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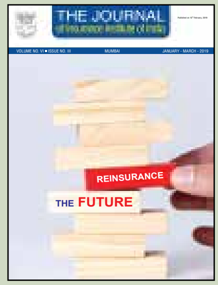

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EDITORIAL

The theme of this issue of 'The Journal' is 'Reinsurance – The Future'. The central purpose of reinsurance is to enable insurance companies to build their capacity to assume higher and more complex risks. The reinsurance sector has indeed been able to pay a yeoman's role in this regard, both in its facultative and treaty forms. It has been able to bail out insurers in the wake of catastrophes and also has been able to provide expertise in underwriting and other technical fields to insurers.

As we move through the 21st century, the insurance industry faces serious challenges of sustainability. A whole new set of issues arises from environmental, social and governance factors. These include issues like NatCat; pandemics, financial volatility including the global meltdown. Fraud is emerging as another area of concern, as is terrorism….. above all, one of the central questions that continue to haunt the industry is the issue of the protection gap and the vulnerability this creates.

The reinsurance industry in future may need to do more than just reinsuring. It may need to look at broader interventions for risk management and how it can empower insurance companies in this regard.

The next issue of the journal will be a non-theme based one. We invite articles for this issue on or before 28th February 2019.

The Future of Reinsurance: Challenges, Opportunities & Growing Influence of Technology

Abstract

This research effort traces the growth and development of reinsurance across the globe. The future of reinsurance industry is bright despite challenges faced by them in the last few years. Alternate capacity is now available in the form of alternate capital/insurance linked securities. This has eased the pressure on margins. Regular recurrence of natural disasters/catastrophes is indeed a cause of concern and the industry has to leverage technology to predict trends and deploy risk mitigation strategies. The lines between insurance and reinsurance are blurring. So, reinsurers have to underwrite new lines of business like cyber-liability insurance to sustain in the long run. They have to become more customer-centric in their orientation and develop unique insights about new forms of risks. Finally the paper presents a picture of what would make the reinsurance industry future-ready. Cost efficiency, expense control, structuring of risks, settling claims and pricing will continue to be critical success factors for reinsurance sector in the future.

Keywords

Reinsurance, Cyber-liability, new product development, big data, analytics, alternate capital, insurance-linked securities, block chain, artificial intelligence.

Introduction

Reinsurance is the process wherein the insurance companies seek insurance cover from reinsurers to protect themselves against major claims. Insurance companies buy protection for their balance sheets against volatility

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(chances of paying hefty sums for claims) due to large manmade and natural catastrophe losses.

Globally, the reinsurance industry is well organized and technologically ahead. Reinsurance is a link in the “insurance chain” that joins insurance buyers, whether individuals or corporations, to the insurance supplier. Reinsurance earns its place in the process, strictly based on the value added to the basic insurance transaction.

Globally, the volume of reinsurance markets is one-tenth of primary insurance markets. Reinsurance plays an important role in supporting the solvency and capital efficiency of insurance risk transfer. In the recent past, the reinsurance sector has outperformed primary insurance in terms of total return to shareholders. As per a 2017 Mc Kinsey report, reinsurers have created value for shareholders – however the performance of non life reinsurance sector has been partly due to limited catastrophic events.

Importance of scale and diversification is gaining ground. Globally diversified reinsurers are sustaining margins better. Reinsurers absorb complex risks, reduce capital requirements for primary insurers and cap volatility. They ensure smoothening of capability gaps and enable improvements in capacity and solvency.

Reinsurance sector has an oversupply of capital. This has made global and regional reinsurance companies scout for opportunities to expand their global foot print. Most insurers are also offering reinsurance now. So, pure play reinsurers remain few in number. Opportunities exist for reinsurance industry to increase its relevance. Global macroeconomic conditions are becoming more complex. New risks are emerging. Reinsurers have to effectively use technology to underwrite the new forms of risk.

History of Reinsurance

For more than 150 years, reinsurance has played an important role in the industry. Cologne Re wrote the first reinsurance treaties in 1852, ten years after the Great Fire of Hamburg. Cologne Re became a part of Gen Re in the 1990s. Swiss Re and Munich Re were established in the 1860s to 1880s, and continue to be the top two global reinsurers in today’s market.

In the early 1900s in the US, reinsurance was offered by US-based insurers and also by Russian companies as well companies like Cologne Re, Swiss Re and Munich Re. Whether it is hurricanes or terrorist attacks, reinsurance companies pay a major share for catastrophic claims.

Reinsurance in India

Reinsurance industry in India is estimated at ₹ 20,000 crores. Change in legislation has attracted foreign reinsurers to Indian shores. Now foreign reinsurers can set up local branches in India. The entry of foreign players like Lloyd’s, Gen Re, Swiss Re, Munich Re and Hannover Re is expected to give a fillip to the Indian economy. Lloyds has been granted R3 license by IRDAI; Indian insurers can benefit from Lloyds’ expertise in agriculture, infrastructure and disaster management. The R3 license allows foreign reinsurers to deliver underwriting and risk management expertise locally rather than cross border.

India’s first private reinsurance company ITI Re has commenced operations in 2017.

The Indian non-life insurance market is more reinsurance intensive as against life insurance. Roughly, the size of non life insurance market is estimated at ₹ 1.26 lakh crore and out of this, ₹ 28900 crore is given out as reinsurance premium. Of this, ₹ 11000 crore was sent out to overseas reinsurers.

Regulatory Issues in India

While GIC has been offering its full fledged support to the Indian insurance industry, foreign reinsurers are said to be cherry picking business based on loss experience of Indian insurers.

The IRDA enacted regulations that came into effect on January 16, 2017. As per these regulations, the Indian insurers have to cede business to reinsurers according to a prescribed order of preference. European insurers have alleged that this doesn’t amount to a level playing field as according to them these provisions are skewed in favor of GIC Re. However, these charges were rebutted by GIC Re. The reinsurer claimed that developed countries have restrictive regulatory stipulations with regard to market access and so faulting India on the issue is inappropriate.

Existing regulations aim to ensure that the maximum business is retained within India and preferences would be given to companies domiciled in India. The first right of refusal is with GIC Re.

IRDAI has now issued eligibility criteria for global insurers who have set up branch offices in special economic zones. These are called as International Financial Service Centers (IFSC). This has resulted in the absence of alignment between the reinsurance regulations for onshore market and the IFSC zones. These are issues that need to be quickly sorted out.

Foreign reinsurers must work closely with existing insurers and intermediaries to educate market participants. Product innovation, leveraging technology to reach the mass market and training local talent will be vital for sustaining the reinsurance business.

Reinsurance industry in India is estimated at ₹ 20,000 crores. Change in legislation has attracted foreign reinsurers to Indian shores. Now foreign reinsurers can set up local branches in India. The entry of foreign players like Lloyd's, Gen Re, Swiss Re, Munich Re and Hannover Re is expected to give a fillip to the Indian economy. Lloyds has been granted R3 license by IRDAI; Indian insurers can benefit from Lloyds' expertise in agriculture, infrastructure and disaster management.

Importance of scale and Diversification

The reinsurance industry has continued to consolidate and diversify. The leading global, diversified companies – such as Munich Re, Swiss Re, SCOR, Hannover Re, and Partner Re – have maintained their market share, and have also sustained their profitability better than others in the industry. Overall market capacity has increased due to the inflow of capital from both traditional carriers as well as alternative capital.

Alternative capital is known as insurance-linked securities, mostly deployed with short tail property catastrophe markets. (Short tail means claims are reported and settled in a relatively shorter period of time).

Larger companies can assume more capacity strengthened by their strong balance sheets. These companies have more options to optimize their balance sheets by transferring risks to capital markets. One of the main advantages of diversification is that clients with diverse needs can be given one-stop solutions. For the client, it is not about convenience but also significant savings in costs. Reinsurers benefit because customers stay loyal.

Impact of Technology on Reinsurance

Reinsurers face two challenges – underwriting white space risks and making productive investments in building new expertise to deal with new forms of risk. White space risks are surprise risks that you missed out on and which can substantially impact your plan, schedule development and budget. Way back in 2003, Harvard business review published a research paper on the subject.

Risk assessment will assume greater significance. Data-driven decision making will gain momentum in the days to come. Technology will be effectively used for- risk assessment, loss prevention, claims handling. This is the reason why data analytics capabilities will assume more importance than ever.

At present, we do not have any risk quantification models. Artificial intelligence can be used to model risks and provide solutions to the market. Big data and analytics allows insurers to efficiently process underwriting losses with low volumes and high demand rates.

Web-based multi broker electronic reinsurance trading platforms have now evolved to meet customer needs. This platform provides reinsurance markets a single online repository for brokers to distribute offers, submissions, exposure data and analytics. Identification and quantification of risks is vital. Disruptive technologies will lead to the transition of the reinsurance market to a syndicated market.

Block chain can open doors for innovation and product development and improve operational efficiency. It can improve the combined ratio. Combined ratio is a simple way to measure the financial health of an insurance company. This ratio measures whether the insurance company is earning more revenues from its collected premiums relative to the claims it pays out.

Block chain and Artificial Intelligence will shape the future landscape of Reinsurance. Innovations like block chain technologies support digital contracts, online payments or automated claims handling. Use of block chain can lead to economies of scale due to common infrastructure available for all reinsurers.

Reinsurers will feel the need to invest in new technologies or form strategic partnerships with technology groups. Reinsurers can partner with technology providers and insurers to underwrite cyber risks. Cyber insurance is a new line of business. Even the definition of cyber insurance is vague. So, this needs to be addressed on war footing.

Digitalization and automation are going to be the mega trends in the future. Big data will dominate the development of traditional reinsurance business. However, it will take time for AI, block chain and big data to cause meaningful disruption to the sector.

How Can Reinsurers Become Future Ready?

Reinsurers need to work collectively to enhance underwriting standards, pricing and wording of policies. They also need to evolve a transparent dispute resolution mechanism to ensure that the Indian market flourishes in coming years. Reinsurers can serve as enablers. They can set up technological infrastructure, co-creation of new products, know-how transfer between markets and by overcoming the risk adversity of traditional players or regulatory hurdles that young companies face.

Reinsurers have to be particular about maintaining underwriting discipline. As the world becomes one market place, reinsurers can bring greater value due to their international connections. Reinsurers can assist primary insurers in scaling up their own risk analytics capabilities. Reinsurance is a talent-intensive business. Mid-sized reinsurance companies are lean and cost efficient. More than cost savings, underwriting performance is the true driver of success. What is needed is that reinsurance sector must shift from brick-and-mortar low grade technology to an efficient, digitally enabled, analytically driven operating platform.

Once a reinsurance company has entered the market it should stand committed to fulfilling the needs of its customers. Despite the repeated occurrence of natural disasters, coverage for these risks is low (particularly in India). Entry of foreign players will help increase cover for managing disaster risks. The 2018 Kerala and Kodagu floods are agrim reminder to the insurance community that there is no escaping the wrath of nature.

Liability insurance is an upcoming and emerging line of business that can pick up momentum as time progresses. The corporate governance issues in behemoths like Tatas, ICICI Bank and Infosys is a reflection of the need for managing these risks well. Liability insurance can cover a company's directors and senior officers for any errors or omissions that were inadvertently made, matters of product and public liability, product recalls etc. The controversy that erupted over the additive content in Maggi Noodles is still fresh in people's memory. These sorts of business problems are opportunities for insurers and reinsurers to invest efforts in new product development.

Reinsurers cannot afford to compete only on price – they must capitalize on internal expertise to get closer to clients and understand their needs. They must also develop unique insights about risks.

Health, crop and micro insurance are areas that will incite the interest of reinsurers. Covers like title insurance offer scope for innovation and new product development. Instead of predatory pricing, reinsurers can bring down costs through innovative risk transfer solutions.

Reinsurers have to ensure that their products are suited to the demographic shifts occurring in the economy. Emerging risks like cyber cars, autonomous automobiles, Internet of things, Robotics, Artificial intelligence are forcing primary insurers to write new covers. Reinsurers have to support these efforts.

Data-driven, technology-based underwriting can enhance performance. This provides an opportunity for reinsurers to form strategic alliances with start-ups that can provide such technology. As primary insurers continue to grow, reinsurers can piggy-back on this growth.

In developed markets, catastrophic events are uninsured. Reinsurers and governments can collaborate and build structures where reinsurance industry can propose innovative solutions. UK has set up Flood Re. Governments across the globe expect reinsurers to take part in disaster financing. Terrorism and flood risks are being transferred to reinsurance and this has contributed to growth in premium income.

Adequate and flexible pricing has become essential now. Reinsurers have to further expand the scope of insurable risks and market penetration. New products must be designed to cover previously uninsured events. Example – epidemics or increasing weather related risks or new threats like cyber crime.

The business model of reinsurers must adapt to market changes. Reinsurers must create internal knowledge pools; co-create partnerships with traditional clients and InsurTech. Consolidation of reinsurers is a distinct possibility in the future. Insurers can acquire additional capital and set up captive reinsurance companies.

Recent Developments in Reinsurance Sector

80% of reinsurance policies are renewals; data remains pretty much the same. Reinsurers are facing profitability pressures. Increasing demand for insurance will fuel the growth of reinsurance.

As insurance sector becomes technology driven, there is an acute need for talented people. With reinsurance gaining more prominence, diversity is now spread across the value chain. The physical supply chain is now moving towards nonphysical supply chain. Hence there is a need to connect the dots. Political risks are also increasing; skilled manpower is needed for risk assessment/ estimation.

New technologies like block chain enabled smart contracts can speed up processes and transactions leading to efficient reinsurance business models. New platforms are emerging for reaching out to clients. Climate change will be a key determinant of future risks covered.

Reinsurance has now spread across Asia, Latin America and far-reaching corners of Africa. There are massive improvements in speed and efficiency of processes and customer reach. The skill sets have to match the rise of technology so that customer expectations can be managed well.

There is a greater need for products and services have to be more user-friendly. Reinsurers focus on short term soft challenges like low investment returns. But considering the limited growth in traditional markets plus the disruptive new threats – they need to radically rethink about how to build the future.

The lines between insurance and reinsurance are blurring. Reinsurers have to stay close to understanding the needs of customers. This will ensure that chances of securing and retaining the business are high. The market expects customized/evolved solutions from reinsurers.

> As insurance sector becomes technology driven, there is an acute need for talented people. With reinsurance gaining more prominence, diversity is now spread across the value chain. The physical supply chain is now moving towards non-physical supply chain. Hence there is a need to connect the dots. Political risks are also increasing; skilled manpower is needed for risk assessment/ estimation.

What Does the Future Portend?

The long term demand outlook for reinsurance is bright due to following reasons:

1. Climate patterns are changing and populations are getting concentrated in hazard prone areas.
2. Rise of middle class in emerging companies
3. Rapid urbanization
4. Rising influence of Cyber risks – most of them are still unknown
5. Continued growth of primary insurance in emerging markets

The reinsurance company of the future is the one that has access to both the traditional balance sheet as well as alternative capital. Such a company would identify cheaper sources of capital. The reinsurance market now has traditional products as well as new products developed as a result of innovation.

The focus won't be only on being capital light. Reinsurers have to retain their traditional abilities of pricing and structuring of risk as well as settling claims.

Reinsurers are considered as risk takers and as companies become risk averse, it will lead to the continued importance of reinsurance. The underwriting experience of reinsurers coupled with their abilities to do research will continue to be their strengths.

At the global level, the insurance and reinsurance industry was facing a situation of excess capacity. The supply of capital is more than the demand and this leads to pressure on pricing.

Consolidation between larger players and smaller players can help the reinsurance industry to gain access to new markets, areas and products. Consolidation is driven by economies of scale and economies of scope. The industry needs to focus on further development of skills, know-how and business models and new lines of business.

The successful reinsurers of the future will be those who use strategic alliances and joint ventures to partner with people who can provide technology and alternative capital. Cost efficiency and expense control will be the cornerstones for success of a reinsurer. Optimizing the delivery costs will become a necessity for sustaining the insurance/reinsurance business in the long run.

Reinsurers have to be adept in managing new forms of risks by building solutions to address these risks effectively. Innovation is as important as speed. Reinsurance provides opportunities to help protect against tomorrow's risks in developed countries and also addresses the growing needs of emerging markets. The relevance of reinsurance will continue to increase in future as new risks emerge and risks continue to evolve and as global regulations become more stringent.

As natural and man-made disasters continue to strike the globe, the importance of reinsurance will get more pronounced in the time to come. When new risks emerge, the winners will be reinsurance companies who are agile across underwriting, analytics and capital deployment.

Conclusion

Reinsurance industry enters an era marked by fast paced changes to macroeconomic conditions. Demographic shifts, policy decisions, macroeconomic variables and technological innovations are leading to change in the reinsurance landscape. Technology, growth opportunities in life insurance and revival of macroeconomic growth are leading to the growth of reinsurance. The long term viability of reinsurance industry in India is impacted by low interest rates, macroeconomic uncertainty and climate change.

Growth of reinsurance market is driven by emerging markets. Emerging middle class in India and China is creating opportunities for protection, savings and health. As governments face fiscal pressure, they may be forced to reduce social security obligations creating a demand for private insurance and wealth solutions.

As the reinsurance markets open up, there are new opportunities for the industry to grow and develop localized solutions. Collaboration between different players will enhance the prospects of the industry. Foreign partners should be considered not as a threat but as partners who will fuel the growth of the Indian reinsurance market.

Availability of insurance in developing markets, increased customer convenience in developed markets – both are leading to higher penetration. People are now talking about offering the perfect individualized insurance coverage for every demand as long as enough data is available. Frustrating moments in the customer experience such as the risk of buying the wrong insurance, too much or too little insurance could be eliminated. Climate change will be a key determinant of future risks covered.

The reinsurance market cycle is getting flattened. Reinsurers now have access to capacity from capital market sources. Capacity is now available in the form of insurance-linked securities and alternate capital. The rate increases in the last few years have been quite modest. This is due to lesser volatility in reinsurance market capacity.

Losses are now more widely spread with the help of institutional investor capital. Alternate capital represents sources of capital from third party investors in capital markets. Cost of risk transfer is now getting reduced. Pension funds that participated in equity markets have invested in insurance-linked securities like catastrophe bonds.

Insurers who are financially sound tend to purchase lesser reinsurance to save on reinsurance premium. The reinsurance market is now becoming soft even as reinsurers are spotting emerging trends and innovating with regard to product design of newer and creative coverages.

Reinsurers should now focus on new lines like cyber liability, terrorism lines and business interruption risks. Reinsurers have to expand into newer markets as existing markets become saturated.

Some reinsurers have started outsourcing underwriting operations but one does not know whether this is the right move. Underwriting is a core competence of an insurer/reinsurer and the standards cannot be diluted at any cost. Risk assessments can be outsourced but the final call on underwriting standards must be vested with the insurer/reinsurer.

