disaster
4. Livestock disease
5. Accident
6. Property Loss

While these priorities imply a strong need among individuals in the middle income range for health insurance, life insurance and agricultural insurance, it does not automatically create demand for it. Without an understanding of and a faith in insurance, this population tends not to look to insurance as the risk-management tool of choice, but instead chooses alternate methods of self-protection. Such methods being applied currently include: informal risk-sharing agreements; conservatism; savings; borrowing – likely at excessive rates; liquidation of assets – primarily agricultural – which provides an immediate source of income but diminishes long-term prospects for a family; or forfeiture of education in exchange for labor.

The Viability of Microinsurance

Certainly, populations stand to benefit from the existence of microinsurance. Its effects improve the average standard of living in a given country, establish a culture of savings and self-sufficiency, and increase overall economic activity. These benefits are supported by governments, charitable foundations, development banks and other groups that seek to alleviate poverty. But can microinsurance exist as a business model for a profit-seeking enterprise?

The low premiums in microinsurance policies cannot cover the expenses of structures typical to traditional insurance models. Offering protection

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to customers in exchange for premium payment, the insurer must incur the costs of underwriting, claims processing, analysis, regulation and other overhead. The modern regulatory landscape requires insurers to provide a substantial amount of paid-up capital; gather and report significant premiums, policyholder and claims information; and dedicate staff members to regulate requests and on-site visits. Highly skilled and experienced professionals are required to perform these tasks. For the premium levels and profit margins available in the area of microinsurance, such an infrastructure would not be possible, except perhaps at a huge scale. Exhibit 3 provides a generic illustration of how typical expenses incurred by insurers can be mitigated in this unique class of business.

Although this illustration does not reflect any reference to donor capital, it is important to note that often, donations and government subsidies are paid to insurance companies, non-governmental organizations (NGOs), governments and service providers to help alleviate these costs. However, A.M. Best contends that long-term sustainability of this business model requires the industry to learn to survive without such direct assistance. **Sharing Costs With the Community**

As mentioned in the previous section, insurers incur significant costs associated with the distribution of insurance, the collection of policyholder information that identifies their needs and assesses their risks, and the assessment and payment of claims. Through certain types of organizations or partnerships with community organizations, microfinance institutions (MFIs) and cooperatives, risk-bearing entities can reduce those costs and afford to reduce premium charges to policyholders. This approach often is referred to as the "Partner" (insurer) – "Agent" (community organization) model. Through this method, insurers gain access to large aggregations of clients through an existing channel.

Insurance-centric, grass-roots

organizations can concentrate on micro-type policies. According to an International Association of Insurance Supervisors (IAIS) – Microinsurance Network 2010 issues paper, mutuals, cooperatives and community-based organizations (MCCOs) play a special role in the distribution of microinsurance. MCCOs, in this definition, include mutuals, cooperatives, friendly societies, burial societies, fraternal societies, risk-pooling organizations, community-based organizations and self-insuring schemes. This group overlaps with the ones previously mentioned, but is established primarily to provide insurance to members.

Aside from insurance-specific groups, other community-based organizations also play a special role in the distribution of microinsurance. These organizations – which commonly focus on fulfilling religious, social, economic or health services – are run by community leaders and are able to identify members' needs, which often include the assuaging of those fears mentioned earlier in this report: protection against illness, death and natural disaster. In many countries, these community organizations have become essential to the distribution of insurance and claims to members.

Reducing Costs Through Innovation, Partnerships and Simplicity

Insurers that are successful in this space understand that microinsurance is more complex than merely scaling down traditional insurance, and that creativity and innovation are the keys to its success. A variety of methods are employed on a case-by-case basis to reduce costs.

Many insurers have partnered with a variety of service providers, primarily those dealing in high-volume, easily accessible products – such as cell phone companies, grocery chains, banks (micro-finance institutions) and lotteries – to distribute insurance products. For example, a simple life policy can be bundled with the sale of air time on a mobile phone. The product and its contract are simple to understand and easy to access and pay, and often lead to the gradual increase of coverage. On the benefits side, insurers often partner with service providers such as physician groups, pharmaceutical companies,

funeral homes and coffin manufacturers, as well as distributors of agricultural products.

Reminiscent of the early days of U.S. industrial life insurance, door-to-door selling of insurance policies does occur. For example, a community member would sell a product such as funeral insurance door-to-door, receiving a percentage of premiums sold. With this method, the product and brand gain traction through the development of personal relationships. This style of distribution is similar to the community partnerships, except that it infiltrates a community that is linked in its geography as opposed to its beliefs or occupation.

To reduce claims-adjusting and data-collection costs, and to contribute to scale, insurance can be written in more general terms. For example, health insurance in the microinsurance market omits screening for pre-existing conditions and its related expenses. Coverage is simple and payout is limited. In the area of catastrophe protection, index insurance is utilized. For example, if a particular event threshold – perhaps a level of rainfall or magnitude of earthquake – is met, an insurance company will pay out on all policies, regardless of damage. Beyond utilization by farmers for agricultural risks, governments also buy such products to cover for earthquake risks that are beyond the capacity of their state disaster relief funds, such as Mexico's disaster fund, FONDEN, and the Caribbean Catastrophe Risk Insurance Facility (CCRIF).

The Role of Regulators

As previously mentioned, it is in the interest of governments and charitable organizations to encourage the growth of this class of insurance. Typically, insurance regulators are responsible for protecting policyholders and for guaranteeing the population's access to insurance in their respective domiciles. As microinsurance emerges as the potential method of granting access to the underserved members of their population, regulators can present insurers an incentive to offer products to the lower-income populations, such as reducing licensing requirements or making regulations proportional to the risks being taken. In the case of India, the Insurance Regulatory and Development

Authority (IRDA) requires companies seeking to write business in India to dedicate a portion of their capacity to increasing access to insurance for the country's underinsured populations.

The IAIS has provided guidance to regulators around the world on how to regulate microinsurance and has been innovative in its approach to microinsurance, as it has actively engaged in modifying core regulatory principals for the purpose of increasing insurance accessibility. Additionally, the Group of Twenty (G-20) finance ministers who have included increasing access to insurance in their Mexico agenda later this year.

Proportionality is a core concept that applies to capital requirements, flexibility in pricing, policy structure, unorthodox distribution and transparency regarding clients. Specifically, regulators seeking to increase the population's access to insurance can do so by easing insurers' regulatory burdens and reducing their cost-intensive obligations such as initial capital and data, and reporting requirements. Regulators also can enact regulation on microinsurance which can simplify policies and reduce administrative expenses. Although regulation should protect policyholders from fraudulent insurance schemes, it should not make products cost-prohibitive to insureds or create a burden for insurers.

Microinsurance as a Long-Term Growth Strategy

To create a successful microinsurance program, there must be cooperation, innovation and a great deal of flexibility by donor organizations, risk-bearing entities, governments and community groups.

In this market, the majority of risk-bearing entities are commercial insurers that often work with community groups for distribution purposes, and enter this sector with various motives, ranging from the philanthropic to the opportunistic. Specifically, an insurer's participation in microinsurance programs may afford it the following advantages:

- Gaining access to new and potentially high-growth markets.
- Enhancing the brand by creating a favorable image to the general population.
- Enabling compliance with government requirements.

- Being a means to learn the nuances of a given market for the sake of future product development.
- Enabling a company to diversify, as well as create new cross-selling opportunities.

The Microinsurance Network's 2010 survey stated that private-sector participants expect the business to more than double in the next three years as insurance awareness grows and governments increase their incentives for companies to participate in this segment. Companies with longer-term perspectives and a desire to grow in emerging markets can use a microinsurance strategy to build insurance awareness along with building their brands.