Reinsurers are also toying with a product-oriented strategy and are relying on size/scale to offer cheaper coverage. This will force them to become more customer-centric. As far as India is concerned, GIC Re has been doing a commendable job and along with the regulator, it can carve out new reinsurance standards in the future to support the Indian economy. Regulation will continue to irk foreign reinsurers but this has to be managed with tact. The way forward is to create mutually acceptable solutions using a win-win approach.

Considering that these are exciting times for the reinsurance sector, the time is now ripe to make India a regional reinsurance hub. IJ

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Reinsurance as Exists in India – Its Trends Now & Onwards

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Abstract

The constitution of The Insurance Regulatory and Development Authority of India (IRDAI) is a landmark in landscape of Indian financial sector. IRDAI is an autonomous body to regulate the Indian insurance sector & associated reinsurance processes and practices. In August 2000 privatization as a centerpiece of economic liberalization was permitted for newcomer private players. Now there are 24 life insurers, 27 general insurers and 6 stand-alone health insurers, two reinsurers and nine foreign reinsurance branches exist in India. Lots of changes are bound to occur in near future as various amendments are being continuously pouring in through new Regulations issued by IRDAI, both for the processes of insurance & reinsurance operations.

Various other innovative approaches in reinsurance activities in Indian Insurance sector are being in place. Last five year period (primarily the 2015-17 periods) was very significant for the Indian Reinsurance Sector as it witnessed important notification of changes in Reinsurance Regulations and guidelines issued by IRDAI, occurrence of huge catastrophe losses in Rajasthan, Chennai, Kerala – with disasters all around India. Finally IRDAI issued the Exposure Draft on Insurance Regulatory Authority of India (Reinsurance) Regulations 2018 on 5th January, 2018 (Reinsurance Exposure Draft), which proposes to prescribe a new order of preference of cessions (that is, rights which must be given up) for Indian insurers replacing the old order of preference and describe new hierarchy between various entities with which an Indian insurer can place

its reinsurance business. As perceived by the foreign reinsurers this evolving Indian Reinsurance Market is a very lucrative proposition for the

cross-border reinsurance placements and also foreign reinsurers are allowed now to open their Branch Offices in India. Future Reinsurance Prospect in India is tremendous but the future reinsurance processes will become relatively complex and types of risks, insurance & reinsurance requirements may become eventually much more complicated.

Keywords

Reinsurance, Regulation, Programme, Performance, Treaty, Retrocession.

1. Prologue

Bluntly speaking, reinsurance is known as insurance for insurers, which basically means the practice of insurance companies buying protection for their balance sheets against volatility (which means chances of paying hefty sums for claims) due to large natural catastrophe and manmade losses. Reinsurance refers to a mechanism that an insurer uses to obtain protection against some or all risks associated with the insurance policies that it issues. Typically, this process involves an assuming reinsurer who, for a monitory consideration, indemnifies the ceding or direct insurer against some or all of the loss that may incur under a policy or policies that has been covered under a treaty. From here on, the term "reinsured" is used to mean the direct or ceding insurer, and the term reinsurer is self-explanatory, who accepts this reinsurance placements. Reinsurance holds a greater role in the realm of insurance, as primary insurers can latch on to the business of insurance in an unshackled way as the risks they are exposed to, constantly make them to look back with caution. Reinsurance provides them cushion through risk transfer and a source to share their liability and also to increase their ability to undertake the huge risk exposures and undertake heavy claims. Without reinsurance cover, it is obvious that large claims might jeopardize the viability of individual insurers or even the entire insurance system of our country.

The simplest definition of Reinsurance may be found in the German Commercial Law which states that "Reinsurance is the insurance of the risk borne by the insurer." Reinsurance would not be possible without the existence of insurance and conversely, insurers could not exist if they were not opted for reinsurance. Reinsurance is an insurance of insured risk where the direct insurer retains a part and cedes the balance of a risk to the reinsurer. This is done to facilitate a greater spread and reduce liability on the part of the insurer. In other words, reinsurance is insurance of insured risk taken by insurance companies to protect their liability commitments beyond their net capacity to do so. It is the foundation on which the whole edifice of insurance rests. This is a widely used & worldwide risk transfer mechanism and provides the backbone to the insurance industry. Reinsurance is one of the major risk and capital management tools available to primary insurers. Furthermore, the period from the date of occurrence of an accident to final settlement of the claim – this process often extends to a number of years. In addition it is sometimes impossible to judge to any accurate degree the maximum possible loss in advance in dealing with risks which have eventually possibility for high aggregation of limits for total indemnity.

Therefore, an original insurer arranges reinsurance with a reinsurer who accepts part of the risk of loss. The reinsurer may be another insurer who either accepts reinsurance in addition to his direct insurance underwriting or he may be a specialist company who only transacts reinsurance business, the

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insurer may affect either 'direct' with the reinsurance company or through an intermediary – a reinsurance broker.

The progress in science and technology brought in its wake many revolutions the way in which the companies operate today, thus making insurers to face more complex risks, with substantial values at single locations and demanding special types of cover. The stakes involved are considerable and in money terms very huge. The changing legal system and the increasing court awards, the increasing number of potential liabilities and the depreciation of the money are affecting in a cumulative fashion the cost of claims today. Reinsurers help the industry to provide protection for wide range of risks. Practically all classes of insurance can be reinsured. Virtually each insurer world-wide reinsures a part of all business underwritten by him.

Although the primary purpose of reinsurance is to avoid too large a risk concentration within one company, it may be used to take advantage of the underwriting judgment of the reinsurer, to transfer all or certain classes of substandard business to reduce the strain on surplus caused by writing new business, to stabilize the overall mortality or morbidity experience of the ceding company or in the case of newly organized small companies, to obtain advice and counsel on underwriting procedures, rates and forms.

Reinsurance is needed because of severe natural catastrophes, like floods, storm cyclones featuring in the coastal areas, tremendous teamers occurring in the hilly terrains like Uttarakhand, in Indian localities surrounding Nepal (the epicenter of several recent deadly earthquakes). The reasons for increasing reinsurance demand by primary insurers may include the following:-

1. Risk of random fluctuation: e.g. Actual loss may differ from the expected loss;
2. Risk of error: e.g. misjudging probability and severity of losses;
3. Risk of change: e.g. probability and severity change in the course of time;
4. Expanding the scope of primary insurers in various areas;
5. Providing the enhanced capacity of underwriting: where in an insurer can take on higher commitments with proper reinsurance support;
6. Substitute equity easier for insurers to complying with solvency regulation i.e. Balance-sheet continuity;
7. Reinsurance covers can stabilize annual accounts of insurers;
8. Aim is to provide “added value” for the primary insurer.
9. In the issues like product development, operating in new line of business where the insurer has no past experience on his own (such as in the areas of training & related technological support), and also in case of infrequent and very large claims, when that occur.

2. Reinsurance Value Chain

A reinsurance company insures insurance companies. Insurance companies buy reinsurance for two related reasons: as an alternative to capital and to reduce the volatility of their results. A single building, oil rig, or board of directors can be insured by multiple insurers each of which may in turn buy reinsurance from multiple reinsurers. Reinsurers themselves buy cover called retrocession. This web of contracts enables very large claims to be absorbed by a global network of companies.

The simplified schematic on the below shows the traditional reinsurance hierarchy. The policies that link each entity represent a promise to pay certain losses. Rating agencies such as AM Best and S&P provide a guide to each entity’s ability to pay. In recent years, insurance-linked funds have been participating at every stage of the reinsurance chain.

practice, most of the primary insurers try to be specific in fixing their goals and therefore negotiate on limits, commissions and work on cost of reinsurance.

The primary insurers benefit from a well-planned and well-executed reinsurance program in more ways than one. Reinsurance helps stabilize loss experience, provide capacity and provide surplus for growth. Reinsurance is especially useful in financing catastrophic losses. A good reinsurance program can only be executed with assistance from reinsurers, brokers and consultants. A reinsurance plan must take into account the primary insurer’s needs and be based on a thorough understanding of the reinsurance market. By the primary insurer’s needs, it is meant how much large line capacity is desired, how much stability of losses is expected, or in other words, what is the variance in expected losses and how much surplus relief is needed. There are two considerations to be taken:

1. Firstly, the primary insurers must continue to be solvent, and
2. Secondly, primary insurers must be able to pursue the future growth plans.

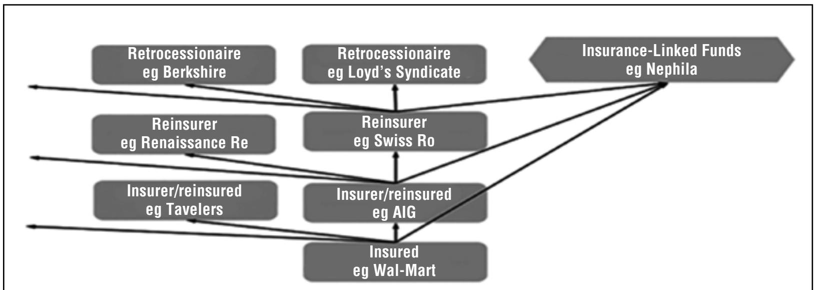

Figure: 1

Reinsurance Value Chain

In practice, there cannot be a specific type of reinsurance that tackles the impact of loss frequency. The factors determining the reinsurance needs of a primary insurer are many. In

The management’s attitude to the stability of losses must be considered. For example, in the case of mutual insurers, the policyholders may be prepared to accept lower short-term profits and hence greater loss ratio volatility than stock insurers. While the reinsurers look at the underwriting profit, the primary insurer must also consider the stability of investment profit when designing the reinsurance program since that would make variations in underwriting results more acceptable.

In practice, most primary insurers try to be specific in fixing their goals. Such goals might include the following:-

1. Not allowing increase in the net loss ratio to exceed five percentage points on account of catastrophic losses,
2. Providing a single risk capacity of at least ₹ 10 billion for commercial property insurance and ₹ 5 billion for commercial liability insurance, and
3. Automatic treaties or increase the surplus by ₹ 5 billion.

The factors determining the reinsurance needs of a primary insurer are many. But the more important of them are the following:

1. Kinds of Insurance written;
2. Exposures subject to catastrophic loss;
3. Volume of Insurance written;
4. Available Financial Resources;
5. Stability and Liquidity of Investment Portfolio; and
6. Growth Plans.

3. Reinsurance Regulatory Framework in India

Pursuant to the liberalization of the Indian insurance sector and emergence of the current regulator IRDAI in 2000, the GIC was made India's sole reinsurer in order to better address the reinsurance requirements of the growing number of insurance risks in India. In this regard, notably, every Indian insurer must cede obligatory five percentages (5%) of the sum assured on each policy for different classes of insurance written in India to the GIC, as per Section 101A of the Insurance Act 1938. The Insurance Laws (Amendment) Act 2015, which brought about extensive amendments to the Insurance Act, also permits the establishment of branch offices in India by foreign companies engaged in reinsurance business (foreign reinsurer branches). Pursuant to the Amendment Act, between 2015 and 2016 the Insurance Regulatory and Development Authority of India (IRDAI) issued the IRDAI (Registration and Operations of Branch Offices of Foreign Reinsurers other than Lloyd's) Regulations 2015 (Branch Office Regulations) and the IRDAI (Lloyd's India) Regulations 2016 (Lloyd's India Regulations), paving the way for foreign reinsurers to set up branches in India and for Lloyd's to establish a presence in India.

In December 2016 the IRDAI granted certificates of registration to five foreign reinsurer branches under the Branch Office Regulations. The IRDAI also granted a certificate of registration to ITI Reinsurance Limited (ITI) so that it could function as an Indian reinsurer alongside the GIC. Further, Lloyd's is in the process of forming an India branch, along with various other foreign reinsurers which are looking to underwrite reinsurance business through service companies set up in India under the Lloyd's India Regulations. In other words, the coming months will see the emergence of several new types of player in this sector.

The regulations issued by the IRDAI govern all insurers, that is:

1. Life insurers.
2. General insurers.
3. Stand-alone health insurers.
4. Reinsurers.

In addition, the IRDAI regulations govern all insurance intermediaries, that is:

1. Insurance brokers.
2. Corporate agents.
3. Third party administrators.
4. Surveyors and loss assessors.
5. Web aggregators.
6. Insurance marketing firms.

Further, the Foreign Exchange Management (Insurance) Regulations 2015 (FEMA Insurance Regulations) regulate the manner in which a person resident in India (that is, a person who has been residing in India for more than 182 days in the preceding financial year) can take or continue to hold a general insurance or a life insurance policy issued by an insurer outside India. Therefore, it is evident that all insurers, reinsurers and insurance intermediaries are regulated by the IRDAI. The Insurance Act and the IRDAI Act lay down certain general principles. The specific regulations issued by the IRDAI from time to time govern insurers and intermediaries, depending on the nature of business undertaken by these entities. To obtain authorization, the insurer or reinsurer must apply for a certificate of registration from the IRDAI in accordance with the staged process set out in the IRDA (Registration of Indian Insurance Companies) Regulations 2000. An applicant wanting to carry on insurance/reinsurance business in India must make a registration application in Form IRDA/R1. On acceptance of the requisition, the applicant can make an application for grant of certificate of registration in Form IRDA/R2. Both Form IRDA/R1 and Form IRDA/R2 must be accompanied with the specified documentation and requisite details on the background of the applicant. If the IRDAI is satisfied that the applicant fulfils all the specified criteria and is suitable, it will grant a certificate to the applicant in Form IRDA/R3.

The IRDAI has revised the procedures and requirements for granting registration. However, the process, as set out in these amendments, continues to be the staged process with certain additional requirements which need to be fulfilled to obtain registration. In addition to setting up an Indian reinsurer in the form of a joint venture company in accordance with the process provided above, a foreign reinsurer can also undertake reinsurance business in India through the following structures:

1. Foreign reinsurers may set up a branch office in India under the Branch Office Regulations.
2. Syndicates of Lloyd's may transact in reinsurance business under the Lloyd's India framework through a service company registered in accordance with the Lloyd's India Regulations.

The regulatory framework governing the reinsurance of general insurance risks in India was initially governed by the IRDA (General Insurance-Reinsurance) Regulations 2000, which were superseded by the IRDA (General Insurance-Reinsurance) Regulations 2013. The passage of the amendment act set the stage for the amendment of these regulations, and in 2016 the IRDAI published the IRDAI (General Insurance-Reinsurance) Regulations 2016, which superseded the earlier reinsurance regulations. Similarly, the reinsurance of life insurance risks in India was governed by the IRDA (Life Insurance-Reinsurance) Regulations 2000, which were subsequently superseded by the IRDAI (Life Insurance-Reinsurance) Regulations 2013.

The guiding principle behind the Reinsurance Regulations 2016 and the Life Reinsurance Regulations 2013 is to maximize retention by Indian insurers within India. As such, Indian insurers are strictly prohibited from fronting for a foreign reinsurer. While certain specifications regarding retention limits by life insurers are provided under the Life Reinsurance Regulations 2013, the IRDAI has not issued specific guidance on the appropriate minimum amount to be retained by general insurers. Further, Indian insurers, Indian reinsurers and foreign reinsurer branches can carry out reinsurance business outside India only with foreign insurers and reinsurers (cross-border reinsurers) that satisfy the eligibility criteria (i.e. have a minimum credit rating of 'BBB' from Standard & Poor's or equivalent and are registered in India in accordance with the applicable laws, among other things). Generally, the maximum limit on cessions to cross-border reinsurers under an insurance segment has been prescribed and is based on the cross-border reinsurer's rating.

4. Reinsurance Contracts in This Current Era

The legal principles which are applicable to a contract of insurance between insurers and insured are applicable to a contract of reinsurance between reinsurers and the reinsured. The following basic criteria must be met by a reinsurance contract.

a) Contract of Reinsurance is a contract of insurance.

b) It is a separate contract distinct from original contract of insurance. The persons or firms insured by the primary insurer are not parties to the contract and usually have no rights under the reinsurance contract.

c) It is a contract of indemnity on the same risk as the original contract of insurance.

d) Both contracts are in existence at the same time.

e) There must be transfer of risk from one party to another.

f) Reinsurance must be between two insurance entities.

g) The insurance operators are recognized by concerned regulators.

h) All the transactions between a ceding company and a reinsurer must be conducted on the principle of 'utmost good faith'.

> Pursuant to the liberalization of the Indian insurance sector and emergence of the current regulator IRDAI in 2000, the GIC was made India's sole reinsurer in order to better address the reinsurance requirements of the growing number of insurance risks in India.

The availability of reinsurance makes it possible for policyholders to obtain all of their insurance from one insurer instead of buying it in bits and pieces from several insurers. This simplifies the problems of buying insurance. The availability of reinsurance helps to maintain the solvency of primary insurers with obvious advantages to policyholders. Reinsurance makes it possible for small insurers to compete effectively against larger ones, thus increasing the options available to buyers of insurance.

Reinsurance contract is always a contract of indemnity, even in life and personal accident insurance, because it protects the insurer from a diminution of his property, caused by insurance policy obligations. Whereas insurance is a contract between the insurer and the insured, reinsurance is a separate contract between the insurer and the reinsurer. Each of these contracts is independent of the other.

Now, the factors which influence the results of reinsurance are as below:

1. Risks emanating from the Insured (Original Risk): these risks are also known as technical risk run by granting a cover through an

insurance policy. There is also contractual risk originating from a fraudulent, unjustified exaggerated claim.

2. Risks emanating from the insurer or the reinsurer: these include improper business administration (negligence, incapacity) on the part of the insurer which can increase the risk run by the reinsurer. Deficient underwriting practices or methods, hastily business development of business, inefficient technical assistance, can influence the results.

3. Risks beyond the control of the contractual parties: these risks include exchange risk, inflation, fiscal risks in countries facing deficit budgets. Investment budgets, technical reserves when carefully planned can mitigate these risks.

4. Risks inherent to reinsurance: As a reinsurer must work on a basis as possible and consequently grant cover to as many companies as possible, the reinsurer runs the risk of accumulation of exposure from any single event or risk.

5. Utmost Good faith (Uberrima Fides): a reinsurance contract is essentially based on the principle of Utmost good faith. In mutual interest a cedant must provide the reinsurer with detailed information on his portfolio both during the negotiations preliminary to the conclusion of the treaty and then for the period of its validity.

6. Insolvency of Ceding Insurer: The reinsurer as per the contract of reinsurance follows the fortune of the insurer from the technical point of view. He shares only the insurance fate of the insurer and not the commercial fate. Even in case, the insurer becomes insolvent, the reinsurer as per the agreement has to pay the entirety of his share of loss, after deducting balances due to him, whilst the insure pays a partial compensation to his insured.

7. Insolvency of the Reinsurer: The reverse situation occurs in this case. The ceding insurer is fully responsible for the total amount due to the insured irrespective of the fact that he cannot recover the share of reinsurer or any part of it.

5. Types of Reinsurance Business Carried out in India

There are two approaches that reinsurers adopt for securing their business which are:

1. Direct writing
2. through Brokers

Reinsurance companies solicit reinsurance business directly through their employees as well as through reinsurance broking companies.

6. Types of Reinsurance Available in India

There is no single kind of reinsurance that effectively serves all purposes. Several kinds of reinsurance have developed to serve the various functions. While reinsurance contracts can be categorized in several ways, one basic categorization is between facultative reinsurance and treaty reinsurance. In facultative reinsurance, the primary insurer and reinsurer negotiate reinsurance contract for each risk separately on as is where basis. There is no compulsion for the primary insurer that it should purchase reinsurance on a policy that it does not wish to insure. Likewise, there is no obligation on the part of the reinsurer to reinsure proposals submitted to it. The reinsurer has the option of either accepting or declining a proposal. Facultative reinsurance may be either proportional or non-proportional. Facultative reinsurance is now widely used for reinsuring hazardous risks not covered by treaty arrangements, for the purpose of reducing the insurance in certain area, for reducing the treaty reinsurers' liability, to augment risk capacity and to get advice of the reinsurer on risks that are considered new and complicated.

On the other hand, in the treaty reinsurance, there is a prior agreement between the primary insurer and reinsurer whereby the former reinsures certain lines of business in accordance with the terms and conditions of the treaty and the latter agrees to accept the business that falls within the scope of the agreement. An obligation is imposed that all policies that come within the terms of the treaty are required to be placed with the reinsurer. Similarly, the reinsurer cannot decline risks that come within the terms of the treaty. Given that the treaty reinsurance guarantees a definite amount of reinsurance protection on every risk which the primary insurer accepts, treaty reinsurance works out to the cheaper than the facultative reinsurance.

Though there seems to be a clear distinction between facultative and treaty reinsurance, there are some insurance contracts, called facultative treaties, which are hybrid in nature and are in use now. The Reinsurance Association of America defines a facultative treaty as "a reinsurance contract under which the ceding company has the option to cede and the reinsurer has the option to accept or decline classified risks of a specific business line. The contract merely reflects how individual facultative reinsurance shall be handled". Sometimes a facultative treaty is referred to as facultative obligatory treaty or automatic facultative treaty. Under this, the primary insurer may submit risks within a specified class which the reinsurer is obligated to accept, if ceded. As this type of reinsurance provides plenty of opportunities for adverse selection, reinsurers exercise abundant caution in selecting primary insurers. The Facultative Obligatory Treaty which is not very common is a combination of facultative and treaty forms of reinsurance.

7. Main Classification in Reinsurance: Proportional and Non-proportional Reinsurance

1. Proportional Treaties - are comprising of the following:
   a. Quota share treaty,
   b. Surplus treaty,
   c. Facultative - Obligatory / Auto Facultative treaty.
2. Non-proportional treaties – are comprising of the following:
   a. Excess of loss treaty of any one risk,
   b. Excess of loss of any one event,
   c. Stop loss or Excess of Loss Ratio treaty (Umbrella Cover).

Figure 2 below depicts the various ways of classifying reinsurance as below:

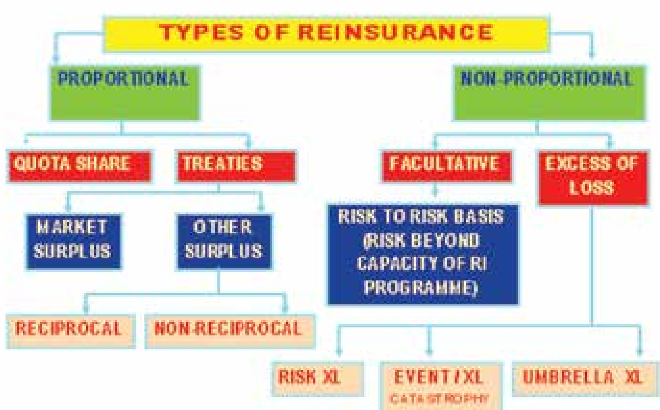

Figure 2
Types of Reinsurance available in India

Here the system of classifying reinsurance is dependent upon the way in which the obligations under a reinsurance contract are divided between the reinsurer and the primary insurer. Prorata reinsurance or proportional reinsurance and excess of loss or non-proportional reinsurance are the two approaches for sharing losses.

Under Pro-rata or proportional reinsurance (also called participating reinsurance) the premium as well as the losses is shared between the primary insurer and reinsurer in the agreed proportions. For instance, if the reinsurer covers 25 per cent of the risk under a given policy, he also receives 25 per cent of the premium and has to pay 25 per cent of each loss under the policy, irrespective of the size of the loss. Under prorata insurance treaties, the primary insurer receives from the reinsurer a ceding commission in order to cover his expenses and possibly an allowance for profit. Under this, no amount of insurance is ceded. This reinsurance arrangement will not come into effect until the primary insurer has sustained a loss exceeding his retention under the contract and is covered by the excess of loss agreement. It is important to note that both facultative reinsurance and treaty reinsurance can be written as a pro-rata or excess of loss or a combination of the two.

Under ideal conditions, the contractual relationship between a reinsured and its reinsurer is a long-term, mutually beneficial relationship. The mutual obligations found in the reinsurance contract are derived from the principles of fairness and good faith, which culminate in the standard of 'utmost good faith' between the reinsured and reinsurer. Indeed, reinsurance agreements are often referred to as 'honorable engagements', generally intended to be viewed as statements of industry custom and understanding, and concerned above all with perceived intention of the parties rather than the strict interpretation of contract provisions.

The reinsurance regulations issued by the IRDAI define a contract of reinsurance as a legally binding document on all the parties that provides a complete, accurate and definitive record of all the terms and conditions and other provisions of the reinsurance contract. Reinsurance arrangements do not need to be pre-approved by the IRDAI, but they need to be documented and filed with the IRDAI within the stipulated time period. There are separate sets of regulations governing reinsurance arrangements of general insurers and life reinsurers, including the manner by which cross-border reinsurers (those reinsurers who do not have a physical presence in India) can reinsure risks written by Indian insurance/ reinsurance companies. Cross-border reinsurers must file certain specified information with the IRDAI by the end of each financial year, to accept any reinsurance/retrocession from India. After were operating as only servicing offices in India, liaising with Indian market for their parent offices. By default, GIC had preferential treatment in the market but foreign reinsurers had a near laissez faire its de-nationalization in 2000, GIC was demerged and became the sole Indian reinsurer. Doors were opened for FRBs in 2016, after the Insurance Act was amended with stringent pre-conditions obtaining FRB licence. Currently, there are eight such branches including Lloyds and two more are in the pipeline.

IRDAI's recently introduced 'Reinsurance Exposure Draft' that proposes revised norms for reinsurance placements, and also proposes a revised order of preference of cessions for reinsurance placements by Indian insurers. IRDAI came out with the draft of the proposed regulations basically to streamline reinsurance operations in the country.

The size of the Indian non-life market, which is more reinsurance intensive as against life insurance, was estimated to be INR 1.26 lakh Crore last fiscal, out of which, nearly INR 28, 900 Crore is given out as reinsurance premium. Out of this, INR 1, 1000 Crore was sent out to overseas reinsurers — through Cross Border Reinsurance placements.

GIC that has a dominant 60 per cent market share has been supporting the Indian market to the hilt, even though Indian primary market prices are very low in this de-tariff regime at the backdrop of the cut throat competition, whereas the foreign branches have been cherry-picking — based on the quality and loss experience of business referred to them by Indian insurers. European reinsurers have accused India of regulating to protect the domestic industry and holding back rivals from seeking to penetrate the world's fastest-growing reinsurance market, a charge summarily rejected by state-run reinsurer General Insurance Corporation (GIC). Insurance Europe, a European reinsurance federation, has highlighted a range of regulatory and market access issues that European (re)insurance companies encounter in India, and trained their gun on state-run reinsurer GIC. Reinsurance is a process where the insurance companies protect themselves against major claims. Members of 'Insurance Europe' are the national insurance associations in 35 countries, representing undertakings that account for around 95% of total European premium income. Insurance Europe continues to have significant concerns over regulatory developments and recent initiatives by the Indian Government. According to them, these initiatives breach the spirit of free trade and market access and appear to undermine the prior positive steps taken by the Indian authorities. Insurance Europe encourages the EU authorities to raise these concerns in their future discussions, should the negotiation of an EU-India FTA be revived again.

The approval of the National Insurance Bill on March 12, 2015, was welcomed by the European (re)insurance industry and resulted in a number of European (re)insurers seeking to increase their local presence in India. However, the European lobby group says that the following year the Insurance Regulatory and Development Authority of India (IRDAI) enacted new regulations, which came into effect on January 16, 2017, requiring Indian insurers to cede business to reinsurers according to a prescribed order of preference. These provisions explicitly favour the Indian State Reinsurer over foreign reinsurers' branches and cross-border reinsurers - they argued.

In response, GIC Re replied, "Stipulations having effects similar to the order of preference are present in other regimes, say by way of an additional capital charge on outward business, collateral stipulation, etc. It would not be correct to see a solitary development and consider the regime as protectionist. When developed countries including the likes of USA, Germany and South Korea have very restrictive regulatory stipulations in regard to market access, to fault India for order of preference is invariably inappropriate."

The IRDAI set up a Reinsurance Expert Committee (REC), comprised of a number of experts from the local industry, to review the reinsurance regulatory framework, including the order of preference regulations. On November 28, 2017, the REC report was published, making several positive recommendations that could improve and streamline the ability of cross-border reinsurers to quote and participate in reinsurance cessions. The REC also proposed that certain specialized lines, such as aviation, marine hull, life insurance, oil and energy and larger infrastructure projects, be exempt from the order of preference.

8. Irdai's Draft Rules Ensure A Level-Laying Field for Foreign and Indian Reinsurers While Safeguarding Interests of Indian Firms

IRDAI's recently introduced 'Reinsurance Exposure Draft' that proposes revised norms for reinsurance placements, and also proposes a revised order of preference of cessions for reinsurance placements by Indian insurers. IRDAI came out with the draft of the proposed regulations basically to streamline reinsurance operations in the country. The measures have been interpreted as protectionism by various stakeholders in the industry.

Now, those antagonists of the IRDAI rules say that the proposed reinsurance regulations should be recast to throw open the choice of approaching reinsurers, Indian or overseas, as would be expedient for the commercial considerations of the insurer seeking support. The extant regulations aim to ensure that maximum business is retained within the country and preference would be given to Indian domiciled entities — with the first right of refusal lying with the General Insurance Corporation of India (GIC) and then cascading down to foreign reinsurers (FRBs) and other 'Indian reinsurers'. The spillover should be placed with cross border reinsurers (CBRs), fulfilling certain laid-down criteria.

9. Impact of Draft Rule / Regulation in Near Future

Now, based on the latest report of The Reinsurance Experts Committee, representing all stakeholders, the IRDAI has released draft regulations, triggering a debate in which the following arguments have emerged out.

The proposed regulations:

1. Definitely will limit competition, leading to high costs, limited coverage and curtail innovation in product. The fact is Indian players retained 90 per cent of all volumes generated in the country in FY 2017, according to the latest Annual Report of the General Insurance Council. Moreover, mass retail sectors such as auto, health and small/medium property businesses are least reinsurance dependant. Hence, the pricing to the policy holders in these classes are the prerogative of the insurance companies themselves. Indian corporate have always had the best terms in the Indian market given the aggressive top line aspirations of Indian insurers and substantial local capacity available through "coinsurance".

2. It may result in concentration of risks in the hands of a few reinsurers, affecting the stability of the market. Here also the fact is that the proposed regulations do not forbid placing business with CBRs and insurers will still be able to spread their risks in a diverse manner. The regulations only ensure that locally available capacity is not overlooked resulting in:

   a) Foreign exchange being frittered away, and

   b) Any credit risk issues or disputes/ defaults between the placing insurer and receiving reinsurer are taken care of by the same regulatory ring fencing.

3. It will help Indian reinsurers hijack terms offered by overseas reinsurers. The proposed regulations do provide for placing business with CBRs who have a minimum A-rating. If terms from a CBR are credible, India-based reinsurers will accept a share. Hence, there will not be a displacement of cross border reinsurers, instead they will get supported.

4. It will invariably affect diversification of risks across geographies. Reinsurers manage accumulations in specific geographies through advanced risk transfer methods. This is exactly the reason why the 2017 US natural catastrophes of Harvey, Irma and Maria —together estimated to cost the insurers $93 billion — did not turn out to be a 'balance sheet event' but only as an "earnings event".

5. Local reinsurers can plagiaries intellectual property rights of CBRs. Reputed reinsurers will not resort to the cheap tactics of imitating the product design of others. They indeed set standards for the market — e.g. Lloyds Forms.

6. No level-playing field for CBRs. A CBR can successfully lead a business as much as an India based reinsurer can, if their quote is deemed as the best by the concerned insurer. The insurer has the right to allocate shares rewarding all on their merits, including CBR;

7. Required ratings are pegged to S&P and there are no comparables in other agencies. There have always been multiple insurance rating agencies — S&P, AM Best, Moody's etc., and by sheer comparison of hierarchy of the respective grading, one can calibrate rating by one agency against that of the other.

8. Not many major markets impose an order of preference like India. India is not alone in ensuring exploitation of locally available and secure capacity. Regulators in the US, for example, mandate that the reinsurance bought from overseas is supported by a collateral security executed in favour of the buyer. In Australia, the regulator imposes withholding charges which dent the solvency levels of such buyers. Indonesia, for one, imposes more forthright preferential treatment of local reinsurers.

10. Importance of Statistics to be Maintained in Reinsurance as per IRDA Regulation for Reinsurance in India

It may be noted from the IRDA Regulation for Reinsurance that –

1. "Every insurer shall be required to submit to the Authority statistics relating to its reinsurance transaction in such forms as the Authority may specify, together with its annual accounts."

2. "Every insurer shall make outstanding claims provisions for every reinsurance arrangement accepted on the basis of loss information advice received from Brokers / Cedants and where such advices are not received, on an actuarial estimation basis."

11. Other Enhanced Future Needs in Indian Reinsurance Process

Based on the insurance written by the primary insurer, it is possible to gauge the stability of loss frequency and of loss severity. In practice, there cannot be a specific type of reinsurance that tackles the impact of loss frequency. On the other hand, having an aggregate excess treaty (since it puts a cap on the primary insurer's loss ratio) can reduce the impact of severe losses. However for large individual losses, both surplus and per risk excess treaties are very much effective.

Exposures Subject to Catastrophic Loss: The primary insurer must assess the history of catastrophic losses both in terms of individual natural disasters and in terms of geographical distribution of its insured properties. Usually, however, reinsurers themselves have such historical records and are in a better position to price reinsurance for different primary insurers. In India there is a consistent increase in natural catastrophes like recent Kerala flood, Chennai flood, cloud bursting in Rajasthan, and Uttarakhand disasters, etc.

Volume of Insurance Written: If the primary insurer has written a large volume of business, then the Probable Maximum Loss (PML) is predictable with some accuracy since the law of large numbers will operate. However, this is a gamble since the law of large numbers is inapplicable in the case of catastrophes.

Available Financial Resources: There are two possible scenarios. In the first, the primary insurer with a weak surplus position needs a highly stable net loss ratio and might require the use of pro-rata reinsurance to provide surplus relief. On the contrary, the primary insurer with a very strong surplus position can risk a more volatile net loss ratio. However, the quality of the surplus as indicated by the invested assets is also important.

Stability and Liquidity of Investment Portfolio: This is an everyday investment consideration since investment of funds must also consider the need for liquidity at short notice; that means, investment must be in readily marketable securities. Besides, since return is not a more important consideration than liquidity, investment must not be in shares or stocks with wide fluctuations in the short term.

Growth Plans: A rapidly growing insurer needs surplus relief more than an insurer with less rapid growth. In this process, many profitable lines will be ceded to reinsurer in the short run but that is a strategy for surviving in the long run while achieving the growth potential.

Typically, a reinsurance underwriter evaluates an entire book of business, as well as the stability, practices and pricing of the primary insurance company. In particular, there the underwriter must evaluate the loss exposures covered by the primary insurance company and the specific terms of that coverage. In the case of facultative reinsurance, the underwriter is evaluating all of this as well as a specific risk.

12. The Future Trend of Choice of Retention in Reinsurance Market

A lot of considerations of the Cedants are the awful need of the market – which are given in details below:-

12.1. Setting Retentions:

The choice of retention depends on the type of treaty, which, in turn, depends on the needs of the primary insurer. The setting of retention varies depending on the type of treaty. In other words, the basic reason for choosing one type of treaty in preference to another is supported by setting the following example. For example, if the primary insurer prefers a pro-rata treaty when compared to an excess treaty the reason could be that a pro-rata treaty provides surplus relief. Therefore, the important factor in of retention must be the amount of relief needed. The amount of surplus relief received will be a function of the percentage of premiums ceded and the percentage ceding commission received.

On the other hand, the principal purpose of an excess of loss treaty is to stabilize loss exposures, besides providing large-line capacity. It may be seen readily that providing large-line capacity is a function of treaty limit rather than the retention. Therefore, the true consideration in setting the retention of an excess of loss treaty is the size of loss the primary insurer can absorb without affecting the policyholder's surplus or the net loss ratio. That amount, in turn, is a function of the premium volume and the policyholder's surplus of the primary insurers. It is logical that the primary insurer should retain that part of its aggregate losses that is reasonably stable and predictable and should cede that part that is not reasonably stable. Losses are stable and predictable when the maximum probable variation is not likely to affect the insurer's loss ratio or surplus beyond expectations and hence unacceptable to the management. Hence, retention is related first to the frequency of losses and secondly to the probability of a very large loss occurring. In all these calculations, the cost of reinsurance and the role of reinsurers in setting retentions cannot also be overlooked. For example, reinsurers sometimes insist on a lower retention than what is designed by the primary insurer. Retention also depends on the number of treaties the primary insurer may carry.

12.2. Levels of Retention:

In general, insurers do not seek to transfer more risk to reinsurers than is efficient. The decision regarding the efficient or optimal level of retention for an insurer is often complex and subject to judgment; it can change over time as business objectives and conditions vary. There is a balance to be drawn between the cost of the reinsurance cover and the capital required to support the portfolio.

On the one hand, the desirable amount of retention depends on three elements:

a) The insurer's current level of risk aversion (usually measured by a certain probability of failure, over a fixed time period, that the board of the insurer approves as acceptable, such as a probability of failure of 0.1 percent over one year),

b) The amount of capital the insurer is prepared to put at risk to support the portfolio, and

c) The variability of claims results expected from the portfolio, in terms of both size and time of occurrence.

On the other hand, the desired level of retention needs to be balanced against:

a) The cost of the reinsurance cover considered desirable,

b) The availability of the desired cover,

c) Practical issues in implementing the desired cover, and

d) Any minimum retention criteria.

Insurers and reinsurers may set "per risk" and "per event" risk retention limits as well as consider blocks of business in aggregate. For example, Stenhouse (2002) gives the long-standing position as the Australian supervisor in this regard in the following ways:

1. **Per risk Retention:** Not more than 5 percent of net tangible assets, with a maximum of 3 percent considered more prudent, especially as the size of the insurer grows.