Potential Market Size

Largely consistent with previous studies, Accenture recently published a study that identified the market as between \$30 billion and \$50 billion in annual premium revenue. If we assume the target customers are those whose incomes are approximately between \$500 and \$1,500 per year, then we can assemble a list of emerging market countries that have current or future potential for microinsurance policies. A partial listing of these countries (see Exhibit 4) shows the current or potential domiciles for microinsurance in terms of GDP per capita. The shaded areas represent those quintiles of the population whose average income is within, or close to, the income target range for microinsurance.

Comparisons of regional income quintiles show that the demographics of Africa and Southeast Asia are, as a whole, more relevant to the microinsurance model. Exhibit 5 shows the per capita income for each quintile of the populations in Africa, Southeast Asia and Latin America. For example, it shows that the top quintile (top 20%) of people in Latin America have, on average, an estimated per capita income of \$18,366 and the bottom quintile (bottom 20%) of people in Southeast Asia have, on average, an estimated per capita income of \$852. The exhibit shows the demographics in terms of potential development of microinsurance. While regions such as Southeast Asia and Africa fit the traditional microinsurance mold, others such as Latin America do not fit the typical profile, yet microinsurance has taken a strong foothold in the domestic market.

Specifically, India and the Philippines – which have large target populations – have the most innovative and most supportive environments and the highest growth for microinsurance in the world. MFIs are significant distributors in these countries. According to the Accenture study, India and Philippines, along with Bangladesh and China, are the world's fastest growing micro-insurance markets (see Exhibit 6).

In contrast to India and the Philippines, Brazil's population is, on average, much wealthier. In fact, only a portion of the lowest income quintile falls into the target population for microinsurance (see Exhibit 7). Nevertheless, a large segment of the population is underserved by traditional insurance. As a result, in December 2011, the Brazilian insurance regulator, SUSEP, introduced new regulation to encourage the development of microinsurance in Brazil. Exemplifying methods of proportional regulation, SUSEP announced that base capital for insurers exclusively dedicated to microinsurance would be 20% less than the required base capital for traditional insurers.

In contrast to its Asian counterparts, Brazil has different business models and does not need to take advantage of donor capital to survive – as some other programs might – implying that areas of greater need tend to require more mixed models incorporating subsidies and support. Instead, recently established companies – aided by the more forgiving regulatory environment – are able to develop an interesting business model that is considered the next level up from microinsurance. Instead of distribution through MFIs, insurers are utilizing retail outlets, utility and telecommunications companies to identify customers, distribute their products and collect premium payments, as unit prices are high enough to cover costs.

Expanding Companies' Reach Into Emerging Markets

Insurance protection against death, accident, injury and property damage in small amounts is not a new concept to the insurance industry. Companies such as MetLife Inc. and Prudential wrote industrial policies more than 100 years ago for the working poor, and some companies in developed countries still write those policies. For companies, microinsurance requires

scale, innovation and flexibility to be profitable. And, the business case for it is clear, especially to a company wishing to pursue long-term growth in a country or region that is actively increasing its population's access to insurance.

A wide array of companies has ventured into microinsurance, with mixed results. Some have lost significant investments in projects that ultimately failed. However, a number of companies have managed to be profitable in this space and are able to use the business model to diversify risks, increase brand awareness and enter a market at its most nascent stages.

A.M. Best expects the industry to evolve and will closely watch developments in microinsurance business models. This evolution, made possible by advances in innovation in technology, and in corporate and partnership structures, will allow insurance to penetrate deeper into the lower echelons of the income pyramids across the globe.

Leveraging Memberships Structure of Cooperatives

The Latin American Reinsurance Group The Members of LARG Are: (LARG) was formed in 2004 to facilitate the joint negotiation and placement of reinsurance treaties. All LARG members, who represent 13 countries, are members of the International Guatemala Cooperative and Mutual Insurance Federation (ICMIF). The majority of LARG members are small institutions that aim to develop an insurance culture among the low-income populations. That said, not all members offer microinsurance yet.

(LARG) LARG facilitates larger-scale access to reinsurance and raises awareness among populations and governments with the goal of achieving long-term feasibility of insurance for low-income communities. This group also receives assistance from various institutions including ICMIF; Cooperation Society for International Development (SOCODEVI), from Canada; Willis Re, who is the intermediary in the nonlife reinsurance programs; and the reinsurers, American Agricultural Insurance Company, RGA and Shelter.

Latin America's growth of premiums and risks insured is rapid, albeit from a low base. LARG strives to achieve scale and efficiencies so that this program may be sustainable for the long term.



LOOKING AROUND

by Vinod Kumar

The Mars exploration program undertaken by NASA scientists target to understand whether Mars ever developed or maintained an environment in which life could thrive. This could also lead to deeper understanding of Mars surface to know whether life ever existed in Mars and what made it extinct. The first and foremost testing is to understand the existence of water content and energy sources in Mars. This would lead to further investigations of life traces or exploring future possibilities of life existence in Mars.

There are different thoughts about this mission- A program requires huge budget provisions which in turn can be utilised for eradicating poverty of millions in Earth and/ or building up a wonderful living city or what else not. What all achievements humankind would have achieved after knowing about the planet Mars? Questions are many and answers not too many. It may be possible that we all in this planet are curious about our past, anxious about our present and concerned about our future of existence in the universe.

Wondering why the Mars program in the "Actuary India"? From my side, wondering how many of our subscribers will read this article at all. Many a times, we could see the subscribed magazines dumped in a corner of the reading table of our members without opening the cover!!!

Agree that actuarial science is not like a "Titanic" film story to make everyone feel interested. We would have found sufficient time to watch such interesting movies and programs without having any constraints of time!!! Are we happy with the barest minimum actuarial work of the day? We need to survey this behavioral pattern from ourselves. It might be that we all started believing that the profession is meant for our day to day livelihood and nothing else.

Indian insurance market is moving over a rough road now. The role of actuaries become much more significant than ever before in the Insurance market to bring it back for a smooth ride. The situation is also so opportunistic for an actuary to demonstrate their skills as a risk management professional to the market as a whole. Such a demonstration only can open up new avenues in the market beyond the four walls of insurance, which is the need of the hour and requirement for long term existence.

Market recognition of the Indian actuarial profession can only be possible by expressing ourselves about the confronting issues and possible solutions thereof of the market. Let us all please look around and understand what is in the public domain as contributed individually and collectively. The broken part of the thread is that, there aren't enough research and publications done by us to express our views and solutions to important issues and challenges of the market.

About the Author



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Vinod Kumar is Associate member of Institute of Actuaries of India and is currently heading Research team at IAI.

Coming back to the Mars exploration and its motives of spending thousands of human brains and millions of dollars, are we not comfortable in the Earth leading to further exploration of another planet?

The bottom line is, dry lands are signs of gradual extinction of life. A fertile land with sufficient and regular watering only can prevent life extinction from the universe. This basic principle is equally applicable for actuarial profession as well. It needs regular watering in the form of thought process, research and investigations from our members.

Like a Mars exploration checking the existence of water traces in Mars, a time should not come to check the actuarial traces in the Indian soil. This can be only possible by self-realising our contributions to the profession and future in the waiting. Let us make our contributions to the profession by changing our perception from "Fools do researches and wise men use" to "Wise men do researches and wise men use". This change of perception and attitude can only make the actuarial land fertile and profession exist.



GO OUT AND CHANGE THE WORLD....

THE MORE YOU STUDY, THE MORE YOU SHOULD HAVE -

A GOAL YOU SHOULD BE PURSUING

A DREAM YOU SHOULD BE LAUNCHING

A PLAN YOU SHOULD BE EXECUTING

A PROJECT YOU SHOULD BE STARTING

A POSSIBILITY YOU SHOULD BE EXPLORING

AN OPPORTUNITY YOU SHOULD BE GRABBING

AN IDEA YOU SHOULD BE WORKING

A PROBLEM YOU SHOULD BE TACKLING

A DECISION YOU SHOULD BE MAKING

THE GREATEST FORCE IN THE WORLD IS A POSITIVE IDEA.

- ANONYMOUS



THE INSURANCE SECTOR OF SRI LANKA

by Frank Munro

Economy of Sri Lanka

Since becoming independent from Britain in February 1948, the economy of Sri Lanka has been affected by natural disasters such as the Tsunami in Dec 2004 and a number of insurrections, mainly the 26-year civil war. In 2001, Sri Lanka actually faced bankruptcy, with debt reaching 101% of GDP. The impending currency crisis was averted after the government reached a hasty ceasefire agreement with the opposing LTTE and brokered substantial foreign loans.

The cost of war significantly weighted down Sri Lanka's economy. A sharp rise in world petroleum prices combined with economic fallout from the civil war led to inflation that peaked at 20% in 2008. However, Sri Lanka now reaps peace dividends after ending the three-decade long civil war.

The economy grew by a strong 8% in 2010 which is the first full financial year after conclusion of the war. There is strong evidence of continuation of the growth momentum in 2011 and beyond as the first half of 2011 also grew by 8%. The Department of Census and Statistics announced that the best ever economic growth in Sri Lanka since 1948 was recorded in 2011 with a growth of 8.3%.

The GDP of Sri Lanka (as estimated in 2010) is \$49.55 billion and agricultural products, services and industry accounting for 11%, 59% and 29% of GDP respectively.

Industry Overview

The Insurance Industry in Sri Lanka is regulated and supervised in terms of the provisions of the Regulation of Insurance Industry Act, No.43 of 2000. The Insurance Board of Sri Lanka (IBSL) is established under this Act. 19 insurance companies were registered under the Insurance Board at the end of year 2010. Out of these 19 companies, 12 are composite companies which are transacting both long term insurance business and general insurance business. Out of the rest, 2 companies are registered to transact only long term insurance and 5 are registered to transact only general insurance business. Out of all, 7 companies are listed on the Colombo Stock Exchange.

The companies which provide broking facilities to the industry were registered under Act No. 7 of 2007 and there were 42 such companies at the beginning of the year 2010. Out of that, 33 were composite companies, with 8 engaged only in general insurance. The principal Act permits only individuals to function as insurance agents and they have thus played a key role in marketing insurance products in Sri Lanka, mainly in the life insurance sector. Approximately 65,000 individuals are functioning as insurance agents in the country.

History

The IBSL was established under the above insurance act on 1st of March 2001. The Sri Lankan Insurance Institute (SLII), a non-profit making organization whose main objective is to develop the skills and knowledge of persons who are in the insurance industry, was established in 1982. The Insurance Association of Sri Lanka (IASL) was established in 1989, and every insurance company registered under the Act is eligible for membership. However, the real start of the industry could be found much further in the past. Ceylinco Insurance started in 1939 for example, and Sri Lankan insurance, which is the state owned corporation, started in 1962, with CTC Eagle starting in 1987.

2010 Industry Performance

During year 2010 the aggregate gross written premium (GWP) reported from long term & general insurance business totaled up to ₹ 68,493 million, recording a significant growth of 19.63% over 2009. The total premium as a percentage of GDP was 1.22%. The GWP of long term insurance business amounted to ₹ 31,151 million, showing an increase of 31.07%, while the GWP of general insurance business amounted to ₹ 37,342 million, reporting a growth of 11.52% compared with 2009. The total assets of the industry amounted to ₹ 222,243 million as at 31st December 2010 indicating significant growth of 22.76% over 2009. Assets pertaining to long term business were valued at ₹ 139,592 million at the end of 2010, recording growth of 18%. Assets of general Insurance business and shareholder assets amounted to ₹ 82,651 million, reflecting a growth of 31.74% over 2009.

About the Author



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Frank Munro FIA is Chief Actuary of AVIVA NDB Insurance, and is the only internationally qualified Fellow working full-time in Sri Lanka.

Products – Life

The bulk of the products sold in the industry are UK-influenced conventional with-profits plans supported by protection riders. Since 2006 unit-linked plans have started to be sold, and have seen much success on the back of record stock market gains in 2009 and 2010. The life industry experiences high rates of lapse compared with other international markets.

Products – Non-Life

The non-life market remains dominated by the motor class of business, with a fairly large corporate medical class. Generating profitability in these segments is a challenge for the majority of market participants.

Capital Requirements

The minimum capital requirement that the IBSL requires for a company to register is ₹ 500 million per class of insurance, and a suitable rating of an insurer's financial strength is also required.

Risk Based Capital (RBC)

The IBSL has taken a decision to transform the rules-based supervisory system to a risk-based capital model. This proposal will present a challenge to the industry in terms of the capability required to develop the framework. However, it will also elevate the role of the actuary in the marketplace and will lead to greater opportunities for those within the actuarial profession.

Splitting of composite companies

The IBSL are gearing to separate firms with life and general insurance into two different companies, in a bid to make them more transparent, amidst opposition from the industry. This is to keep in line with the trends in the rest of the world. Also the IBSL feels there is a growing need to have a clear line between the assets in the company and the liabilities backing these assets for shareholders as well as the regulator.

MAURITIUS - ACTUARIES IN PARADISE

by Vanisha Pursun

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For those of you who haven't heard of us, Mauritius is a small island in the Indian Ocean surrounded by clear blue oceans and white sandy beaches. A large part of the population of 1.3 million is of Indian origin and we thus have strong cultural ties with India.

The last time I counted, there were about ten qualified actuaries living and working on the island. Most of us are members of the UK institute but we also have a few Fellows of the Institute of Actuaries of India. In addition, I reckon that there are about a hundred students who currently enroll for actuarial examinations governed by various global actuarial bodies and two local universities have recently started offering an undergraduate degree in actuarial science. A local actuarial society is also in the process of being set up.

Apart from beaches and lagoons, Mauritius is also well known for its vibrant, well regulated and expanding financial services sector. Following the mandatory separation of long term and short term insurance businesses as from 1 January 2011, there are 22 insurance companies which are licensed by the Financial Services Commission (FSC). Insurance companies have to comply with the Insurance Act and are required to submit annual actuarial valuation reports to the regulator. All insurance companies are required to appoint an external actuary for regulatory work. Long term insurance products also have

to be signed off by the external statutory actuary before they are approved by the FSC and can be marketed.

Insurance companies are the largest employers of qualified actuaries and actuarial students on the island. Some local members of the profession are also employed by actuarial consultancy firms and local arms of global reinsurers. Actuarial consultancies provide services mainly in Pensions and Employee benefits and more specifically compliance work in relation to the IAS 19 accounting standard.

The pensions industry is well developed in Mauritius with most of the major employers sponsoring their own private pension fund. All private pension funds have to be approved by the Mauritius Revenue Authority (MRA) for employers to benefit from tax deductions on their contributions and the government has signified its intention of enacting a Private Occupational Pensions Act to govern private pension funds. Insurance companies also offer insured arrangements to smaller employers and a couple of multi-employer pension funds are also available. Although most pension funds are of a Defined Contribution nature, a few Defined Benefit pension funds still exist and actuarial valuation of these funds are usually carried out by local actuarial consultancies.

Even though insurance companies have been present on the island for more than 50 years, the first local

About the Author

Vanisha Pursun is a Fellow of the Institute and Faculty of Actuaries. She has some 13 years' experience in Pensions and Employee Benefits in Mauritius.

actuarial consultancy was only set up fifteen years ago. The local actuarial community is therefore relatively young and has developed very fast over the last few years. However the size of the local market means that the demand for actuarial skills is limited. Currently many actuarial science graduates either work in non-actuarial sectors or choose to get some practical experience in developed countries.