2. **Per Event Retention:** Not to exceed the amount of net tangible assets over the insurer's statutory minimum solvency. This seeks to ensure that the insurer can withstand extreme claims without breaching statutory solvency. This is shown in the discussion of maximum event retentions.

Ideally, risk retention should also be related to the ability of the insurer to access relatively liquid funds (noting that tangible assets may include illiquid assets). A standard approach is to assess the level of retention required for a "typical" insurer—the "base" retention—and then to adjust this to apply to different classes of business and to determine more appropriate retention levels for a particular insurer.

Theoretical approaches to assessing retention levels generally depend on the mathematics of risk theory and are based on established actuarial models. A mathematical derivation, using risk theory, of (approximate) excess-of-loss retention covers is given in Hart, Buchanan, and Howe (1996).

In practice it is not always possible to apply theoretical approaches—for example, due to inadequate data, particularly in the case of reinsurers. Approximations, experience, established practice, and judgment can all play a major role in the assessment and pricing of reinsurance cover. Prices quoted for reinsurance cover may vary for a number of reasons, including:

1. The reinsurer's willingness to do business with a particular insured;

2. The reinsurer's willingness to offer a particular type of coverage;

3. The general reinsurance marketplace and competitive issues;

4. The amount of claims variation cover inherent in the reinsurance risk transfer.

Reinsurers are generally reluctant to provide unlimited coverage, except for statutory classes of business, such as workers' compensation and motor bodily injury, where the insurer is required to provide unlimited cover. Unless additional layers of cover are put in place, risks in excess of the reinsurance limit are the responsibility of the insurer.

> In general, insurers do not seek to transfer more risk to reinsurers than is efficient. The decision regarding the efficient or optimal level of retention for an insurer is often complex and subject to judgment; it can change over time as business objectives and conditions vary. There is a balance to be drawn between the cost of the reinsurance cover and the capital required to support the portfolio.

For the main classes of reinsurance, the following limits generally apply:

1. ***Quota Share:*** Limits are seldom imposed.

2. ***Surplus:*** The overall limit is often a matter of administrative convenience, based on the business the insurer expects to write, and may be coupled with facultative cover.

3. ***Excess of Loss:*** The overall limit is driven by the maximum sum insured or the probable maximum loss (PML), which may be assessed by the insurer or based on industry data and discussions. An understanding of the assumptions and processes used to set the probable maximum loss is usually central to the supervisor's understanding of reinsurance programs.

4. ***Catastrophe:*** The limits may be based either on industry practice and analyses or on rules of thumb. A pragmatic approach given in Hart, Buchanan, and Howe (1996) is that the catastrophe limit is between two and four times the probable maximum loss for a catastrophe zone.

In all cases, depending on the size of the portfolios and other insurer-specific needs, comparing the limits of retention and reinsurance cover with industry practice is a useful starting point for reviewing a particular insurer's retention limits. Supervisors are well placed to assess (and perhaps promulgate) industry practices - may also use information collected by industry bodies and professional groups such as actuaries. A supervisor should expect an insurer to provide documentation of, and give clear explanations supporting its decisions with regard to, levels of retention and reasons for changes from year to year. Moreover, reinsurance policies, and so related risk appetites, often must be considered and approved by the insurer's board of directors. Such processes should generate appropriate documentation for review. In jurisdictions where a responsible actuary regime is in place—more commonly for life insurers—annual financial condition reports are required, and copies of these confidential documents must be provided to the supervisor. Supervisors should expect financial condition reports to contain a discussion of reinsurance arrangements, specifically their adequacy and appropriateness from an actuarial perspective. Such information and analysis are potentially valuable sources of information when provided in accordance with professional guidelines.

12.3. Retention Considerations for Catastrophic Exposures:

The theoretical approach to setting catastrophe retentions is the same as that used to set excess-of-loss retentions. However, since the risks involved are in the (extreme) tails of the claims distributions and these distributions are poorly understood, it is common to rely on judgment and assumptions regarding experience in setting catastrophe retentions. A rough rule of thumb given in Hart, Buchanan, and Howe (1996) is that catastrophe retentions are often set at two to five times the basic excess-of-loss retention level, with the lower multiple usually being associated with higher basic retentions. Catastrophe covers generally have quite tight definitions of what constitutes anevent, particularly regarding the time frame of an event; they clearly specify the number of claims required before the cover is triggered. As with other insurance and reinsurance cover, catastrophe covers may contain limits to their continuity or the number ofevents claimable before the cover ceases. Because the reinsurer is taking on the more extreme variability of result in the typically poorly understood tails of claims distributions, catastrophe cover may be relatively expensive.

In some countries there is a direct link between the insurer's management of catastrophe risk and capital requirements and its holding of catastrophe reinsurance. For example, in Australia, non-life insurers are required to hold specific maximum event retention (MER) component in their minimum capital requirements. The MER is the largest loss an insurer will be exposed to (taking into account the probability of that loss) due to a concentration of policies, after netting out any reinsurance recoveries. The MER must also include the cost of one reinstatement premium for the insurer's catastrophe reinsurance.

12.4. Arriving on the Minimum Level of Retention:

The reinsurer must consider not only the ongoing business objectives of the insurer but also the question of "moral hazard" if the insurer retains only a small portion of the risk. Consequently it is common for reinsurers to insist, as a matter of prudence, that insurers retain a "reasonable" amount of their underwritten risks. There are no fixed rules regarding appropriate minimum retention levels, and these may vary depending on the circumstances of the individual insurer. However, there are some tools for assessing reasonable levels of risk and that include the following:

1. **Industry Information:** From statistical information collected on an ongoing basis, industry norms by line of business should be available. Insurers who deviate far from these norms, especially toward lower retention limits, are likely to be reviewed in some detail.
2. **Specified Minimums:** Supervisors may set minimum levels of retention with varying degrees of rigidity. For example, the Australian supervisor, APRA, would normally allow a non-life insurer to cede up to 60 percent of the insurer's total business written (and in the case of captive insurers, up to 90 percent).
3. **External Information:** According to Swiss Re (2003), retention limits for nonlife reinsurance worldwide are about 80 percent, with some variance depending on line of business and in some cases allowance being made for the needs of small companies. McIsaac and Babel (1995) recommend that minimum retention rates, on average, be set at no less than 25 percent, which in aggregate is consistent with the results in Swiss Re (2003).
4. **Life insurers:** Given the typically higher retention limits for life insurance, minimum retention limits might be considerably higher for life insurance before taking into account any particular circumstances.

13. Future Impact of Reinsurance and Risk Transfer

The accounting treatment applied is of crucial importance to assessing the financial impact of reinsurance. Different accounting treatments may lead to significantly different reported financial results. Further, the accounting treatment of reinsurance arrangements may well flow through and affect income tax calculations.

Accounting standards may lead to the development of products specifically designed to take advantage of specified accounting treatments. As an example, U.S. Statutory accounting does not allow immediate recognition of the equity in unearned premium provisions. Consequently, some insurers purchase proportional reinsurance treaties with ceding commissions as a surplus relief mechanism. Also, U.S. statutory accounting does not allow discounting of claims provisions, which creates an incentive to achieve the effect of discounting indirectly through the purchase of claims portfolio transfers. There is an argument that insurance business, especially long-tailed business, which remains in place over a number of years and accounting periods and has significantly uncertain cash flows, is not always well served by accounting practices that presume that all transactions are short term and have a measure of certainty. The issues around matching and spreading or smoothing transactions over a number of years can be significant and generate material issues. In general, accounting standards must be followed, and insurers and supervisors rely both on the financial results provided and on the external audit typically required.

Given the importance and extent of this reliance on external auditors, some supervisors require specific approval of "approved" auditors. Accounting standards should evolve over time to reflect changes in environment and practice, and there may be significant changes with the introduction of international financial reporting standards in 2005–07. It is an ongoing responsibility of insurers, reinsurers, and supervisors to remain abreast of supervisory developments and current professional standards. While these issues are just as relevant for insurers as for reinsurers, the issues may be heightened for reinsurers domiciled offshore, which may increase the difficulty of obtaining information. Supervisors therefore need to understand the accounting regime in their own jurisdiction and, if needed, have the power to require additional statistical and other information from insurers and reinsurers they regulate. In the context of reinsurance (as in general insurance), it is useful to require gross rather than net data. That is, even if amounts may be offset against each other, they should be reported separately. It should be expected that the accountants and actuaries will interact with one another when reporting information to supervisors. In some cases, accounting entries may be used to record items directly; in others, actuaries may include provisions in their calculations (report items indirectly).

14. Future Requirements for Resetting Reinsurance Limits

There should be fairly high limits to cover a good majority of the loss exposures and the limits must be considered along with retention. Large limits are sought especially in pro-rata and per risk or per policy excess treaties. Setting the reinsurance limits depends on cost considerations since reinsurance costs increase in direct proportion to reinsurance limits, keeping the retention constant. However, the treaty reinsurance costs must be weighed against other recurring costs in facultative placements such as the premium, administrative expense and inconvenience and uncertainty associated with facultative reinsurance. However, while setting the reinsurance limits only the volume of the premium is considered and not the premium loading.

Limit Setting for a Catastrophe treaty is even more difficult in practice since one cannot predict a large loss merely based on previous historical records particularly related to various issues like global warming, deforestation, and other weather related issues. Therefore, in reinsuring catastrophes, concentration of loss exposures must be carefully analyzed. Even in the case of aggregate excess treaty, the reinsurance limit must be set at an amount adequate to cover the higher loss ratio that the primary insurer may expect to sustain, but the reinsurance premium for such a limit must be acceptable. To estimate a large loss in future is not easy. However, there will be greater variation in loss ratios for a property insurer than for a liability insurer and it is clear that the variance in the loss ratios is, in part, a function of the lines of insurance written. It is also understood that there will be greater variation in loss ratios for a similar insurance with a lower premium volume. Similarly, a primary insurer who is having a business in major parts of the country will be less vulnerable to loss ratio fluctuation than a regional insurer.

In the exercise of setting the reinsurance limit, the terms of several treaties must be compared and the limits kept flexible. For example, the limit for an aggregate excess treaty can be lowered if adequate catastrophe reinsurance is carried. Again the limit of a catastrophe can be lower if it applies only to the retention of the primary insurer after recoveries from pro-rata reinsurance, rather than to the direct losses.

15. Consideration of Cost of Reinsurance

The reinsurance cost includes the premium paid to the reinsurer and losses recovered or to be recovered under the reinsurance agreement. A primary insurer should pay its own losses and the reinsurer's expenses and profit under any treaty, if the treaty is continued over a fairly long period. That is why the amount included in the premium for the reinsurer's expenses and profit is an important factor in assessing the reinsurance cost.

There is a certain loss of investment income to the primary insurer, since reinsurance involves transfer of some loss reserves and unearned premiums from the primary insurer to the reinsurer. Consequently, the assets offsetting these reserves are invested. And such a transfer of assets results in loss of investment income to the primary insurer. Such a loss of investment income may be greater under a pro-rata treaty than under the excess treaty since the reinsurance premium for a pro-rata treaty is usually greater. Thus, the loss of investment income may also become an additional cost of reinsurance. The cost of administering the reinsurance program varies depending upon the type of reinsurance. For instance, since facultative placements are individual and separate, the cost of administration in these cases is greater than in the case of treaties. Like-wise, pro-rata treaties cost more to administer than excess treaties.

Finally, the profit or loss on insurance assumed under reciprocal arrangement must also form part of the reinsurance cost.

16. Reinsurance Negotiations Being Initiated

Negotiations depend on several factors but chiefly the nature of the primary insurer and the reinsurer and the kind of reinsurance transacted. The requirements may be listed as below:

Information needed: The primary insurer must first compile some basic necessary information. The favorable reinsurance terms and rates depend on the thoroughness of the data compiled by the primary insurer. The information required in reinsurance negotiations is different for treaties and for facultative reinsurance. In treaties, the reinsurer will look for information concerning the management and underwriting operations of the primary insurer. But in facultative reinsurance negotiations, the details of individual loss exposures are more important than the general operations of the primary insurers.

Before signing a reinsurance treaty, the reinsurer must be satisfied about the integrity of the primary insurer, his management characteristics, underwriting policies, underwriting results and financial condition. The moral hazard of the primary insurer must be considered since numerous frauds have occurred.

The underwriting staff of the primary insurer must have demonstrated capability and experience. In the event of the primary insurer becoming insolvent, depending on the cut through endorsements in place, the policy holders will have direct access to the reinsurers and if in the meanwhile, the courts have given awards, compelling the reinsurers to deposit their share of loss, the reinsurers will be facing double liability and this could injure their financial interests. Besides, a reinsurance treaty signifies a long-term relationship and the primary insurer's bankruptcy may lead to disastrous situation.

The underwriting policies and underwriting results of the primary insurer are important considerations in every reinsurance negotiation. Here are some typical aspects need to consider in assessing the underwriting policy of a primary insurer.

1. What are the classes of business the primary insurer is writing?
2. Is the primary insurer basically concentrating on personal lines, commercial, industrial or others?
3. What is his geographic area of operation?
4. How satisfactory are the primary insurer's underwriting guidelines?
5. Are there gross line limits and net line limits in keeping with his financial strength?
6. Are the primary insurer's loss control and loss adjustment practices adequate for the classes of business written?
7. Have the primary insurer's

underwriting results been satisfactory in the lines covered by the proposed reinsurance treaty?

8. Does the primary insurer anticipate any substantial changes in his management, marketing or underwriting practices?
9. Are the primary insurer's rates adequate for the risks covered under the treaty?

Reinsurers are also interested in ascertaining the terms of other reinsurances the primary insurer is having. The idea is to find out if reinsurance is sought only for the benefit of the primary insurer or if it also protects the interests of the reinsurer. Again, the most recent loss experience of the primary insurer is to be considered as that will reflect the underwriting policy that tells of the selection of risks, rating and commission terms. It is not the level of the loss ratio that is important but the reinsurer is interested in knowing about its stability or volatility over time. Distribution of both losses and amounts of insurance by size must also be considered, especially for arranging a specific per risk or per policy excess treaty.

Since reinsurance negotiations are two-sided, even the primary insurer must collect enough information, concerning the solvency of the reinsurer, his satisfactory claims practices, the competitiveness of rates and also the licensing in the territory where the primary insurer operates.

17. More Data Requirement by the Primary Insurer (Cedents) In Future

The more important data that should be capable of being made available from a good information system used by the primary insurer should be:

1. Direct premium data to calculate the reinsurance premium payable to the reinsurers
2. Data for individual losses needed to apply treaty limits and excess retentions
3. The above data for accounting purposes
4. Codes generated for catastrophe losses
5. Codes for identifying occurrence under casually 'clash' coverage
6. Data to determine the portion of policy/ies ceded to each surplus share reinsurer
7. Separate data on retention, limits, rates and reinsurer involved for each facultative
8. Placement
9. Information on risks included in treaty but not ceded for preserving profitability of treaty
10. Data on risks excluded under the treaty but underwritten by the primary insurer so as not to include the same in the reinsurance bordereau
11. An accurate and efficient information system helps in increasing credibility of the primary insurer and helps in renewal of treaties. The primary insurer must make available his books of account for inspection by the reinsurer
12. Maintenance of accurate statistics relating to acceptance and their speedy and timely availability is vital for the successful conduct of reinsurance business. These are necessary for periodically monitoring the performance of each reinsurance arrangement and to take remedial action where necessary.

Some examples of reinsurance statistics required by Cedant's Managements for effective control are:

1. Treaty wise quarterly statistics.
2. Line of Business wise statistics.
3. Broker wise statistics.
4. Country wise statistics.
5. Insurer wise statistics.
6. Proportional and non-proportional statistics.
7. Class of business statistics.
8. List of overdue accounts.
9. List of outstanding balance.
10. The basic statistics relating to a treaty are collated from accounts statements as sent and received. Information can be processed from these basic statistics for any type of review requirement considered as important including as assessment of cash flows.
11. Review of acceptance is to be done periodically and in any case at least one major review must be done in a year. Such review is of importance and part of the duties of executives in charge of underwriting and administration.
12. The review must be done well in advance of the notice period, that is, if a treaty provides for notice of cancellation to be given by 30th September, of the current year and the review would need to be conducted in July-August, of the FY with the up-dated accounts based information.

18. Data Mining – A Dire Need in Current & Future Indian Reinsurance Process

Previously unknown's trends or patterns in the data are analyzed and extracted in this technique. On Line Analytical Process (OLAP) tool is user initiated but data mining is initiated by the data. By using advanced statistical techniques the data is automatically examined for all relationships between fields and significant relationships or trends within the data are discovered. Users are required to understand the data and statistical concepts for a better

Insurance has played a pivotal role in encouraging trade, commerce and industry thereby helping in strengthening the economy of the country. The document-heavy insurance business has a wide scope for computerization of different sub-systems for efficient management of insurance. Currently the computerization in this industry is confined mostly to Transaction Processing and Management Information Systems. There is tremendous scope for use of computer as decision support tools.

use of data mining. Insurers use this technique to:-

1. Identify fraud in claims;
2. Forecasting;
3. Customer life cycle analysis;
4. Profile customer base;
5. Buying patterns of Reinsurance;
6. Enhance overall productivity;

19. Necessity of Information Technology in Building the Data Warehouses for Reinsurance Now Onwards

More and more organizations will try to tap into the information that is hidden in reams of data that they have been accumulating in their databases and application files, regarding all kinds of interactions with customers, suppliers, and other external parties. In Indian insurance (as well as for simultaneous reinsurance processes) industry the move towards effective utilization of data through creation of Data marts and Data warehouses and that will strengthen further. Claims data will be a major area that will be stored in such Data warehouses, apart from information on the policies and customers, customer life events, customer interactions, policy endorsements etc. as the impromptu requirement of reinsurance. In the foreseeable future, these will be on Relational Databases, like UDB, Oracle and SQL Server. Since this data tends to get voluminous it will also become necessary to provide data summary extraction facilities. Even IRDAI needs data generation and Data Base Management System etc. to satisfy their significant role in the regulation of this change in both insurance & reinsurance processes.

20. Use of Communication & Information Technology for Decision Support in Indian Insurance / Reinsurance Industry

Insurance has played a pivotal role in encouraging trade, commerce and industry thereby helping in strengthening the economy of the country. The document-heavy insurance business has a wide scope for computerization of different sub-systems for efficient management of insurance. Currently the computerization in this industry is confined mostly to Transaction Processing and Management Information Systems. There is tremendous scope for use of computer as decision support tools.

Insurance Companies - in the present competitive environment - have to perform a dual role. They have to fulfill their social obligation to the urban and rural sectors as well as run as a profit making and commercially viable organization. This need for improving their performance and increasing productivity has posed a considerable challenge to those at the helm of affairs in the insurance industry. Hence a timely and reliable **decision support system** [in short, DSS] is essential for effective decision making, planning and control. Information Technology will be playing an increasingly important role in achieving this. The computer world has been characterized by miniaturization and reducing cost with improved performance and better reliability combined with shortened product development cycles due to advances in chip technology.