As the market develops further, the demand for actuarial skills will undoubtedly soar. Moreover, major local insurance companies have indicated their intention to expand regionally and the government is also encouraging foreign companies to use Mauritius as a platform to invest in the African region. In addition, some international actuarial consultancies have expressed an interest in outsourcing part of their actuarial processes to Mauritius because of the relative lower employment cost locally. All these projects will undoubtedly result in an increase in the number of 'actuaries in paradise'.

Last but not least, given the privileged relationship Mauritius shares with India we look forward to a closer collaboration with the Institute of Actuaries of India on future projects.



ABOUT MAURITIUS

Location: Southern Africa, island in the Indian Ocean, east of Madagascar

Geographic coordinates: 20 17 S, 57 33 E

Map references: Africa

Area: total: 2,040 sq km

country comparison to the world: 181

land: 2,030 sq km **water:** 10 sq km

note: includes Agalega Islands, Cargados Carajos Shoals (Saint Brandon), and Rodrigues

Area - comparative: almost 11 times the size of Washington, DC

Land boundaries: 0 km

Coastline: 177 km

Maritime claims: measured from claimed archipelagic straight baselines

territorial sea: 12 nm

exclusive economic zone: 200 nm

continental shelf: 200 nm or to the edge of the continental margin

Climate: tropical, modified by southeast trade winds; warm, dry winter (May to November); hot, wet, humid summer (November to May)

Terrain: small coastal plain rising to discontinuous mountains encircling central plateau

Elevation extremes: lowest point: Indian Ocean 0 m, **highest point:** Mont Piton 828 m

Natural resources: arable land, fish

Land use: arable land: 49.02%,

permanent crops: 2.94%,

other: 48.04% (2005)

Irrigated land: 210 sq km (2008)

Total renewable water resources: 2.2 cu km (2001)

Freshwater withdrawal (domestic/industrial/agricultural): total: 0.61 cu km/yr (25%/14%/60%)

per capita: 488 cu m/yr (2000)

Natural hazards: cyclones (November to April); almost completely surrounded by reefs that may pose maritime hazards

Environment - current issues: water pollution, degradation of coral reefs

Geography - note: the main island, from which the country derives its name, is of volcanic origin and is almost entirely surrounded by coral reefs; home of the dodo, a large flightless bird related to pigeons, driven to extinction by the end of the 17th century through a combination of hunting and the introduction of predatory species

Source: <https://www.cia.gov/library/publications/the-world-factbook/geos/mp.html>

FINANCIAL STABILITY BOARD REPORTS TO G20 ON PROGRESS OF FINANCIAL REGULATORY REFORMS

FSB Press Release; April 20, 2012,

The Chairman of the Financial Stability Board (FSB) reported to the G20 Finance Ministers and Central Bank Governors today on progress in the financial regulatory reform programme.

In connection with this, the FSB is publishing today:

- a **letter** by the FSB Chair to the G20, sent ahead of their meeting, reporting on the progress being made in the following priority reform areas: (i) building resilient financial institutions; (ii) ending “too big to fail”; (iii) strengthening the oversight and regulation of shadow banking activities; (iv) completing OTC derivatives and other reforms to create core continuous markets; and (v) implementing agreed G20 reforms in a timely and consistent manner;
- a **report** on progress in extending the framework for Global Systemically Important Financial Institutions

(G-SIFIs) to domestic systemically important banks;

- a **report** on progress in strengthening the oversight and regulation of the shadow banking system;
- a **joint report** from the International Accounting Standards Board (IASB) and the Financial Accounting Standards Board on their progress in converging their standards, together with a report on enhancements to the governance of the IASB.

At today's meeting the G20 Finance Ministers and Central Bank Governors reaffirmed their commitment to common global standards by pursuing the financial regulatory reform agenda according to their agreed timetable in an internationally consistent and non-discriminatory manner.

Notes to editors

The reports are available on the FSB's website, www.financialstabilityboard.org/.

The FSB has been established to coordinate at the international level the work of national financial authorities and international standard setting bodies and to develop and promote the implementation of effective regulatory, supervisory and other financial sector policies in the interest of financial stability. It brings together national authorities responsible for financial stability in 24 countries and jurisdictions, international financial institutions, sector-specific international groupings of regulators and supervisors, and committees of central bank experts.

The FSB Secretariat is located in Basel, Switzerland, and hosted by the Bank for International Settlements.

For further information on the FSB, visit the FSB website, www.financialstabilityboard.org/.



The IAA Participates in the Private Sector Taskforce of Regulated Professions and Industries and Makes Recommendations to the G-20 Update to 2011 Report Addresses Implications for 2012 and Beyond

IAA Press release; April 19, 2012

The Private Sector Taskforce (PSTF), in which the International Actuarial Association (IAA) is a member, submitted an update to its report *Regulatory Convergence in Financial Professions and Industries* (“2011 Report”) issued to the G-20 Deputies in September 2011.

The PSTF strongly encourages the G-20 to implement all of the 15 recommendations presented in its 2011 Report with emphasis on its first two recommendations:

- Continue to focus on regulatory convergence in the financial sector, ensuring that G-20 nations work together to identify and narrow gaps in regulatory practice; and
- Discourage nations from implementing unilateral national regulatory reforms that are inconsistent with

international standards and that widen—rather than narrow—the convergence gap.

In support of these recommendations, the update provides a discussion of matters that have arisen since the 2011 Report was issued—including examples of where regulatory convergence has moved forward, such as the application of Legal Entity Identifiers (LEI) and the adoption of International Financial Reporting Standards (IFRS) and International Standards on Auditing (ISAs). The update also notes examples where international regulatory arrangements have become more fragmented.

The update includes additional recommendations regarding public sector financial management and reporting, transparency, and accountability. Over

the last year this has been brought into greater focus as a consequence of the sovereign debt crisis, and growing global financial instability. Other important matters are identified which the PSTF suggests will require closer attention by the G-20 in 2013 and beyond.

The PSTF was established in 2011 at the request of the Presidency of the G-20. In addition to the IAA, the PSTF includes International Federation of Accountants (which acts as coordinator), CFA Institute (CFA I); INSOL International; Institute of International Finance (IIF); International Accounting Standards Board (IASB); International Corporate Governance Network (ICGN); International Insurance Society (IIS); and International Valuation Standards Council (IVSC).





BIKRAM BORDOLOI ACET CANDIDATE FROM NORTH EAST INDIA

bordoloi.bikram@gmail.com



How did you come to know about ACET?

I came to know about ACET from my brother who is an employee of LIC of India.

Tell us about your childhood, family and educational background?

We are a nuclear family. I were born and brought up in a small industrial town known as Namrup, located in Upper part of Assam. My father was a service person until 2007, when he got retired. My mother is a house maker and elder brother an employee of LIC of India. My earlier education till 12th was in Namrup. After that I graduated as B.E in Electrical Engineering from Assam Engineering College located in Guwahati and under Gauhati University, with Honours in the year 2009.

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

They are very supportive and encouraged me to persuade a career of my interest. Though, from a middle class family with limited monthly budget, I had always been provided with the best that could be afforded for the success in my career.

Having already completed engineering, what has motivated you to take up Actuarial professional course?

Having completed Engineering I joined ASSAM STATE ELECTRICITY BOARD as Assistant Engineer in the year 2009. After few months of work experience I felt the importance of Finance in an organization. But for me Finance is just like looking at the other side of the smog. Beside this, gradually I was inclined to the Insurance sector too. The fact that I don't have much knowledge about these two subjects has made me take Actuarial Science as a professional course.