21. The DSS Concept is the Terrible Need

Decision support as a system is aimed at a particular problem a manager must solve and decisions that must be made.The problems that the DSS can best address are semi-structured ones. A structured problem in one with elements that are known and their relationships are understood. An unstructured problem is just the opposite - neither the elements nor their relationships are defined. A semi-structured problem consists of some elements and relationships that are known and understood and some that are not.

The DSS adopted should meet the following three objectives:-

1. Assist risk managers in making decisions to solve semi-structured problems.
2. Support the risk manager's judgement rather than try to replace it.
3. Improve the risk manager's decision making effectiveness thereby enhancing the efficiency of the decisions.

These objectives correlate with the three fundamental principles of the DSS concept – problem structure, decision support and decision effectiveness.

22. Application Areas of DSS

Almost in every functional area, there exists a need of DSS for effective insurance management.

1. **Operation Planning and Management:-**
    1. Underwriting, Risk Analysis and product rating;
    2. Claims Management;
    3. Inventory Management;
    4. Placement of Reinsurance;
    5. Opening of new offices.
2. **Resource allocation and acquisition:-**
    1. Financial planning and analysis;
    2. Personnel selection and assignment;
    3. Location of resources;
    4. Reinsurance & Investments Areas;
    5. Budgetary planning.
3. **Workload and Demand Forecasting:-**
    1. Identifying short term and long term staff requirements in all related spheres;
    2. Estimating market potential;
    3. Planning of products and service.

The information systems are becoming quicker responding and broader in scope. With the merging of computer and communication technology, distributed processing with a broader database approach and extensive use of data communication services on Local Area Networks and Wide Area Network will have to be adopted for responding to the needs of the organization and decision makers.

In the ultimate analysis, the main benefit from using a DSS is being in a position to make better and more informed decisions. Insurance Companies need to think differently about information and technology. Insurers historically have been heavy users of technology but mainly for making administrative functions more efficient. They also had large quantities of data, but very little useful information. New opportunities are emerging as technology advances make the capture, access and management of information easier. Simultaneously the general ability to use information is becoming a competitive tool in delivering high quality, efficient service. Any need to analyze historical and demographic data quickly and easily, to improve business profit warrants the need for a DSS.

Companies need to utilize decision support systems by implementing data warehouses that pull information from existing legacy systems into a customer information database. Such DSS will equip the insurance managers with the ability to allow for customized products and service that are more in line with what the customers want.

23. Order of Proclivity

In addition, subject to its retention limit and the mandatory cession to the GIC to reinsure the remaining insurance risks, with effect from January 16, 2017, every Indian insurer must comply with the order of preference for cessions by Indian insurers prescribed by Regulation 28(9) of the Branch Office Regulations. The order of preference contained in Regulation 28(9) sets out the hierarchy between the various entities with which an Indian insurer can place its reinsurance business. However, by way of a February 29, 2016 circular, the IRDAI deferred the enforcement date of Regulation 28(9) until further orders, as at that time no foreign reinsurer branches had been registered to operate in India under the Branch Office Regulations. When the IRDAI began registering foreign reinsurer branches, it brought Regulation 28(9) of the Branch Office Regulations into immediate effect through a January 16, 2017 circular.

In accordance with Regulation 28(9), as amended, Indian insurers must obtain the best terms for their facultative and treaty surpluses from:

1. Indian reinsurers with the minimum credit rating (i.e., good financial security characteristics) from any of the internationally renowned credit rating agencies for the previous three years; and
2. At least three foreign reinsurer branches which have been registered under Regulation 4(a) of the Branch Office Regulations (i.e. Category 1, wherein the foreign reinsurer branch must maintain a minimum retention of 50% of the Indian reinsurance business).

The Indian insurer requiring the best terms for participation in the following order of preference:

1. Indian reinsurers which have the minimum credit rating (currently, the GIC) and thereafter to those foreign reinsurer branches registered under Regulation 4(a) of the Branch Office Regulations (i.e. Category I – 50% retention);
2. Other Indian reinsurers or to those foreign reinsurer branches registered under Regulation 4(b) of the Branch Office Regulations (i.e. Category II, wherein the foreign reinsurer branch must maintain a minimum retention of 30% of the Indian reinsurance business);
3. Foreign reinsurer branches set up in special economic zones, only after having offered terms to all the entities listed above; and
4. If any balance is left, Indian insurers and overseas reinsurers/cross-border reinsurers.

Under Regulation 28(9) of the Branch Office Regulations, at present, the GIC has the right of first offer over any entity to which an Indian insurer can offer its reinsurance business.

Notably, the IRDAI granted registration to ITI so that it could function as an Indian reinsurer. However, at this stage, it is unclear where ITI will fall in the order of preference, although it is expected to fall within the category of 'other Indian reinsurers', as set out in Section 2 of the order of preference described above. Further, while it is unclear whether the mandatory cession under Section 101A of the Insurance Act must be made to ITI and the GIC, from a plain reading of the provision, it may be argued that the mandatory cession may be required to be made to both entities. However, the mechanism and procedure for implementing this remains unclear.

Further, neither Regulation 28(9) nor the IRDAI itself have clarified the number of Category I or Category II foreign reinsurer branches with which an Indian insurer can place reinsurance business. No clarity has been provided on whether Indian insurers must offer their surplus to some or all foreign reinsurer branches at the same time or create an order of preference among the branches. Moreover, even assuming that Indian insurers must offer the surplus to all foreign reinsurer branches at once, the criteria for determining the allocation of reinsurance business between such branches remains unclear.

On November 23, 2016 the IRDAI set up a committee to make recommendations for the efficient implementation and operation of the order of preference for cessions specified in Regulation 28(9) of the Branch Office Regulations. The committee, which was expected to come out with a report and guidelines by December 9, 2016, must set out:

1. The procedure establishing the order of preference for cessions; and
2. The manner of seeking quotes on best terms and establishing timelines for accepting the best offer.

The committee report is eagerly awaited by the insurance industry, as it is expected to clarify the implementation of Regulation 28(9) of the Branch Office Regulations and is likely to affect Indian insurers' reinsurance programmes in future. For now, Indian insurers are in the process of preparing and submitting their reinsurance programmes for the coming financial year, in accordance with the extant reinsurance regulatory framework.

24. Increase in Inward Reinsurance Contracts in Future

Some of the reasons why companies will go for more inward reinsurance are as follows:

1. To increase the gross premium and net retained premium;
2. To achieve a lower expense ratio by maintaining the volume of premium income (as ceding reduces the premium income);
3. To obtain a better and wider spread of business;
4. To counteract the drain of foreign exchange caused by ceding of premium;
5. To earn an investment income this may be derived from the cash flow.

In recent times, the trend of direct insurers undertaking inward business is on the rise as it results in increase of gross premium and net retained premium. Inward reinsurance business is defined as "the insurance business taken up by a direct insurer or reinsurer from the cedent in turn for share in the premium volume generated by the cedent or on a fee basis". The growing reinsurance market kindled new hopes for many insurance companies, which traditionally carry insurance business, to undertake inward reinsurance business along with their main line of business.
In a retrocession arrangement a reinsurer (the retrocedent) cedes all or part of the reinsurance risk it has assumed to another reinsurer (the retrocessionaire).

As the market for inward reinsurance is yielding attractive returns, many kinds of companies all over the globe are jumping into the fray of inward reinsurance. However, the company taking up inward reinsurance should look at its competence in terms of market knowledge, research facilities, sound actuarial practices and knowledge of changing risk profiles in the market. Some considerations the company should keep in mind while finalizing its inward programme for the year are as follows:

1. Treaty or facultative-facultative involves more administrative work as each offer will be scrutinized. Treaty is less expensive but it requires a thorough knowledge of the market and treaty clauses.
2. Territorial scope-if the company wants a greater geographical spread then it has.
3. Underwrite foreign business keeping in view the political and economic conditions of the country.
4. Direct or brokers-if the company has experienced staff direct business can be solicited. However this will involve travel expenses to procure business. So initially it is better to place business through a broker.
5. Class of business-the company should decide whether it wants to underwrite property business, which is on annual basis or casualty business.
6. Acceptance limits-keeping in mind the financial standing and premium income of the company. The acceptance limit should be large enough to make it attractive for the brokers and ceding companies to offer business.

25. Definite Increase of Inward Reinsurance & its Objectives

Any reinsurance company would, in addition to ceding their business, also started accepting some reinsurance business. Some of the reasons why Indian insurance companies go for inward reinsurance are as follows:-

1. To increase the gross premium and net retained premium;
2. To achieve a lower expense ratio by maintaining the volume of premium income as ceding reduces the premium income;
3. To obtain a better and wider spread of business;
4. To counteract the drain of foreign exchange caused by ceding of premium;
5. To earn an investment income this may be derived from the cash flow.

After examining all the pros and cons a company has to devise an appropriate corporate strategy for its underwriting policy. It can write lines for its net account or it can write larger shares and create a retrocession treaty to take care of the surplus over its net retention.

Some considerations the insurance company should keep in mind while finalizing its inward insurance programme for the year are as follows:-

1. Treaty or facultative: Facultative involves more administrative work as each offer will be scrutinized. Treaty is less expensive but it requires a thorough knowledge of the market and treaty clauses.
2. Territorial scope: If the company wants a greater geographical spread then it should underwrite foreign business keeping in view the political and economic conditions of the country.
3. Direct or brokers: If the company has experienced staff direct business can be solicited. However, this will involve travel expenses to procure business. So initially it is better to place business through a broker.
4. Class of business: The Company should decide whether it wants to underwrite property business, which is on an annual basis, or casualty business.
5. Acceptance limits: Keeping in mind the financial standing and premium income of the company, the acceptance limit should be large enough to make it attractive for the brokers and ceding companies to offer business.
6. Finally, IRDA has brought in certain norms for acceptance of inward business, which have to be adhered to while designing the inward programme.

26. In Future the Business Strategy to be Revisited

A business strategy is required to support any insurer or reinsurer to transact reinsurance business and all logistical help should be available to carry out the task. Intimate knowledge of the international markets, skills in reinsurance area are basically essential in restricting or excluding acceptances.

The reinsurer should study the market conditions with due focus on expected spread of risks and volume of business. There have been dramatic changes in the methods and forms of reinsurance at international level compared to traditional methods of doing business. The reinsurance capacity has undergone rapid changes and the capacity is also available from capital markets.

Reinsurer should aim at writing a large line to attract business with quality and to keep his costs of acceptance economical. Nearly 90 percent of global reinsurers depend on some form of retrocessional protection as a means both to cede a portion of their risk and to stabilize their earnings. The reinsurer has to cope with financial problems like delayed remittances and exchange of losses. Besides the tool of credit rating, gathering information first hand would assist for diligence in writing inward reinsurance.

Some important dimensions in business strategy are as follows:-

1. The companies should have clarity on the basis of underwriting – should it be reciprocal or non-reciprocal?
2. An insurer or reinsurer accepting reinsurance business has two options open to him – gross or net lines. He can write such shares as can be retained by him without retrocession or he can write larger shares and create a retrocession treaty to take care of the surplus over his net retention.
3. Undertaking facultative reinsurance business involves more administrative work and the amount of premium is relatively small and the insurer needs to have thorough knowledge of tariffs and other market conditions. In treaty reinsurance business the premium volumes can be built up.
4. Insurers need to be clear on how much will be proportional and what amount will be non-proportional. Reinsurance companies should exercise the choice carefully.
5. Opting for wider geographical areas and spread will result in growing volumes and at the same time may bring new types of business. Therefore, the market conditions will certainly impact the profitability of the reinsurer.
6. Reinsurer can procure business from various sources. It can be by granting an underwriting or binding authority to another company or agency to write business. It may accept business through brokers.

> The mutual exchanging of reinsurance, often in equal amounts, from one party to another, the object of which is to stabilize overall results, is the essence of reciprocity. Ceding insurers tend to protect the experience of the treaty by not fully utilizing the treaty capacity for more serious risks or arranging an excess of loss cover to protect the treaty portfolio to take the benefit of reciprocal reinsurance trading. These parties are ready to offer adjustments in commission, profits and reciprocity terms to keep the treaty exchanges balanced.

7. The acceptance limit should be sufficiently large to make it more attractive for the ceding companies and brokers to offer business. Companies need to stay within their financial limits to avert any kind of financial crisis subsequently.

8. The company should lay down guidelines for accepting business.

27. More Retrocession Arrangements Will be in Use

A retrocession is both the unit of insurance that a reinsurance company cedes to a retrocessionaire and the document used to record the transfer of risk from a reinsurer to a retrocessionaire. After making acceptance, decision, underwriting decision has to be taken. The accepting insurer or reinsurer may retain it wholly for his net account or retrocede a part of the acceptance to a retrocession arrangement, if any, or even arrange a specific retrocession on an individual acceptance with another reinsurer. Retrocession is required by a lead underwriter who led quotes on a reinsurance proposal. The larger is his acceptances, the higher is the confidence of his underwriters. Retrocession is also required to support reinsurance offers, which may otherwise be scarce in the absence of retrocession. When there is excess capacity, lead underwriters yield to broker pressure to offer lower and retrocession support is in offing.

28. Reciprocal Trading Will Crop Up

The mutual exchanging of reinsurance, often in equal amounts, from one party to another, the object of which is to stabilize overall results, is the essence of reciprocity. Ceding insurers tend to protect the experience of the treaty by not fully utilizing the treaty capacity for more serious risks or arranging an excess of loss cover to protect the treaty portfolio to take the benefit of reciprocal reinsurance trading. These parties are ready to offer adjustments in commission, profits and reciprocity terms to keep the treaty exchanges balanced.

The benefits that accrue from this reciprocal exchange are:

a) It enables the ceding insurer to add to his net premiums and net profits;

b) It provides a wider spread for the net retained portfolio of the insurer with an improved balance thus ensuring greater stability in profits.

The reciprocal reinsurance trading is very much prevalent in fire insurance and it is not that much evident in cargo business, barring a few instances. Reciprocal reinsurance tends to take place in the same area of both the insurers.

One can think of more than 100 percent premium reciprocity to balance the exchange of profits when dealing with markets of lower average profitability. It can be said that a ceding insurer with a treaty carrying an average 10 per cent profitability can expect to receive 200 percent premium reciprocity from a reinsurer whose treaty has an average profitability of 5 percent. However, the reciprocating insurer has a much better balance for his treaty and is able to conclude short of 100 percent profit reciprocity in consideration for the steady results. Profit is normally subject to fluctuations and therefore, accepting large premium reciprocity from a treaty may be fraught with danger. It is preferable to increase profit commission to reduce the net profit ceded. Large premium reciprocity adds to the net premium of the ceding insurer and has other advantages flowing from it such as creation of larger reserves and reduction of tax on profits consequently.

Finally one should consider the impact of brokerage cost on the result of reciprocal profit from the inward treaty when examining the terms of any treaty exchange through intermediary.

29. Practice & Regulations for Inward Reinsurance

IRDA regulations state that all life and non-life insurers in India can write inward reinsurance business from other domestic insurers and from overseas, provided that they have a well-defined underwriting policy. The insurer shall ensure that decisions on reinsurance business are exercised by persons with necessary knowledge and experience. The insurer shall file with the IRDA a note on his underwriting policy stating the classes of business, geographical scope, underwriting limits and profit objective. The insurer is also required to file any changes to the note as and when a change in underwriting policy is made.

30. Trend of Combining Quota-Share and Excess of Loss Treaties on the Reinsurance of Independent Risks

When an insurance company seeks reinsurance for an independent risks (a risk refers to a single policy or a group of policies) or for an independent lines of insurance), and has a choice between a pure quota-share treaty, an excess of loss treaty or any combination of the two, for any of the risks. The way this combination operates is as follows:

1. First the quota share contract will apply, so that the insurer shall remain responsible for no more than its share-established by the contract-of any claim that may occur for that risk ;
2. Afterwards, the excess of loss contract applies, so that, by no means, shall the insurer (of course considering only that part for which it remains responsible after the quota-share contract) pay more than a certain fixed amount of any claim that takes place.

The problem consists of determining the optimal retention limits for each risk, in each of the two forms of reinsurance. "Optimal" in the sense those limits that maximize the adjustment coefficient and, therefore, minimize the upper bound to the risk probability.

31. Dire Need in This Indian Insurance Sector - Blocking the Protection Gap

Insurers recognize that they have a big role to play to block the protection gap and bring fare coverage to the public, providing protection for the poor and those who need it most. To do all this, insurers understand the need to build sustainable, long-term businesses for a more resilient society, powered by more robust, data-driven decision-making processes.

Natural disasters, on the other hand, have a tremendous impact on this sustainability and resilience. Natural catastrophe events that have affected India over the last two decades and comparing the first decade (1997 to 2007), and the last ten years, the frequency of calamity incidents appears to have gone up considerably, and it is flooding that dominates, becoming a routine affair in the last five to seven years — not just economic losses but also insured losses. In terms of losses and to a lesser extent, earthquakes feature, and also cyclones which appear to be more frequent and severe all along the coastal areas of our country. Many recent events were also surprises to the market, such as the recent disastrous flood in Kerala few months back, Chennai floods in 2015, with the market in disbelief at the extent of these events. These factors stand out — the increased frequency, this "surprise" element and flood leading the losses. Over the last few years, both the exposures and the complexity of these exposures have substantially increased. Insured losses have also gone up as the insurance companies are now covering more risks in India where the awareness in the insuring public is increasing.

Modeling has developed greatly over the last ten years, RMS now covers flood, earthquake, and agricultural risk for India, to help (re)insurers gain a holistic view of their portfolio, manage underwriting practices, and develop portfolio optimization. RMS has launched the first full probabilistic model for India inland flood covering both pluvial and fluvial sources of flooding which clients can use to estimate their portfolio losses for future events and for underwriting at the point of risk for selection and pricing. Agricultural risk modeling brings together weather, crop type and yield data in line with the demands of the Pradhan Mantri Fasal Bima Yojana (PMFBY) scheme. And earthquake, where the market has benefited from an RMS model for ten years, still represents the surprise element in terms of causing huge losses and impacting solvency.

All players need to come together to achieve three fundamental objectives; a sustainable, profitable insurance sector that manages growth, copes with the shocks of natural disasters, and can help close the protection gap?

Everyone must accept that in India insurance business is getting much more complex, and AOG events seem to be more frequent with severity. The Chennai floods were a very good example of how both claims and exposures were becoming more complex, with the Chennai event affecting commercial and industrial exposure across lots of sectors from IT companies to manufacturers, with business interruption extending for many days. Improved IT support as various sophisticated tools would invariably help to estimate the losses, and calibrate the exposure after an event. Despite increasing exposures, in India, the insurance penetration remained all along very low, and consequently the protection gap — the gap between economic and insured losses for India — is featuring around 90 percent. This gap falls on the government to fund and rebuild, and government does not currently see the insurance industry as a solution, believing it lags behind with disaster risk management. The role an independent modeling company such as RMS can play to help government see the benefit and the value of science-based models that insurance companies use. The gap does also apply in developed countries but not to the same extent as for India; if the 2017 Atlantic hurricanes produced US$300 billion in economic losses, insured losses covered US$130 billion – the actions taken to address the shortfall and the successes from other governments, such as Flood Re in the U.K., and the U.S. government purchasing US$1.46 billion in reinsurance to cover excessive flood losses are the lively example in this context. But trying to introduce this type of risk transfer through reinsurance in India will require some more efforts from the Indian insurance industry.

It is now a big challenge to monitor these exposures, and data quality is also a serious issue, to get the information required for reinsurance on a granular level. Agents struggle to complete detailed proposal forms to help with the quality of the risk, so factors such as construction quality, closeness to water bodies or earthquake resistance constructs, do not come into the consideration realms of underwriting. There is lots of aggregation and assumptions which needed to improve in future, and too much reliance on local agents using their experience to select or price the risk has to be done away with. This is an area various IT driven software's may help the industry in the days to come, to ensure companies prioritize the data they collect, and not to feel pressured to complete data fields for the sake of it, inaccurate data is worse than no data.

The currently introduced models like RMS really helps and the situations are improving, and to close the protection gap, the insurance industry needs to adopt the having assistance of RI recoveries-when the catastrophe events are on the rise, it goes to huge economic/ insurance losses. To help address this, the solution lies in the industry taking a phased approach, first to start working together to address the need for improved data, before moving into implementing new systems and resorting to adequate reinsurance support to face these ensuing challenges with claims from natural catastrophes, such as whether a particular coverage exists for a peril or not, managing complete loss, and how models help validate the loss. Documents do get lost, sites are hard to access, but RMS again has helped the industry bridge the gap between exposure and claims data, to match claims with underlying exposures or establish whether a specific coverage existed when the policy was created compared to what is being claimed.

With surprises such as the floods in Rajasthan only after two days of flash rain where the premium rates have generally gone down in this cut thought competition in current Indian insurance sector, but surprises mean consideration of re-pricing, and post-event, aggregate the models they use to arrive at a rate, so underwriters have an idea for pricing of the upcoming exposures. Data prioritization as RMS advocates does also help to drive up data quality and better decision making and all these are having a consequential impact through adequate reinsurance arrangement. IT Technology can help regulate catastrophe risk losses in future. We all are impressed by the role technology plays in agricultural risk, from data collection, exposure assessment, to integration with claims payments. The drought insurance in Kenya, which is structured for payments of US$100 directly into mobile wallets, or parametric insurance in China, where farmers buy coverage on smart phones, simply selecting the cover required.

32. Finally

Finally, the author is incorrigibly optimist to believe that a proper mix of insurers, reinsurers, government, technology, and modeling science have to come together to build resilience, and catastrophe risk models that can provide the framework for better data capture, to avoid surprises, deliver better future planning and also help close these protection gap for Indian insurers, through definite & efficient dealing in all of their insurance and reinsurance requirements all along in future very effectively & satisfactorily. TJ

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Reinsurance in the Age of Automation

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Abstract

Traditionally, reinsurance business involves tons of transactions moving back and forth from multiple legacy systems to conclude the daily business. For this the reinsurers employs thousands of high to medium skilled workers to bridge the gap between these systems. Still after all these efforts the reinsurer faces challenges in maintaining TATs, accuracy and efficiency. The revolutionary RPA is contributing largely in eliminating repetitive and mundane processes and let the employee focus on core jobs they have assigned.

Keywords

Robotic Process Automation, RPA, bots, processes, Reinsurance

Preface

Robotic Process Automation (RPA) is a technology which mimics the human actions with respect to human interactions with digital systems to execute the business processes. RPA robots have capability to utilize the user interface to capture data and manoeuvre applications exactly like the humans do. They interpret and communicates the responses among other systems in order to perform vide verities of repetitive tasks. The RPA does the tasks much faster than human, takes no rest, makes no mistakes and at the cost much lesser than that of an employee.

RPA is capable of logging in into various applications, moving files and folders, coping and pasting data, filling in forms, opening emails and attachments, extracting structured and semi-structured data from documents, scraping browsers, and more. Same as a human do.

As per white paper published by Capgemini on RPA in Insurance, RPA revolution is capable in addressing processing complexity from low to high. i.e. starting from ruled based automation for structured input to knowledge based automation as a medium processing complexity which involves unstructured input low process complexity. To further the highest level of processing complexity which involves Artificial Intelligence for unstructured inputs.

Having said this, RPA is very different from traditional enterprise automation tools. RPA works on legacy systems without disrupting them. Hence, shorter implementing time and lesser implantation cost resulting in to faster realization of benefits.

With RPA taking care of repetitive and mundane day to date transactions the bandwidth of the employees is released. The high skilled employees are now able to focus on their core jobs which ultimately resulting in higher end customer satisfaction.

The Challenges Reinsurer Face

Typically reinsurance business receives a surge of new policies that required manual keying of data in multiple systems. The manual work results in a heavy backlog and bandwidth of underwriting choking up in non value adding task. The existing processes require input of over hundreds of fields into multiple systems to bring the reinsurance policy to life. Keying of data manually is highly error prone and arguably one of the most complex and laborious processes in reinsurance.

RPA effectively brings to insurance operations a robotic assistance that are able to take over employees' basic computer commands, handling a variety of "low-value-add" tasks that currently drain these workers' time, energy, and morale.

For established insurance providers, operations have traditionally relied on years old legacy systems, that work in isolation and do not interact well with each other. This has resulted in the need for highly-paid knowledge workers to effectively provide the bridge between these unequal systems—in what amounts to grueling days spent transcribing and reconciling data: opening emails, copying and pasting information between legacy systems, generating PDFs, and so forth.

How RPA is Helping Reinsurer

Faster claims processing - Claims processing requires employees to gather information from various documents and copy/move that information into various systems. It's a time-consuming process, which delays the timely response that customers desire when they file a claim. Also, manual interventions are prone to errors. RPA can move large amounts on claims data with one mouse click.

Easier policy cancellation - The process of cancelling policies is time-consuming due to having to interact with email, a policy administration system, a CRM, Excel, and PDFs. RPA can toggle through all of these interactions at the same time and eliminate the need to move data through all of them manually.

Increased Data Accuracy - Using RPA increases the reliability of data. Since the robots follows the instructions given accurately, chances of causing any error is next to zero. That's because, unlike humans, robots are unable to key in data incorrectly; nor will their "minds" wander while performing repetitive tasks.

Standardized Processes - A side effect of using robots is the necessary standardization of processes. In order to start using a robot, a company's process all need to be standardized, which in turn increases worker efficiency, and then greatly increases the speed at which the robots can do their work as well.

Legacy-systems Compatibility qnd New System Implementation Friendly - Robots can be configured to use old systems that might be replaced in the next few years, and updated to work with the new ones. Robots are easily reconfigured within days to point to new systems as they get implemented.

Easy transition- Working at the familiar desktop level, robots are easy for employees to understand and to use. They can be installed quickly (unlike traditional IT projects), and work with existing technology. IJ

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Redefining Reinsurance through Technology

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Technology has literally changed every aspect of the way any business operates and never before in history has that change occurred so fast. One can see the business world reshaping itself faster than ever. Megatrends such as Digitalization & Automation has disrupted most of the traditional businesses, on one hand bringing lot of uncertainty while on other hand throwing up lot of opportunities to innovate more flexible and cost-efficient solutions, thus setting up a major challenge for major players to stay relevant. Businesses that fail to adapt to technology are going to find themselves left behind while the savvy ones who learn to keep up will reap the rewards.

Reinsurance Trends

Over the last few years reinsurance demand has subdued, whereas the reinsurance capacity continues to increase with alternative sources of capital like Insurance Linked Securities (ILS).

The Reinsurance industry will continue to be affected by prolonged soft market followed by erratic cycles and in this testing environment, reinsurance options in terms of carriers, products and capital markets solutions can only proliferate if the stakeholders remain nimble and agile to accept the new market openings, changing customer expectations and new analytical techniques offering them an opportunity to use their echnology has literally changed every aspect of the way any business operates and never before in history has that change occurred so fast. One can see the business world reshaping itself faster than ever. Megatrends such as Digitalization & Automation has disrupted most of the traditional businesses, on one hand bringing lot of uncertainty while on other hand throwing up lot of opportunities to innovate more flexible and cost-efficient solutions, thus setting up a major challenge for major players to stay relevant.. Businesses that fail to adapt to technology are going to find themselves left behind while the savvy ones who learn to keep up will reap the rewards.

expertise to the full. The key is to sharpen differentiation, rather than simply competing on the price.

Reinsurance – An Underdog

Most Insurance industries have invested and managed to tap into the benefits offered by technology, digitizing processes, focusing on data quality and analytics but unfortunately the same has not been so for reinsurance remains an underdog.

Thanks to emerging innovative technologies, there is a lot happening in insurtech space, where policies are issued in real time basis and claims are settled in seconds, however reinsurance contracts and claims are still manually processed, struggling to get its administration automated.

The underinvestment in technology and integration of data from multiple sources renders substandard reinsurance data quality and analytics, resulting in the inability to conduct required performance analysis and adequate negotiations.

Need of the Hour

It has become imperative that reinsurance market players modernize their approach and adopt technology to automate their operations. Smart Workflow tools, one touch data capturing, integration of various systems, adoption of block chain, robotics, artificial intelligence (AI), the internet of things, big data, and predictive modelling are some cutting edge innovations that will promote consistent data standards, avoiding duplication of work, establishing reliable audit trail and reduction in overall reinsurance operations cost.

The Future

Emerging technologies will transform the reinsurance business and create new opportunities with a potential for sizable returns. Automation will allow reinsurance industry to enhance data-analytics abilities and tools to improve risk assessment, loss prevention and claims handling.

Digital reinsurance platforms launched in early 2000 like Inrion, ri3K etc. did attempt to bring transformation in reinsurance through digitalization but failed to attract traction because they were probably way ahead of their time, hitting roadblocks when it comes to adoption by reinsurance participants and for them to accept technology as a game-changer. New reinsurance platforms like PPL by London Market, eRe from US and ReConnect from Singapore are trying to make a sincere attempt to bring reinsurance at par with other industries in terms of adopting technology and to bring in more efficiencies in the reinsurance workflow.

It would be interesting to see the role technology plays in development of reinsurance towards becoming a paperless yet efficient business. Going forward, it is required that the capabilities of the all reinsurance players are aligned with all the new technologies to not only save high operating costs, but also take strategic advantage by being able to leverage the technology to manage the capital and business operations efficiently.

Every industry Must Evolve to Reach its Highest Potential, and Reinsurance is no Different.

Reinsurance - Challenges Ahead

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The basic concept of Insurance, as we all know, is to spread the Risk far and wide so that one has to bear a small portion only. This concept is carried further to Re-insurance where the Primary Insurer insures the Risk with other Insurer or Reinsurer. The purpose of Reinsurance is to spread the risk wider to increase capacity and also to involve many to share the huge losses. It also adds to Insurance Capacity.

If we consider the recent events in terms of losses, there have been storms in America, Japan and Malasiya. There was an earthquake in Japan after the storm thus aggravating the loss.

Back home in India, the period from July to September is Monsoon Season with wide-spread rains but this period is also of floods and draughts due to un-even spread of monsoon and, consequently, rains. Both these events fore-bode catastrophic losses.

If we go in some of remote past, the failure of Enron and Lehman Brothers are examples of Business Failure and Fire in off-shore Rig of ONGC is Engineering Failure whether due to human error or otherwise. Such losses corroborate the basic concept of spreading the risk as far and wide as possible.

As a matter of fact, with changing environment in business arena as well as climatic changes emanating from global warming, the incidence of natural calamities leading to catastrophic loss is bound to increase beyond traditional capacity of insurers and reinsurers. Particularly, the insurers the world over do not have adequate capacity to handle these claims. Then there are cyber attacks which may cripple the affected organization and cost of data recovery coupled with other property losses due to failure of computer controlled plants could be enormous. In such a scenario,

> As a matter of fact, with changing environment in business arena as well as climatic changes emanating from global warming, the incidence of natural calamities leading to catastrophic loss is bound to increase beyond traditional capacity of insurers and reinsurers. Particularly, the insurers the world over do not have adequate capacity to handle these claims. Then there are cyber attacks which may cripple the affected organization and cost of data recovery coupled with other property losses due to failure of computer controlled plants could be enormous. In such a scenario, the importance of reinsurance cannot be over-emphasized.

the importance of reinsurance cannot be over-emphasized.

But would the traditional reinsurance markets have the capacity to absorb such losses? In my opinion, it is not. Then what? The answer lies in Alternative Risk Transfer Techniques (ART). The capital markets are evolving continuously and there are investors willing to take higher risk in exchange of larger returns and would be willing to provide capital when the need be. This may prove to be lucrative business option as the gains will be higher if there were no losses during the covered period. Various ART models and options are there and the insurers and the reinsurers are adopting them. One good option is pooling of resources but the limitation lies in the fact that the pools are created out of earned premium by the insurers/reinsurers. What if the losses are higher than the pool can absorb? This will certainly put strain on the resources of contributing insurers.

Surely, the reinsurance is the way to enhance the capacity but traditional methods of reinsurance would not be adequate if an Earthquake of higher magnitude occur in an industrial area with thickly populated surroundings? Loss of life and personal property itself will be large coupled with loss to industrial establishments of the area. We are dealing with only financial losses and not loss of production capacity which in any way cannot be insured.

A recent phenomenon needs to be watched with interest. Shortage of crude oil availability and sanctions by USA against some of the countries like Russia and Iran and trade war with China is pushing oil prices up and consequently the demand for USD. Several world currencies are losing ground and thus they have to pay more in their currencies which is straining their individual economies. The claims against Exchange rate fluctuations will be high. And from where the Capital will come? Such kind of world phenomenon would require use of ART to supplement the traditional insurance/ reinsurance.

I believe the above narrative will amply corroborate the need of reinsurance as well as Alternative Risk Transfer Techniques transferring the risk to capital markets through several modes already in vogue and those which may emerge in future.

Reinsurance is the need of future or the future of Insurance as the traditional Insurance has in-sufficient capacity and where the availability of more capital is at higher rates, to cater to new kind of losses which emerge from changing socio-economic and political scenario the world over.

Rate-making

Credibility

Before going in to process of Ratemaking by reinsurers, we have to consider the credibility. As we

know the reliability of statistical inferences and conclusions depend upon credibility of available data. The credibility in itself will depend upon reliability and volume of date to be processed. Unfortunately data in respect of catastrophe claims is sparse. In Indian peninsula, the earthquake in Koyna, (now in Pakistan) occurred almost a century ago but since then there is report of any worthwhile seismic activity. Similarly the quake in Bhuj, Gujrat occurred about two decades ago and again there are no reports of such an occurrence or its possibility in near future. Same is the case with storms and tsunamis. Such catastrophes do occur regularly but their repetition in one particular locality/area is not regular. Again, the loss in such cases is not comparable. The speed of winds may be very high but there may not be torrential rains or vice versa. The wind speed may not be very high but the rains might be very heavy causing flood in the area. Or take the case of overflowing and resulting floods in many parts of our Country which is almost regular every year but the data on losses is not high as in rural are awareness of insurance is low and several people do not buy insurance policy. What I am trying to say the losses are great and the Government may have to provide relief but the insurance companies do not have enough data to review or revise their rates. What is called experience rating comes from the data on losses, number of insureds or policies issued which is insuffiecient. This makes the ratemaking for insurers and/or reinsurers difficult.

In this light we now discuss the problems in rate making, particularly in respect of catastrophe losses.

Rate-making

Rate-making is in itself a complex proposition. It assumes greater significance in case of catastrophe losses. Present technology is not capable of accurately predicting an earthquake - when and where it will strike or what will be the intensity of it. The recent earthquake in Indonesia amply proves the point where the quake was so strong that it reduced the height of the hill by two-thirds and perhaps that along with debris and ash generated from eruption caused huge tsunami which resulted hundreds of casualties and loss to physical property in millions. There is not enough data to compute the loss and value it. Same is the case with Storms including snow-storms.

Long term forecast for an earthquake or a storm is a tough task. Both seismologists and meteorologist cannot adequately predict future movement of natural elements. For the purpose of rate making complex statistical models can be developed estimating future movement of natural elements and their impact on earth. Say, an earthquake of z intensity will occur in Seismic Zone ‘A’ in next say 20 years. What value z will take? We have to consider various options ranging from mild to severe and several rates will be possible, but, what rate should be considered as the too high a rate will not find buyers and too low rates might prove suicidal to the insurer/reinsurer or buyers of the catastrophe bonds and what if there is no occurrence in the policy period but the calamity strikes almost immediately in the following year? Or the intensity and the value of loss is beyond all estimates – both upwards and downwards? If the resultant loss is on low scale, all the insured could be satisfied but what if the loss sky-rockets then what will be the impact on primary insurers as well as reinsurer?

These questions will have to be considered and answered by the statistical model/s developed. I am not actuary and have no thorough knowledge of statistics and model development but being student of insurance and surveyor such question do come to mind answers to which are not easy.

<u>Statistical Model</u> So how the model will be developed? To me it appears a tough task as different intensity of a disaster will produce different losses and the amount of which will be difficult to estimate keeping in mind economic conditions such as inflation, political environment, social changes, etc. which affect the prices on a general level, mostly upwards. Considering natural variable which cannot be predicted like epicenter of an earthquake or eye of a storm and ocean/air currents long in future are beyond present forecasting techniques available, the job of actuaries is not enviable. They have also to consider management approach as well as attitude of buyers of the particular product. The actuary will also keep in mind legal and social framework and attitude in determining rates.

I am not that much qualified to try to answer these questions but the questions are there and those who are in the field of ratemaking and selling policies will provide more valuable data on which future statistical model can be developed. I hope I am initiating a debate which will go long way ahead to produce economical and viable solutions and products that will help the insured who are at the mercy of natural elements and donot find and viable economic product to meet their needs.

Reinsurance-The Future

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Indian Insurance Market-at the Verge of Growth

The insurance industry of India consists of 57insurance companies of which 24 are in life insurance business and 33 are non-life insurers. Among the life insurers, Life Insurance Corporation (LIC) is the sole public sector company. Apart from that, among the non-life insurers there are six public sector insurers. The insurance industry in the country is set in the growth arena and is expected to grow significantly in the coming years due to rising financial literacy. The Indian insurance sector is set to mark a significant growth in the coming years. The insurance sector is expected to witness surge in the flow of foreign capital in the coming years, given the relaxation of FDI norms.