How many hours of study on average per day did you put in to pass the ACET result where in 1,663 candidates appeared?

I have many official tours so whenever I am at home I used to study. However 1-2 hour of regular study is sufficient for ACET.

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

I will bring more awareness about this profession to the people of my region who have the requisite talent to pursue this course so that, this profession can be extended to cover most of the industries or service providers which currently suffers from lack of actuarial valuations.

Any comment on your experience with ACET process?

The ACET process is simple and easy. The guidance provided by the Institute during registration and notifications available on the website are appreciated.

What is the level of awareness about actuarial science in North east India since we would like more participation from the local people?

I would say probably 2- 5% of the local people would be able to answer, what is Actuarial Science?

In fact none of my friends, colleagues were aware of the course. However I try to make people aware of Actuarial science whenever I get an opportunity.

Any message for the students wanting to take up the ACET in future from Guwahati

There is a common notion that ACET as well Actuarial course requires good Mathematical and analytical skills and the pass percentage is poor. But I would say dedication and self motivation are the two factors that would set success to your Actuarial career.

I believe that, the natives of North east part of India have enough skills to qualify as Actuaries and to be at par or probably above compared to the other states in number of pass candidate.





FRANK MUNRO, CHIEF ACTUARY AT AVIVA NDB INSURANCE PLC SRILANKA

Frank.Munro@avivandb.com



Frank Munro FIA is Chief Actuary of AVIVA NDB Insurance, and is the only internationally qualified Fellow working full-time in Sri Lanka. In this role, Frank is responsible for oversight of the actuarial life function, covering reserving, assumption setting, product development, value management, risk and contributions to regulatory debate and industry issues. He is also the secretary of the Actuarial Association of Sri Lanka. Prior to working in Sri Lanka Frank, worked across several international markets including the UK, Netherlands and Singapore, in a range of roles spanning a 6 year period, covering group level policy implementation, regional oversight, and operational business management.

PERSONAL

What level of college education or training did you receive in order to get to this level?

I did a degree in Math, followed by the professional examinations of the Institute and Faculty of Actuaries. These examinations were taken whilst working in a number of countries around the world. Other training was on-the-job, the majority of that was indirect via work experience rather than by way of formal training programs.

What has been your greatest challenge to date?

I would say that coming to the Sri Lankan business, learning about the operations and local environment, as well as adapting myself to be a good fit culturally, was a significant challenge, and one that was extremely rewarding.

Please describe for us a typical day at work for you?

There would be technical content in terms of guiding the actuarial team, for example on model development, product pricing, experience analyses or reserving methodology. There would be a lot of operational involvement with the business, for instance on setting an appropriate incentives structure for a new channel, developing business plans, advising on treating customers fairly etc. There may be attendance at a committee, such as the asset liability management committee, where topics such as interest rate risk would be discussed and appropriate management actions taken. There could be a meeting with the regulators, auditors or local actuarial society to discuss any prominent issues. The business and market are very dynamic and the range of work would vary accordingly.

What has been the most satisfying moment of your leadership?

Seeing the great strides made by the actuarial team, as evidenced by the overall performance of the business in addition to feedback from senior management, auditors and

regional colleagues, was extremely satisfying for me.

What are the key qualities that a Chief Actuary should possess?

In Asia the qualities required differ somewhat from Europe. Here, the actuarial function will be smaller, with a potentially wider scope. Hence the main qualities required are flexibility, a wide range of actuarial experience, coaching and effective communication skills.

INSURANCE INDUSTRY

What do you see as the key success factors for an insurance company in Sri Lanka?

As per many markets, the key success factors would be a sound distribution strategy supported by the right products and strong customer service and focus.

Where do you see the industry in five, ten years time? What market share do you see the private sector players having in ten years time?

The industry is set to experience a rapid pace of development as RBC gets introduced, leading to more analyses of value and risk. The private players may well occupy the vast majority of the market in ten years' time.

What are the key issues facing the insurance industry today?

The life industry continues to be affected by poor persistency, with up to 45% of policies failing to remain in-force for 13 months.

The non-life industry suffers from lower profitability compared with the life side.

What role does technology have to play in the development of the industry?

We may well see the emergence of the internet as a sales

channel in the years to come. Otherwise, companies need to consider how to most efficiently issue policies in the minimum time, with the least intrusive level of underwriting. I believe that technology is the major component to consider in respect of this challenge.

What are the toughest problems you deal with at work? What problems does the industry have as a whole? What is being done to solve these problems?

There is currently a major issue whereby life solvency assets are marked to market with liabilities valued on a net premium basis. With interest rates rising, this creates a significant solvency strain on the life industry. As a result of this the regulator is working on a gross premium valuation framework with the support of the local actuarial association.

On addressing the issue of persistency, we have adjusted our sales force incentives structure, and introduced more granular management information to allow positive decisions to be taken.

The non-life profitability issue will come to a head in the coming years, since the regulator has proposed to split composite companies. In doing so, the non-life market will have to demonstrate an appropriate level of profitability to attract shareholder investment.

What do you believe are the inefficiencies in the insurance industry? How do you think such inefficiencies should be overcome? What are its strengths?

Payment methods remain a problem, and contribute to poor persistency. It is expected that more payment vehicles will arise naturally in the medium term, as the economy continues to develop.

The main strength of the industry lies in the established direct sales forces in operation, with the major companies all enjoying strong brand recognition. Further, profitability for life companies is high, with financial metrics that many other markets would envy.

ACTUARIAL PROFESSION

What is level of awareness about actuarial profession in Sri Lanka?

Awareness is quite low, with the actuary sometimes seen as a necessary evil in terms of product certificates and valuations! However, that is set to change with the regulator proposing an RBC framework for the market.

What do you consider to be the key areas where actuaries add value to the business?

A lot of areas!

In non-life, for example, the market is using only one rating

factor for pricing. Further, there is little consideration of cyclical or seasonal events such as floods.

Clearly RBC will elevate the role of the actuary in the industry. Within this lies the need to understand the company's own experience, leading to a greater predictive ability conducive to making appropriate management decisions.

There is room for product innovation in the market, although some more exotic product offerings would first require the emergence of a deeper asset market.

Given that actuarial education substantially takes place in the working environment what type of work experience does your company provide to actuarial students?

We offer the full spectrum of actuarial work. Since we are a multi-national company, we are compliant with the latest requirements arising in Europe, meaning that the students are at the cutting edge of actuarial science. For instance, they have participated in the Solvency II QIS5 exercise.

What is your advice to the actuarial profession and Professionals?

In terms of working requirements, the key skill that seems to be required is effective communication with non-actuaries. I think the profession should seriously consider this in its development programs.

In terms of personal career development, I would certainly recommend overseas roles to anyone with an adventurous spirit!

What do you find most rewarding about this work, besides the money?

This is a job that allows you to use the technical skills learned in higher education, to a degree not generally found outside the academic world. The work is always interesting, and always challenging.

What is the job outlook currently like in Sri Lanka?

My firm belief is that the proposal to introduce RBC to Sri Lanka will dramatically increase the demand for actuarial professionals in Sri Lanka. Aside from this, the underlying market fundamentals are sound and the number of insurers entering the market may well increase, further increasing demand for actuaries.

Having attended 14th GCA organized by Institute of Actuaries in Mumbai on 19-21 February, kindly let us know your impression on the event and takeaways.

I was very pleased to have had the opportunity to attend the event, and found it extremely well organized and insightful. In terms of takeaways, to some extent certain market conditions in Sri Lanka resemble those of India a few years ago, especially in relation to unit-linked products, so we must learn from the Indian experiences in forging the best path forwards for the local industry.