The lower level of penetration, favourable demography, initiatives like 'Pradhan Mantri Jan-Dhan Yojana', Pradhan Mantri Jan Arogya Yogna etc. for enhancing financial inclusion, rising financial literacy along with increase in domestic savings consequent to rise in per capita income are expected to support the growth of insurance sector going forward. The favourable regulatory environment in the country is also expected to help in fuelling growth of the insurance sector. To provide insurance cover mainly to the below poverty line (BPL) households, the government has introduced some insurance schemes such as 'Rashtriya Swasthya Bima Yojana' (RSBY), 'Pradhan Mantri Jeevan Jyoti Bima Yojana (PMJJBY) and Pradhan Mantri Suraksha Bima Yojana (PMSBY). These schemes are expected to help in penetration of insurance sector in lower and lower-middle income population, which currently does not possess insurance cover.

The introduction of point of sale (PoS) transactions for products like cattle or livestock insurance, agricultural pump sets insurance, fire insurance, crop insurance and government insurance schemes has helped to simplify the distribution network in small cities and villages, it noted. A range of insurance products under life and non-life insurance segments are expected to be sold through PoS persons, in turn improving insurance penetration. In the coming years, initiatives like extension of insurance portability facility to other insurance products, differentiated pricing on e-policies, customised health insurance policies among others are expected to fuel growth of the sector. With more companies entering the sector, competition as well as operational efficiency is expected to rise, which would raise the penetration in the country.

Crop insurance has helped the non-life industry record a 32% growth in premiums the last fiscal year ended 31 March 2017 to over INR1 trillion (US$15.5 billion) for the first time, despite the absence of new large projects. The total premium income soared to INR 1.27 trillion from INR 963.76 billion for the previous financial year. In the overall non-life market, IRDAI data show that private sector insurers beat their state-owned rivals in GWP. Public general insurers collected INR 676,897 million in FY 2016-17, showing a 29% growth. Private non-life insurers, on the other hand, collected premiums of INR 595,228 million reflecting a 36% increase. As part of the privately-held segment, standalone private health insurers collected INR 58,598 million, or 41% more than in FY 2015-16. The government-led initiative for financial inclusion has brought 618 million persons under government-sponsored schemes in 2016-17. These include the Prime Minister's Jan Dhan Yojana, Pradhan Mantri Suraksha Beema Yojana and some others.

India is a very attractive market. It may become the largest economy in the world. The country is seeing high growth and high rate of urbanisation. From risk mitigation point of view, the insurance penetration is low. India's growth in non-life growth is in double digits, but continuing to grow very fast. The economy is more resilient if it is well insured. By bringing in international reinsurance, industry is diversifying risk outside. The government is still putting restrictions on direct insurance. That is fine for the time being. The government needs to attract more capital to diversify risks outside.

Indian Reinsurance Sector-a Boon to Insurance Industry

India today is a land of opportunities, and the ambient business environment in the country is characterised by exuberance and optimism. The feel-good climate is also reflected among reinsurance and insurance market participants who have received a moral boast by way of the second phase of liberalisation of the sector. New reinsurers entering India provide additional capacity in the Indian market and bring with them international expertise. The power derived by the Authority in respect of reinsurance lies in the provisions of Section 14(1) and 14(2) Sub Section (f) of the IRDA Act, 1999 as well as Sections 34F, 101A, 101B and 101C of the Insurance Act, 1938. In addition, the Authority has framed regulations pertaining to re-insurance by both life and non-life insurers which lay down the ground rules for placing re-insurance with the re-insurers.

Under the provisions of the Insurance Act, 1938, the "Indian re-insurer" is entitled to receive obligatory cessions as decided every year, from all the direct non-life insurers. The limits have been laid down in consultation with the Reinsurance Advisory Committee with the approval of Government of India. Every insurer needs a comprehensive and efficient re-insurance program to enable it to operate within the constraints of its financial strength. This is important to maintain the solvency of the insurer and to ensure that the claims are honoured as and when they arise. Hence the IRDAI has stipulated that every insurer shall obtain the approval of its Board for its reinsurance program. The regulatory framework also provides for filing of the reinsurance program for the financial year with the Authority, at

India is a very attractive market. It may become the largest economy in the world. The country is seeing high growth and high rate of urbanisation. From risk mitigation point of view, the insurance penetration is low. India's growth in non-life growth is in double digits, but continuing to grow very fast. The economy is more resilient if it is well insured. By bringing in international reinsurance, industry is diversifying risk outside.

least 45 days before the commencement of the said year. The insurers are further required to file the treaty slips or cover notes relating to the reinsurance arrangements with the Authority within 30 days of the commencement of the financial year. These measures highlight the importance attached to the existence of adequate and efficient reinsurance arrangements for an insurance company. It would be recalled that the solvency position of an insurance company is assessed on a "net of re-insurance" basis.

The Regulations also require that every insurer should maintain the maximum possible retention commensurate with its financial strength and volume of business. The guiding principles in drawing up the reinsurance program have been stated as under:

1. Maximize retention within the country;
2. Develop adequate capacity;
3. Secure the best possible protection for the reinsurance costs incurred; and
4. Simplify the administration of business.

IRDAI effected amendments to the Reinsurance Regulations, 2002 and notified the same in March 2013. The Insurers/reinsurers may place reinsurance business with insurers/ reinsurers outside India, after taking into consideration their Credit rating, Claims experience, Claims paying ability and solvency margin. Accordingly, limit on the total reinsurance which an insurer could place with an insurer/ reinsurer outside India was prescribed by IRDAI. Further, in respect of reinsurance of Catastrophe risks, all insurers/reinsurers were mandated to ensure that the reinsurance arrangements in respect of catastrophe accumulations, using various realistic disaster scenario testing, are adequate and approved before filing the same is with the Authority along-with their reinsurance program. Due to ratification of Insurance Law amendment Act, 2015, the Reinsurance Regulations were amended.

Global Reinsurers-A Catalyst to Market Sustainability

It has taken almost 15 years for Lloyd's to set up onshore operations in India. Lloyd's writes $220 million (Indian business) offshore in reinsurance lines. Coming onshore will increase the capacity of direct insurance company in India, particularly in specialist lines where India does not have the expertise. In terms of insurance penetration, India is at 0.7%, Asia Pacific is at 1.4% and developed counties on an average are at 6.1%. As far as financial stability and impact on macroeconomic terms are concerned, India does not have huge culture of insurance. Economy is growing at 7% and creating more risks. In terms of concentration of risks, the international reinsurance will stimulate better growth.

With liberalisation of Foreign Direct Investment norms for the sector, many foreign insurance firms have entered into India to explore the untapped potential of this industry. Lloyd's are the largest offshore reinsurer for India. So far, Swiss Re (Switzerland), Munich Re and Hann- over Re (Germany), Scor Se (France) and Reinsurance Group of America (RGA) and Life Re have set up their branches from February 2017 onwards. A few others, including Gen Re (part of Warren Buffett's Berk-shire Hathaway Group) and XL Catlin, have already received final licence and started their operations. Axa (France) has also received partial licence. Lloyd's of London, which is not a reinsurance company but an insurance and reinsurance market, is also set to enter (IRDAI has issued separate guidelines for Lloyd's).

The government and regulator are very supportive. One issue that global reinsurers are looking to deal with is the Indian regulations about order of placing preference. Presently the best terms are offered to a domestic reinsurance company and then it goes to other reinsurers. This may deter

overseas investments in reinsurance unless this is addressed.. The market conditions are becoming extremely competitive. For other major platforms in the world, China and Singapore, Lloyd's have taken five-seven years to build up the platform. Most of the reinsurance companies are the biggest competitors worldwide.

In 2016, the domestic insurance industry witnessed few major announcements related to investment as well as entry of new players which is expected to accelerate growth of the sector going forward. Corporate Governance will also pave the way for growth along with discipline in Capital Markets. For example, GIC IPO is good as it will bring in market discipline so that the players operate in a way so as to provide return to shareholders. The discipline of capital market is actually a very important driver. India is likely to have a healthy market if our capital market investors worried about return.

February 1, 2017 was a crucial day for Indian insurance: the day foreign reinsurance companies, for the first time, opened branch offices in Mumbai. It was the culmination of a process which began with the passing of the Insurance Laws (Amendment) Bill in March 2015, the same one which raised the cap on foreign insurers' participation in joint ventures with Indian companies from 26 per cent to 49 per cent. Among its other clauses, it also permitted foreign reinsurers to set up wholly owned branches in India. Though foreign insurance companies have been in India since 2000 – in joint ventures, with a cap of 26 per cent equity – there were no reinsurance companies among them. The sole Indian reinsurer so far was the publicly owned General Insurance Corporation (GIC Re). On top of the preference list are Indian reinsurers that have a minimum credit rating from any of the internationally renowned credit rating agencies for the previous three years, which only applies to state-owned GIC Re, and thereafter, the branch office of a foreign reinsurer which shall maintain a minimum retention of 50 percent of the Indian reinsurance business. Global reinsurers are piling into India in search for growth, but this is likely to increase competition in an already soft market. Indian reinsurance business could previously be written from abroad. However, India's regulator has now introduced regulations placing branches of foreign reinsurers at the top of a preference order setting out how Indian insurers are to cede business.

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In India, insurance industry has advantage because interest rates are 6%. But it is not sustainable. When the domestic insurance industry embraces sophistication of risk adjusted pricing, they will see how they can make better results. At the moment, it is not there. Lloyd's was in favour of remaining in the EU but democracy decided the other way and they set operation in onshore EU to write business seamlessly.

Reinsurance- it has A Future In India

With huge opportunity in India and rapidly growing middle class and a comparatively low insurance density relative to other national economies, India constitutes an attractive market of the future for many re-insurance companies. The entry of foreign reinsurers in India will result in insurance companies being able to provide more specialised covers to corporate, including liability risks and cyber risks. The move will also increase the country's capacity to write large insurance policies. GIC Re, with a turnover of ₹ 18,435 crore in 2015/16, handles around 52 per cent of the total reinsurance business in the country. The rest is already spread across global reinsurers, but with many of them now expected to set up branches in India, the business is likely to get a big fillip. Following the amendment, IRDAI, in October 2015, released guidelines on the registration and operation of foreign reinsurers in India.

Earlier, global reinsurance companies could do business within India only by incorporating locally as a joint venture where they would be minority partners. Under the amended insurance legislation, they can function as branches without having to incorporate locally in the same manner that foreign banks do business. Meanwhile, ITI Reinsurance has emerged the first private reinsurance company in India. The new company would have a capital base of ₹ 500 crore and focus on all segments of non-life reinsurance. Reinsurance companies provide cover to domestic insurance companies and enable them to issue policies where the sum insured is larger than their own balance sheet. In addition, GIC will have a domestic competitor as well, which has been given clearance – ITI Re, owned by Fortune Financial Services. Market participants have greatly appreciated the openness and willingness IRDAI has shown to understand reinsurers' challenges and create a welcoming environment for their entry. Moreover global reinsurers are extremely enthusiastic about India. They are making the case for full liberalisation. There is a question of sensible price. Lloyd's will not come in and underwrite risks at low price. The scale of the opportunity is significant. The regulations would be gradually liberalised. As far as domestic insurance is concerned, there is benefit in liberalising. The global economy is subdued, with the exception of India. India's growth rate is at 7.6%. Indian government is business friendly and is trying to keep up growth. It is encouraging.

Challenges- Reinsurance have to Face

Indian general insurance market is on a healthy growth phase achieving double-digit growth on a year-on-year basis. This will obviously warrant additional demand for reinsurance capacity as well as expertise in product innovation and development. The Indian insurance market always had a steady supply of reinsurance capacity from across the borders in addition to GIC Re. The market dynamics does not change with regard to capacity available except for the incremental capacity brought by global companies, proximity of servicing offices of foreign reinsurers and compulsory retention of business assumed, within India, at a particular levelby branches of foreign reinsurers. There are many challenges for them like:

- The retention ratios of Indian insurers – the portion of the risk they keep to themselves, rather than pass on to the reinsurer – are also relatively high, lowering the scope of reinsurance business. With private insurance only 15 years old, good quality, adequate data for pricing, modelling and underwriting of products is also lacking across the entire insurance value chain. Reinsurers need to work collectively to enhance underwriting standards, pricing and wording of policies. They also need to evolve a transparent dispute resolution mechanism to ensure that the Indian market flourishes in coming years.
- Taxation is another worry for the foreign reinsurers, since there are a number of areas where clarity is yet to be provided – mechanisms for computing business profits of foreign branches, the service tax insurers will have to pay on reinsurance premium, the applicability – or otherwise – of service tax and Goods and Services Tax (GST) on reinsurance brokers, and more. Will Lloyd's, as a reinsurance market, have to pay GST? To bring the Indian market in line with international norms and enable Indian reinsurers to compete on a level-playing field, the reinsurance business should not attract GST. TJ

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Non - Theme Articles

Customer Retention Scenario in Private Life Insurance Services

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Abstract

India is one of the most populated countries in the world. There arises a need for insurance or safety among the people. For the insurance companies to survive competition, they have to upgrade their quality, transparency and integrity to acquire and retain customers in the long run. Now, public and private insurance companies are implementing customer relationship programmes to attract more customers and retain existing customers. One of the ways for achieving high customer retention, satisfaction and gaining the loyalty of customers is to offer high quality services on time. One of the best practices to achieve it can be through Customer Relationship Management (CRM). Data was collected from five Private Life Insurance Companies from Virudhunagar District in Tamilnadu. An attempt has been made to ascertain the importance of Customer Relationship Management in retaining customers in Insurance sector.

Keywords
Customer Relationship Management, Private Life Insurance Companies, Customer Satisfaction and Customer Retention.

Introduction

In today's dynamic environment, the insurance industry has witnessed many spectacular changes in terms of advancement in technology, strengthening of the existing customer base and acquiring new customers. Insurance industry is one of the leading industries in India. There are 52 insurance companies in India out of which 24 are life insurance companies and 28 are general insurance

In today's dynamic environment, the insurance industry has witnessed many spectacular changes in terms of advancement in technology, strengthening of the existing customer base and acquiring new customers. Insurance industry is one of the leading industries in India. There are 52 insurance companies in India out of which 24 are life insurance companies and 28 are general insurance companies.

companies.There are 23 private insurance life insurance companies and 1 public sector Insurance company.

The insurance industry in India was opened up to private sector participation in the year 2000. Because of the entry of private players in the insurance market, Life Insurance Corporation of India has lost 26 per cent market share to the private players although both, market size and the insurance premium being collected are on the rise. Private life insurance companies are competing with LIC to tap the immense insurance market potential of India.

Today, the main challenge before the insurance companies is to attract and retain existing customers. Private insurance companies are implementing customer relationship programs to attract more customers and retain existing customers. Customer Relationship Management is a model for managing a company's interactions with current and future customers. It involves using technology to organize, automate, and synchronize sales, marketing, customer service, and technical support.

In present day scenario, many businesses such as banks, insurance companies and other service providers realize the importance of Customer Relationship Management and its potential to help them acquire new customers, retain existing ones and maximize their lifetime value. There ought to be a close relationship with customers and marketing departments to provide long term retention of selected customers. Information technology and marketing departments must work closely to implement Customer Relationship Management efficiently.

Customer relationship management practices have traditionally included sales activities, marketing, customer care and even technical support. Now-a-days Customer Relationship Management is:

- Acquiring customers
- Keeping customers
- Growing with customers
- Gaining customer insight
- Interacting with customers across all touch points
- Building lasting relationship with customers
- Delivering value to customers
- Acquiring a sustainable competitive advantage
- Growing the business

In insurance marketing, Customer Relationship Management is about understanding the policy holder's needs and encouraging this knowledge to increase sales and improve service quality. Customer Relationship Management also involves the consideration of policy holder's information in a single database and the re-engineering of the business process around the customer.

The following Table depicts the usage pattern of Customer Relationship Management in various service sectors.

Table 1

Usage pattern of Customer Relationship Management in Service Sector

Service Sector	1992-2002 (in per cent)	2003-2013 (in per cent)
Banking Sector	35.81	68.49
Insurance Sector	42.94	75.05
Healthcare Sector	21.53	39.67
Courier Sector	11.62	24.8
Tele Communication Sector	19.04	39.11
Transport Sector	30.81	44.58
Tourism Sector	3.2	15.83

Source: Secondary data, Report of ICFAI Press.

It is evident from Table 1 that Insurance sector ranks top among all the sectors. It is now the turn of insurance sector to adopt the Customer Relationship Management strategies for acquiring customers, serving them at their convenience and also retaining them. After liberalisation, with the opening of insurance industry to private players, competition has intensified and it has become very difficult for the companies to attract and retain the customers (policyholders). Every company has recognized the need for shifting from a traditional strategy to survive in the market.

Top 10 Insurance Companies in 2018

The following are the list of top 10 life insurance companies in India. Out of which seven companies have been selected for the study.

1.	Life Insurance Corporation of India	
2.	ICICI Prudential Life Insurance	
3.	HDFC Standard Life Insurance	
4.	Birla SunLife Insurance	
5.	Bajaj Allianz Life Insurance	
6.	SBI Life Insurance	
7.	Max Life Insurance	
8.	Tata AIG Life Insurance	
9.	Reliance Life Insurance (RLIC)	
10.	ING Vysya Life Insurance	

Research Problem

Insurance sector is one of the most important entities which has been growing relatively fast in India. Addressing the challenge of Life Insurance Corporation of India becomes a critical component of competitiveness for private insurance companies in India. By providing customer relationship management to its customers, the private life insurance companies can differentiate themselves from other service firms and will be able to improve their profitability and retain customers. It would be interesting to know about the business practices adopted by Private life insurance companies for retaining their existing and future customers.

Review of Literature

Chamdrahauns Chavanet.al., (2012) reports that the insurance industry has been flooded with private players due to liberalization in India, the times have passed when the buyer was forced or had no choice in insurance schemes and policies. The customer needs are ever increasing and with the changes in the life-style pattern, the lifespan of people is also undergoing change. With such social changes, it is increasingly important that the customers be given a one –stop service under one umbrella.

G.MageshKutalamet.al. (2012) presents that Indian markets have the highest number of Life insurance policies in force in the world. A substantial part of the insurance market, the portion dealing in pension plans and insurance as an investment option is protected by a tariff and administered price regime. Insurance companies have to make use of CRM technologies to improve efficiency, profitability, and customer loyalty.

T.M.Padmanabhan and P.Singh (2012) reveals that Customer Relationship Management plays a crucial role for the development of the Insurance sector. With the opening up of the insurance sector, 20 private insurance companies have started their businesses in India; existing and new insurance companies are facing competition. So, customer relationship management is needed for insurance sector in the contemporary era.

Geetha and Francina (2012) specifies that all the respondents/ policyholders have certain level of expectations from the services that are to be delivered by an Insurance company. All the policy holders of both LIC and HDFC-SLIC have shown their satisfaction towards the services of both insurance companies. The forth coming years will be more dynamic and challenging for these insurance companies as excellent services to all the strata of economy will ensure their share.

Pappeswari and Rajalakshmi (2013) founds that there is low level of awareness and understanding of life insurance products and more generally of the operation of life insurance companies among rural customers. Insurance companies in India are consequently directing their strategies towards increasing customer

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satisfaction and loyalty through improved service quality both for rural or urban markets.