ELECTION TO THE COUNCIL FOR THE PERIOD 2012 – 2014

The following information is prepared for the members and other readers of the Actuary India with the objective of keeping the governance functions of the IAI communicated. The finality of the contents, however, is what is contained in the Actuaries Act, 2006 and the Actuaries (Election to the Council) Rules, 2008.

Gururaj Nayak
Administrative Officer

Introduction

The Actuaries Act, 2006 taking over the functions of the actuarial profession from the Actuarial Society of India came into effect from 8th November, 2006 and the first elections to the Council (section 12 of the Actuaries Act) took place in year 2008 followed by the second council election in 2010, the Council taking office on 4th September, 2010.

Council member Vacancies

Out of these twelve elected members four members retired during the election for year 2010. The remaining eight out the original twelve are;

- 1) Mr. GLN Sarma
- 2) Mr. K K Wadhwa
- 3) Mr. T Bhargava
- 4) Mr. A R Prabhu
- 5) Mr. A D Gupta
- 6) Mr. Anil Kumar Singh
- 7) Ms. N Kalpana
- 8) Ms. Vibha Bagaria

Section 12 of Actuaries Act 2006, dealing with composition of Council of the Institute inter alia vide section 12(4) provides as under;

“One-third of the Members of the Council referred to in clause (a) of sub-section (2) shall retire as soon as may be on the expiration of every second year by rotation but shall be eligible for re-election.”

The provision states that retirement is by rotation based on seniority. However, only one third of the members should retire i.e. 4. Since all the members were elected together and thus have equal seniority, the four out of eight have to be selected to retire by draw of lot.

The retiring Council members

The Council met on 5th May, 2012 and decided amongst other agenda items, the four members to retire by draw of lot. The following four members accordingly were chosen to retire effective the date new council for the year 2012 – 2014 takes office on some date early September, 2012;

- 1) A D Gupta
- 2) K K Wadhwa
- 3) T Bhargava
- 4) Anil Kumar Singh

Council also approved the following:

1. Appointment of Returning Officer and Assistant Returning Officers

In accordance with Rule 26 of Actuaries (Election to the Council) Rules, 2008, the Council in its meeting held on 05 05 2012 designated Mr. Gururaj Nayak, Administrative Officer as “Returning Officer” for the purpose of conduct of election to the Council 2012 and in terms of Rule 23 of the Rules ibid, the Council appointed Ms. Aparajita Mitra and Mr. Manoj Kumar as Assistant Returning Officers to assist Mr. Gururaj Nayak, the Returning Officer during the election process. The Council as per Rule 26(2) also authorized the Returning Officer to delegate any of the duties to be performed by him under above mentioned Rules to the Assistant Returning Officers, as he may deem fit.

2. Election Code of Conduct

1. The following code of conduct as applicable to the earlier council election is to be followed by the members during election:

- (a) Canvassing is a component of democratic process of which election is one. The canvassing, therefore, has to be left to be decided by the candidate to be done or not. However “Ethics and Good conduct” is expected of members while canvassing.

While canvassing members should ensure that the canvassing is done in a manner which should be considered conforming to high standards of ethics and good

conduct. In particular it needs to be emphasized that canvassing by whatever means should not be given negative impression about others. A manifesto is to be issued by a member in relation to the election which shall conform to the following requirements in the interest of maintaining dignity of the election:

- (i) A manifesto shall contain information regarding the member and shall not make any reference directly or indirectly to any other member.
- (ii) The information which a member may furnish in a manifesto regarding himself shall not differ in any material respect from the information furnished by the Institute to the voters. A member may, however, include in such manifesto, any additional information not contained in the information furnished by the Institute.
- (iii) A manifesto issued shall neither contain any appeal to the voters on the basis of caste or communal, religious, regional or sectional lines nor any tall claim.
- (iv) The distribution of a manifesto shall be restricted only to members of the Institute.
- (v) A certified copy of such manifesto shall be sent to the Returning Officer by speed post or Registered Post or through a messenger within 15 days of its issue.
- (vi) While a member may repeat, in any form the manifesto issued as mentioned above without changing its contents, he shall not issue more than one manifesto or
- (vii) A member shall not adopt any of the following practices with regard to the election to the Council namely:-
 - ✓ bribery, that is to say any gift, offer or promise of any gifts or gratification to any person by a member or any other person with his connivance, with the object directly or indirectly of inducing a member to contest or not to contest as a member at an election or rewarding him for act or

omission or

- ✓ inducing to withdraw his membership nomination to the Council or rewarding such withdrawal or
- ✓ inducing a voter to vote or not to vote at an election or as a reward for act or omission.

- (b) The member contesting the election should not incur expenditure in excess of an amount of ₹10,000/- (Rupees ten thousand only). Every such member shall file complete account of expenses incurred for the election within 15 days from the declaration of results of election to the Council.

This election code of conduct shall be followed by the members, his authorized agent during election to the Council.

2. The list of members as on 31st March 2012 has been placed on the website of

the Institute. In case members require such list, the same will be supplied by

the Institute on demand in hard copy at a price of ₹50/- and in soft copy free of charge.


3. The Election Process

Sr. No	Particular	Date
1	An announcement of availability of voters list to be made on website and Notice Board on :	Tuesday, May 22, 2012
2	Announcement of number of members to be elected and calling for nominations of candidates. (Nomination paper form B and schedule 2) on	Tuesday, May 22, 2012
3	Last date of receipt of nomination papers	Saturday, July 7, 2012
4	Date of scrutiny of nominations received	Tuesday, July 10, 2012
5	Preparation of list of contesting members with address (Form C)	Thursday, July 12, 2012
6	Last date of withdrawal of nomination (Form D)	Tuesday, July 17, 2012
7	Intimation of final list of nomination to candidates and voters: on web site and on Notice board and through letters under certificate of positing	Thursday, July 19, 2012
8	Date of sending ballot papers (outside India)	Saturday, July 21, 2012
9	Date of sending ballot papers (within India)	Saturday, July 21, 2012
10	Last date and time of receipt of ballot papers	Tuesday, August 28, 2012
11	Date of counting of votes	Thursday, August 30, 2012
12	Date of declaration of results	Thursday, August 30, 2012

The Road Not Taken

Two roads diverged in a yellow wood,
 And sorry I could not travel both
 And be one traveler, long I stood
 And looked down one as far as I could
 To where it bent in the undergrowth;
 Then took the other, as just as fair
 And having perhaps the better claim,
 Because it was grassy and wanted wear;
 Though as for that, the passing there
 Had worn them really about the same,
 And both that morning equally lay
 In leaves no step had trodden black
 Oh, I kept the first for another day!
 Yet knowing how way leads on to way,
 I doubted if I should ever come back.
 I shall be telling this with a sigh
 Somewhere ages and ages hence:
 Two roads diverged in a wood, and I –
 I took the one less traveled by,
 And that has made all the difference.

by Robert Frost



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 **May 2012**

S. Chidambaram
N. M. Govardhan
P. C. Gupta
P. I. Majmudar
A. R. Prabhu
Asad Ali Syed
Andrew Thomas Wakeling
N. G. Pai

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



FROM THE DESK OF ADMINISTRATIVE OFFICER GURURAJ NAYAK

gururaj@actuariesindia.org

Journey from MTS (Mental Torturing System!) to MTS (Member Tracking system)

1. Steps in Member Service Delivery

The Background

With a view to offer better and speedy services to members the Institute decided to digitalize member data and computerize the various functions of Member Services. Accordingly, after due process, the contract was awarded to a Vendor **on 3rd October 2008** with the following deliverables;

Deliverables:

- a. A web-enabled Integrated Software system for internal usage for IAI employees to be deployed at IAI's local server.
- b. A members' online connectivity system (deployed at IAI's web server) facilitating online connectivity to IAI members for viewing their details and performing nonfinancial transactions.
- c. Data synchronization between web server database and local database.
- d. Systems study, development, and implementation.
- e. Data Migration
- f. Training to all key users – both admin and functional
- g. Warranty for six months from the date of application delivery and installation; Warranty period will include support / maintenance on tasks related to bug resolution, trouble shooting and any logical / system errors
- h. Delivery of operational manuals including source code (not applicable to third party products / tools)

The Experience – a tortuous path to tread!

Reportedly the Institute started using the system **from October, 2009**. The modules that were used by the Institute were Inward, Admission, Subscription, and Study materials. The Examination module was being tested by the Institute and the Examination process was done under the existing Foxpro application only. To the shock of the users, the modules did not

give the desired results and it was not at all user friendly. The system slowed down very much and the processing time for any operation was much more than what it used to be before implementation of the system. Many applications that should have been developed in each module, as per the System Requirement Specifications that was prepared by the vendor himself, were either not developed or developed partially. When these aspects were brought to the notice of the vendor, he maintained that he had developed the system fully as per the SRS and any modifications to be made amounted to system enhancements which will be separately billed and outside the contract entered into. The system increased the level of impurity in the member database. Meanwhile the vendor started pressurizing release of payments due as per the contract.

Coming to grips

It was at this time that President decided to have an audit done of the system by an expert to get at the facts on board. Accordingly **in September, 2010**, Mr. S. Lakshmanan, Executive Director (Retd.) of LIC was appointed as IT Advisor with the first mandate to do a system audit and submit a report. Mr. Lakshmanan's report found that many of applications claimed to have been developed were not working properly and many of the sub-modules were not functioning at all.

With these problems the system developed by the vendor was given up. The system had created such a mess that even a list of all Associate or Fellow members could not be generated. The vendor was cold shouldering our requests to set right the system.

A bold step and new beginning

On advice of Mr. Lakshmanan it was decided to recruit someone from market with appropriate experience in ASP.net. Consequently **Shirish Mishra** came on board as Manager (IT and Member Service)

with effect **from 1st July 2011**. When he started reviewing the code it was realized that code given to us was wrong and was of no use. Further, the Vendor had done some coding in the software due to which all the database went for a 'toss' giving incorrect result. Thus it was decided to redevelop the whole system from the scratch under the supervision and guidance of Mr. Lakshmanan and with the consultations and coordination with all the other staff members.

While the system was being developed by Shirish Mishra, there was a need to purify the masters in parallel. The master purification was done in three stages. First interfield consistencies were checked through a program and the errors were corrected. Next, the Fellow, Associate and Affiliate members' list was taken and physically checked and corrected. Similar action was done for Student members as well. As and when the masters were corrected, they were uploaded on both the new MTS master database and the web server.

THE RESULTS

MTS package

After regular sessions with the staff users, System Requirement Specifications document for each module was developed by Shirish and validated with the users. MTS Master data table was finalized. The coding for each module was taken up one by one and completed as per time schedule. A professional software tester was recruited on temporary basis who did an exhaustive testing on the modules with real data. For this purpose 200 admission applications of 2011 were taken and the admission, subscription and study material modules were run on these data and the results compared with those of last year. There was active involvement of the users in this process which has been taken as User Acceptance Test. The Admission, Subscription and Study material modules

has been operationalized **on the 25th February, 2012** with the President keying in the first admission application. Prior to this, the working on the MTS package developed by the Vendor was stopped and the masters converted to the present format. The experience of the users has been very positive and they are able to enter more applications than they were able to do earlier. One significant advantage of the new system is removing the centralized inward section and taking it to the users that avoids duplicate keying in and also reduces the work load of the Accounts Department. Another feature of the system is the single point enquiry counter. Under the old system, when a member called up for any enquiry, the call was getting transferred to the concerned section obstructing the work of the person in the section. Further if the enquiry involved more than one section, the member was not able to get the proper response in a short time. In the new system, when the call comes to the enquiry counter, on keying in the member id, the complete history of all transactions with regard to various services appear on the screen, and the member gets immediate reply in a minute's time. The examination module also has been developed and a parallel run for the May '12 exam diet is now being done. On the experience of this, modifications, if needed, will be done and **from November 2012 exam diet** all modules will be operational including Seminars and COP.

2. The Actuarial Common Entrance Test (ACET) – a beginning to change the face of the IAI

The decision of the Council **on 28th December, 2010** to stop admissions based on qualifications only from July, 2011 allowed us just about six months to be ready in all aspects of the project that one hardly realized then its magnitude and impact. Under the leadership of **Varun Gupta**, Chair Examinations Advisory Group and **Puneet Nayyar**, Secretary of the Advisory Group, the Project was kicked off right in January, 2011 and it's a story deserving separate and exclusive space in the Actuary India - may be the June 2012 issue of the magazine will tell the story. I focus here on the outcomes part from admin. perspective.

President, Liyaquat Khan who has been leading the Project right from day one had given a very simple objective – Just about

all transactions and processes have got to be on-line and web based with least human interface and if at all required it should be through helpline/e mail restricting itself to clarifications only.

A portal was developed and all the applicants for ACET were able to do the registration online and also make the payment on line either through credit card, net banking or debit card. If any payment fails at any stage, the candidate is informed through email instantaneously and the amount, if deducted from the card or the bank, is remitted back. The candidate is advised to make the payment again. There is proper reconciliation between the amounts deducted and the amounts passed on to the Institute. The first ACET examination (called ACET 1) was conducted online **in January, 2012**. After all the registrations were done, they were downloaded and a separate ACET master data was created. When the results were declared, the results were updated on the ACET masters. Later, when the candidate applies for admission, the need to key in the basic data is avoided by taking them from the ACET masters. One has to key in only the bank details. This has hastened the admission process further.

3 - Online member services

Online web services were extended to all the members other than student members' on **15th February 2012**. From **30th March 2012**, the services were extended to the student members also. The services include a member to view his/her data and having the facility to edit the same. A member will also be able to pay his subscription online. Plans are on to extend this facility to payment for study material from **May, 2012** onwards. When such a payment is made, the data will be downloaded and updated on the MTS masters. Everyday such altered data will be uploaded to the web server and the member will be able to see the present position. At a later date, The MTS package will be seamlessly integrated with the web services when the changes would happen in a real time

4 - Data Security

As everything is going online always there is a change of data loss and data theft from various attackers and

hackers. To avoid these **Imtiyaz Khan, Executive IT & Web** with the guidance of our IT Manager and IT advisor have taken many steps to provide a full data security.

Currently, our mail server is directly handled by Microsoft. All mails send across the office to outer world is encrypted with 256 Encryption Key.

All our data is backed up in two places viz Online through Netmagic solution and also in our physical hard disk form to avoid any disasters.

New firewall and Spam Filters are installed to avoid attackers to enter in the website.

All system is updated and new McAfee Antivirus installed throughout so as to avoid any virus attack.

New IT policies are incorporated to avoid any data theft within or outside organization.

5 - Looking forward

Right now the accounting functions are done on a software package "Tally" that requires manual intervention and the MTS package is not integrated with Tally but only passes on data to Tally. The next step is to develop an accounting package under MTS itself.

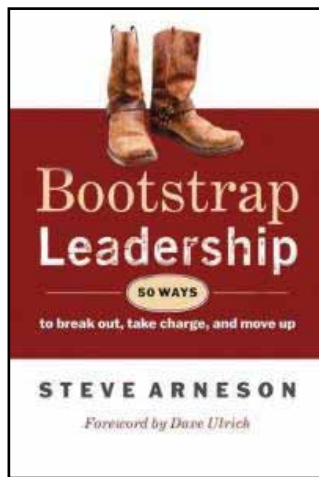
The other office administration functions like attendance, leave particulars and others will also be developed under MTS. User manuals will be prepared both for ACET functions and operations under MTS.

The existing Linux platform web hosting will be hosted in Windows so that the MTS system developed on windows can be seamlessly integrated with the web server for real time updation of the member data whenever changes are made by the members online.

All of us are looking forward to take the IAI service delivery to members to a level that would be envy to any other actuarial professional institute.



Imtiyaz Khan, Shirish Mishra, Gururaj Nayak



BOOTSTRAP LEADERSHIP: 50 WAYS TO BREAK OUT, TAKE CHARGE, AND MOVE UP

By Steve Arneson

Book Number : B11154

Status : Available at IAI Library

Reviewed by Nelius Bezuidenhout
nelius@shriramlife.in

T Bootstrap Leadership is a summary of 50 ideas aiming to help leaders reach their full potential. The intended audience of this book is any leader aspiring to be better by making positive changes to leadership style and behaviours.

A key message of the book is to regularly assess progress on the leadership journey by self and others, and using this to identify key leadership development areas. It is therefore appropriate that the book's introduction includes a leadership self-assessment which becomes the roadmap to navigate through the book's 50 ideas (a chapter for each idea).

The book is structured into five themes, with ten concise chapters (or ten ideas) per theme. Each chapter ends with three doable action points the reader may use to enhance his/her leadership capability. The five themes are summarised below.

1. How are you showing up as a leader?
2. Add something new to your game.
3. Get curious about the world around you.
4. Step out of your comfort zone.
5. It's not about you.

"How are you showing up as a leader?"

The first section invites the reader to ask critical questions and to invite others to give feedback on the reader's progress as leader. The section includes well accepted concepts for example self-assessments, 360 degree reviews and mentors. The section concludes by shifting the focus to looking forward by developing a vision, mission and strategy.

"Add something new to your game", "Get curious about the world around you" and "Step out of your comfort zone"

Following the assessments and reviews explored in the first section, these sections ask the reader not to accept the status quo. Arneson encourages the reader to increase strengths and address weaknesses by utilising existing environments and expanding horizons by for example learning about/from other cultures, technology and different industries. Often an amount of stretch is required to do things which one hasn't done before and as a result a move out of one's comfort zone.

"It's not about you"

The book's themes follow the journey of a leader: starting with the development and improvement of only self but ending with the important realisation that leadership is all about people. Arneson offers the leaders tools to develop and empower others. By this the great leader develops the leaders of tomorrow.

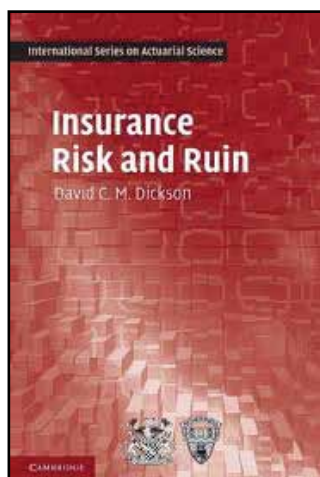
Bootstrap Leadership is a well written, easy to read leadership development book. The book will serve well as guide for leaders starting out to being a quick reference for seasoned leaders in the journey of continuing improvement. The book includes references to other titles for those who would like to explore some themes in a bit more depth.



**IN
50
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A LOT
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<http://www.humourlaughs.com/2012/01/06/>



INSURANCE RISK AND RUIN

By David C.M. Dickson

Book Number : B10611

Status : Available at IAI Library

Reviewed by: Udbhav Gupta
Udbhav.Gupta@towerswatson.com

This book focuses on the two major and classical topics of risk theory – aggregate claims distributions and ruin theory. The book based on author's experience of teaching final year actuarial students, is suitable for a first course in risk theory. Numerous worked examples are included in the text and each chapter ends with a set of exercises that provides the readers opportunity to test their understanding of the concepts discussed. The book requires a basic understanding of probability theory and working with moments (including techniques like moment generating functions) is considered to be assumed knowledge. Throughout the book straightforward mathematical techniques have been used to derive the results.

The highlight of the book is its discussion of the recursion techniques that can be used to determine the aggregate claims distributions – either for individual risk models or collective risk models. Some of these recursion techniques are important and widely accepted results in the field of risk theory – like Panjer's recursion formula, De Pril's formula for individual risk model and Lundberg's inequality. Understanding the application of these techniques when working with risk models is the biggest offering this book provides its readers.

The book is divided into nine chapters. The contents of the first two chapters should already be familiar to the readers as they discuss the basic distributions used in statistics and utility theory.

Chapter three, which deals with principles of premium determination offers an interesting variation to the generally accepted principle of only

using the mean of the claim amounts to determine the premium. Approaches like using the variance of the claim amounts or methods like Esscher transformation that gives more weight to the right tail of the distribution (where the maximum risk lies) offer something new to consider.

The next two chapters which deal with collective and individual risk models are the areas where the author has used the recursion techniques extensively to compute the aggregate claims distribution. Taking the readers through worked examples, the author has demonstrated how the results using the recursion techniques compare to the results arrived at using approximations such as normal or gamma distributions. The author has also mentioned that many of these recursive techniques would sometimes go beyond the realm of calculations by hand and would require the reader to write small and simple computer algorithms to compute them. I believe that rather than appearing as

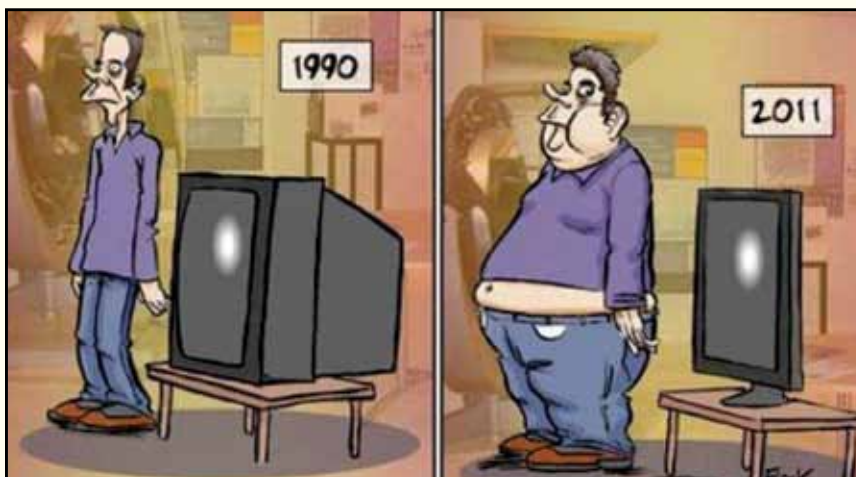
a deterrent, it provides the readers an opportunity to expose themselves to application of such techniques in actual practice. It should prove to be a useful skill for a student actuary.

The next three chapters deal with the idea of ruin theory, which is an important area of application of aggregate claim distributions. The chapter on advanced ruin theory is particularly interesting as it touches upon those aspects of ruin that are generally not covered in basic treatments of this subject. For instance, not only is the determination of probability of ruin considered but also the determination of statistics such as maximum surplus attained before a ruin, distribution of the severity of ruins and the level of surplus just prior to ruin. These are discussed using simple mathematical constructs introduced earlier in the book.

The book closes with a discussion of reinsurance where looking through the spectrum of ruin, the optimal amount of reinsurance that an insurer should opt for is determined.

This book should be beneficial to the students of Core Technical ("CT") series of actuarial examinations, in particular CT6 as the book will enable a deeper appreciation of the aspects involved, some of which are not covered in the CT series syllabus. However, the readers should understand that they can benefit maximum from this book only by *working* through it rather than *reading* through it as it is only by applying these techniques that they will appreciate them.

IN 50 YEARS A LOT HAS CHANGED



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