Koushkimajd et al., (2013), explains that CRM will play an important role in the profitability of this company (IIC). In the present research, the impact of CRM dimensions like trust, commitment, mutual relationship and conflict management on customer's loyalty was measured. Results showed that trust, mutual relationship and conflict management dimensions had positive impact on CRM and this increased customers' loyalty. But commitment had no impact on CRM and therefore no role in customers' loyalty.

Catherine Nirmala Rao (2014), has revealed that customer services in private companies far outweigh the facilities offered in the public sector LIC. It was found that LIC has reinvented its strategies to stay abreast with IRDA regulations and provide varied facilities to its customers. Majority of the respondents were of the opinion that the services provided by private companies have redefined the whole concept of insurance. Private companies also made it relatively easy for clients to revalidate lapsed policies and are very effective in quick claim settlements. There is definitely a shift of customers' preference from public sector LIC to private life insurance companies.

Hypotheses

Chi-Square Test

H_{01}: There is no association between respondents' age and their motives for taking private life insurance policy.

H_{02}: There is no association between income and the mode of premium payment.

Rank Sum Test

H_{03}: There is no significant difference in the ranks assigned to the service quality of Private Life Insurance Companies.

H_{04}: There is no significant difference in the ranks given by the two groups (gender) to select Private Life Insurance Companies for Safety investment.

H_{05}: There is no significant difference in the ranks provided by respondents to the service provided by Private Life Insurance Companies.

Factor Analysis

H_{06}: Exploratory factor analysis is not valid

Objectives of the Study

The main objective of the study is to know about the effectiveness of Customer Relationship Management in retaining customers. Other objectives are to analyse the factors influencing Customer Relationship Management in private life insurance companies and to measure the attitude of customers towards services of private life insurance companies.

Data and Methodology

The study is dependent on both primary and secondary sources of data. A sample survey has been conducted for the collection of primary data. The secondary data has been collected from standard text books, reports and records of Private Life Insurance Companies.

Sampling frame is limited to the Private life insurance companies in Virudhunagar district. At present there are 23 Private Life Insurance companies, out of which the following five companies are included for the study : Reliance Life Insurance Co. Ltd., Exide Life Insurance Company Limited, HDFC Standard Life Insurance Company, ICICI Prudential Life Insurance Company Ltd., and SBI Life Insurance Company Ltd. Respondents constitute the customers who are the policyholders of life insurance companies from the six municipal towns viz., Arruppukottai, Rajapalayam, Sivakasi, Srivilliputtur, Sattur and Virudhunagar. Sample survey has been conducted during April-June 2016.

The size of the sample is 125. Equal number of 25 sample respondents has been collected from the five life insurance companies. Convenience sampling method has been used for the selection of the required number of sample respondents. Survey was conducted during the month of April-May 2016. Relevant statistical tools such as Percentage analysis, chi-square test, Mann Whitney U test, one-sample Kolmogorov-Smirnov test, Friedman's test and factor analysis have been used to analyse the collected data. Statistical packages like Microsoft Excel and SPSS IBM statistic 17 have been used in the present study.

Analysis and Intrepretation

The socio - economic variables such as gender, age, marital status, type of family, educational status, Occupational status and monthly income of the respondents are taken into account.

Table 2

Socio-Economic Profile of Respondents

Socio- Economic Variables		No. of Respondents	Percentage
Gender	Male	101	80.8
	Female	24	19.2
Age (in years)	Below 26	8	6.4
	26-35	38	30.4
	36-45	34	27.2
	46-55	25	20.0
	56-65	17	13.6
	Above 66	3	2.4
Marital Status	Married	77	61.6
	Unmarried	48	38.4
Type of Family	Nuclear	76	60.8
	Joint	49	39.2
Educational Status	Upto Primary school	2	1.6
	Upto SSLC	8	6.4
	Upto HSC	19	15.2
	Diploma	11	8.8
	Under Graduate	52	41.6
	Post Graduate	33	26.4
Occupational Status	Businessman	28	22.4
	Engineer	15	12.0
	Doctor	5	4.0
	Agents & commission broker's	25	20.0
	Private jobs	26	20.8
	Entrepreneur	10	8.0
	Government jobs	16	12.8
Monthly Income (in ₹)	Below 10000	3	2.4
	10001-15000	13	10.4
	15001-20000	24	19.2
	20001-25000	45	36.0
	Above 25001	40	32.0

Source: Primary Data

The study is dependent on both primary and secondary sources of data. A sample survey has been conducted for the collection of primary data. The secondary data has been collected from standard text books, reports and records of Private Life Insurance Companies. Sampling frame is limited to the Private life insurance companies in Virudhunagar district.

From the Table 1, it is inferred that

- 80.8 per cent are male respondents and the remaining 19.2 per cent are female respondents have invested in private life insurance policy.
- 30.4 per cent respondents are in the age group of 26-35 years.
- 61.6 per cent are married and 38.4 per cent are unmarried.
- 60.8 per cent of respondents are in nuclear family and 39.2 per cent in joint family.
- 41.6 per cent are first degree holders and 26.4 per cent are post graduates.
- 22.4 per cent of respondents are businessmen and 20.8 per cent are working in private jobs.
- 36 per cent of the respondents earn between ₹ 20001-25000 and 32 per cent earnabove ₹ 25001 as monthly income.

Table 3

Details of Policy Purchase

Policy Purchase		No. of Respondents	Percentage
Motives	Investments/savings	32	25.6
	Risk coverage	38	30.4
	Children education	15	12.0
	Tax benefits	24	19.2
	Retirement benefit	14	11.2
	Children marriage	2	1.6
Periodicity			
(in years)	Below 2	10	8
	2-4	18	14.4
	5-7	30	24
	7-9	33	26.4
	Above 9	34	27.2
Mode of Purchase	Own purchase	32	25.6
	Through agents	57	45.6
	Through online	36	28.8
Mode of Premium Payment	Credit Card	12	9.6
	Debit Card	10	8
	Internet Banking	35	28
	Bill Payment	68	54.4

Source: Primary Data

- 30.4 per cent of respondents prefer life insurance policy for risk coverage, 25.6 per cent for investments/savings and 19.2 per cent for tax benefit.
- 27.2 per cent of the respondents have invested in private life insurance companies for a period of above 9 years and followed by 26.4 per cent with 7 to 9 years of investment.
- 45.6 per cent of respondents purchase policy through agents and 28.8 per cent through online.
- 54.4 per cent of respondents pay premium through Bill Payment and 28 per cent through Internet Banking.

The awareness of the online services offered by Private Life Insurance Companies is presented in Table 3.

Table 3

Awareness of Online Services

Awareness of Online Services	Frequency	Percentage
Online purchase	36	22.4
Online premium payment	77	47.8
Policy status	19	11.8
Premium calculator	22	13.7
ECS	7	4.3
Total	161	100.0

Source: Primary Data

It is clear from the Table 3 that most of the respondents 47.8 per cent are aware of premium payment through online, 22.4 per cent are aware of online purchase of policy and only meager respondents are aware of the electronic clearing service.

Table 4

Preference to Invest

Preference to invest	Frequency	Percentage
Yes	**99**	**79.2**
No	26	20.8
Total	**150**	**100.0**

Source: Primary Data

It is clear from the Table 4 that out of 125 respondents, 99 respondents (79.2 per cent) prefer to invest in the same private Life Insurance Companies in near future.

Testing of Hypothesis

Performing a hypothesis test on sample data is an attempt to determine if the mean of a population is the same as the mean of the sample. In the study Non parametric test is used for testing the hypotheses.

The Chi-square test has been used to find out if there is no significant difference between the expected and observed result.

H_{01}: There is no association between respondents' age and their motives for taking life insurance policy.

H_{A1}: There is association between respondents' age and their motives for taking life insurance policy.

H_{02}: There is no association between income and the mode of premium payment.

H_{A2}: There is association between income and the mode of premium payment.

Table 5

Chi-Square Results

Variable	Pearson Chi-Square	Significance	Association
Age and their Motives	62.828	.000	**YES**
Income and the mode of premium payment	34.954	.000	**YES**

Source: Computed Data

As computed p value is less than the assumed value of 0.05, the above null hypothesis is rejected. Hence, there is association between the age and the motives to take life insurance policy and between income and the mode of premium payment.

Rank sum tests of (1) one sample KS test, (2) Mann–Whitney U test and (3) Friedman's test are the non-parametric tests which have been used to analyse ranked data. These rank sum tests have been applied for testing the following hypotheses.

One-Sample Kolmogorov-Smirnov Test

H_{o3}: There is no significant difference in the ranks assigned to the service quality of Private Life Insurance Companies.

H_{A3}: There is significant difference in the ranks assigned to the service quality of Private Life Insurance Companies.

Table 6

One-Sample Kolmogorov-Smirnov Test Result

One-Sample Kolmogorov-Smirnov Test		Service Quality
N		129
Normal Parameters[a,b]	Mean	3.07
	Std. Deviation	1.306
Most Extreme Differences	Absolute	.180
	Positive	.166
	Negative	-.180
Kolmogorov-Smirnov Z		2.049
Asymp. Sig. (2-tailed)		.000

Source: Computed Data

As computed p value is less than the assumed value of 0.05, the above null hypothesis is rejected. Hence, there is a difference in the ranks given to the service quality of Private Life Insurance Companies.

Mann-Whitney U Test

H_{04}: There is no significant difference in the ranks given by the two groups (gender) to select Private Life Insurance Companies for Safety investment

H_{A4}: There is significant difference in the ranks assigned by the two groups (gender) to select Private Life Insurance Companies for Safety investment.

Table 7

Mann-Whitney U Test Result

	Gender	N	Mean Rank	Sum of Ranks
Safety	Male	116	73.04	8473.00
	Female	34	83.88	2852.00
	Total	150		
Asymp. Sig. (2-sided)			.191	

Source: Computed Data

As the computed p value is more than the assumed value of 0.05, the above null hypothesis is accepted. Hence, there is no significant difference in the ranks assigned by gender to select safety investment in Private Life Insurance Companies. Males have given minimum mean rank to select Private Life Insurance Companies for safety investment. Safety of investment has been most preferred by male respondents than females.

Friedman's Test

H_{o5}: There is no significant difference in the ranks provided by respondents to the service provided by Private Life Insurance Companies.

H_{A5}: There is significant difference in the ranks provided by respondents to the service provided by Private Life Insurance Companies.

Table 8

Friedman's Test Result

Service Rendered	Mean Rank	Chi-square Value	p Value
Proper maintenance of record	3.48	28.560	0.000
Quick repayment of money	3.00		
More bonus	2.54		
Customer problems are solved quickly	3.12		
Safety of investments	2.86		

Source: Computed Data

From the above Table it is clear that mean rank for the factor, 'proper maintenance of records' is very high of 3.48 and mean rank for the factor, 'more bonus' is very low (2.54). Hence, loyalty bonus is most preferred by the respondents. As the computed p value is less than the assumed value of 0.05, the above null hypothesis is rejected. Hence, there is a significant difference in the ranks assigned by respondents to service provided by Private Life Insurance Companies.

Factor Analysis

Exploratory Factor analysis has been used to analyse the factors that influence Customer Relationship Management in private life insurance companies. In the study, 30 variables have been considered such as superiority of policy, safety of investment, rate of return, quality, staff appearance, etc. Factor analysis depends on three or four important steps. The initial first step is to see whether the performance of factor analysis for the present study is appropriate or not. To test the validity of factor analysis, the following hypothesis were framed and tested with Bartlett's test.

H_{06}: Exploratory factor analysis is not valid.

H_{A6}: Exploratory factor analysis is valid.

Table 9

Kaiser-Meyer-Olkin and Bartlett's Test of Sphericity

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.851
Bartlett's Test of Sphericity	Approx. Chi-Square	3649.861
	Df	435
	Sig.	.000

The KMO co-efficient ranges from 0 to 1; it must be above 0.5 and the value nearer to 1 indicates more reliability of the analysis. From the Table 7 the KMO value is nearer to 0.9; it means the data are adequate. The Bartlett's Test of Sphericity p value shall be less than 0.05, and test significance of .000 shows the variables taken for the study have a good level of correlation among them. Therefore, the Bartlett's test rejects the above null hypothesis; it indicates the performance of factor analysis is appropriate.

Variables with the highest loading on the factors indicating the Customer Relationship Management practices of Private Life Insurance Companies are provided in Table 10.

Table 10

Variables with High Loading

Factors	Name of Extracted factor	Selected Variables	Factor Loading
F1	Staff Courtesy	Willingness to help the customers	.678
F2	Service quality	Providing prompt service to customers.	.722
F3	Information technology	Easy to get information through Internet	.711
F4	Knowledge management	Details regarding policy status, due date of premium, new products and services.	.715
F5	Reliability	Convenient to pay premium on due date	.605
F6	Tangibility	Convenient operating hours, days and location	.617

Table10 exhibits the factors influencing the Customer Relationship Management practices of Private Life Insurance Companies. All the 30 statements have been reduced to six factors F1 is named as "Staff Courtesy" with the highest factor loading of

the selected variable Willingness to help the customers (.678), F2 is named as "Service Quality" with the highest factor loading of the selected variable Providing prompt service to customers. (.722), F3 is named as "Information Technology" with the highest factor loading of the selected variable Easy to get information through Internet(.711), F4 is named as "Knowledge Management" with the highest factor loading of the selected variable Details regarding policy status, due date of premium, new products and services.(.715), F5 is named as "Reliability" with the highest factor loading of the selected variable Convenient to pay premium on due date(.605) and F6 is named as "Tangibility" with the highest factor loading of the selected variable convenient operating hours, days and location.

Suggestions and Conclusion

Private companies have also made it relatively easy for clients to revalidate lapsed policies, speedy documentation, efficient service quality, more products available for all age groups and are very effective in quick claim settlements. There is definitely a shift of customers' preference from public sector Life Insurance Corporation of India to private life insurance companies. Private Insurers should innovate new products with unique features having some multipurpose benefits at the same time which could create an appeal to the customer. To conclude, respondents of the study area are satisfied with the services of private life insurance companies and are willing to invest in the same companies again and again which leads to customer retention of the private life insurance companies. Thus Customer relationship management is a tool for customer retention, so private life insurance companies may concentrate on more Customer relationship management practices to retain existing and future policyholders in the study area. TJ

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Insurtech: The Unchartered Potential

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Abstract

Insurance is a means of protection against a financial risk that could occur against a contingent or an uncertain eventuality. The insurance sector in India works on a mainstream business model that includes risk pricing, huge capital requirements as well as customer retention strategies. The incumbents in the business have been hesitant to changing or modifying their business models which has given a window of opportunity to the insurtech startups. Hence this has led to a surge in the number of evolving Insurtech startups which are constantly focusing on integrating technology into the business.

With the advent of technology in the Finance sector (FinTech), the sector was largely disrupted by new technological tools like Big Data Analytics, Machine learning and Blockchain. A similar potential is contained in the insurance landscape as well. The insurtech startups have been aligning themselves towards technology to tap some new channels, consumer segments and innovative provision of services. They are also trying to personalize the insurance policies by analyzing consumer behavior and lifestyles and certain patterns that are significant in determining the premiums to be paid by the consumers. This paper broadly discusses the types of technologies that can be adopted and used by the

Insurtech startups, types of physical tools like wearables, telematics etc. that can be used for developing patterns and trends and the way ahead for the insurtech startups and the incumbents.

Literature Review

In 2016, a research was conducted by Volosovich Svetlana,Professor, Doctor of Economics, Professor of Finance at Kyiv National University of Trade and Economics. The research covered a broad overview on what are the key challenges and development perspectives in Insurtech. The predominant basis of the research stated that Blockchain has led to the technological innovation in the insurance market. It has hiked operational efficiency by automation of the claims handling process as well as transparent payment mechanism systems.

Alexander Braun and Florian Schreiber have explored the insurtech potential in their book: The Current InsurTech Landscape: Business Models and Disruptive Potential. This book has gauged the Insurtech landscape to greater depths by doing a retrospective study of Insurance business models and patterns. The book also talks about insurtech being a disruptive innovation and the extent of its disruption for the insurance incumbents. All the studies and conclusions have been backed by various empirical analyses by conducting international surveys targeting primary insurers, brokers, venture capital firms, incubators, accelerators and insurtech startups.

In 2017, Infosys had published an article on the changing face of insurance industry. The article stated how technology and business trends pose a challenge as well as an opportunity for the insurance sector. It also stated that Insurance industries should invest more in computive technologies like blockchain, Internet of Things, cognitive computing, digital analytics, digital distribution channels etc. the article posed a conclusion that alongside with investing in technology, insurance companies should always look forward to acquiring or partnering with insurtech startups and connecting with customers at a personal level so as to enhance their insurance experience. This would help to retain the existing customers and generate new leads by giving financial security and protection against uncertain losses.

Indian Insurance Scenario

The Indian insurance landscape has seemed very promising in the last decade. The total insurance market has mushroomed from US$23 billion in FY2005 to US$84.74 billion in FY2017 giving an annual compounded growth rate of 41%. The total premiums have increased at a rate of 11.48% CAGR over the same tenor. The life insurance sector is being dominated by LIC with a staggering market share of 71.07% whereas the following players are ICICI prudential, HDFC, SBI Life with single digit market shares. The non-life insurance sector has a similar growth story with the market blooming at US$19.6 billion in FY17 at a rate of about 10% CAGR. The major players in the market are ICICI Lombard, Bajaj Allianz, HDFC Ergo, TATA-AIG, Reliance, Cholamandalam etc.

With the advent of new technology and some alternate enhancement factors, the insurance industry shows promising growth. All the processes having been taken online has led to increase in operational efficiency of insurance companies. The incumbents have started adapting to new ways of customer engagement through NBFCs, Bancassurance, online web portals and Insurtech. But along with a promising future, there are a lot of challenges that these incumbents face. The majority of life insurance policies are sold in the last quarter which gives an irregularity in the sales pattern. Insurance is also merely perceived as a tax saving instrument. This sentiment in the minds of the consumers has been a barrier to the sales of insurance policies. The strategies for distribution channels have also never been quite impressive sided by poor data collection and management.

The rural insurance sector is highly untapped by private players. The micro insurance industry shows high potential in the rural areas. The insurance companies, apart from LIC, do not show any interest in such areas thereby neglecting the establishment of any satellite branches. The lack of literacy in terms of insurance also

> In this scenario, the role of good relationship with the customers will trigger. Good relation with the existing customers will help us to convince and educate them more easily for not opting for cheaper price and thereby ending up with the poor services in return. The Insurers have to consider the changing needs of the customers as well and act in a timely manner.

plays a major role in not letting people purchase insurance policies. Some do not know of such schemes while some others lie below the poverty line, where basic necessities like food, clothing and shelter themselves are not fulfilled.

There has been an apparent drop in persistency ratio as well. Persistency ratio is defined as the percentage of all existing policies that are renewed by the insurer annually. In 2017, the persistency ratio for 1 year has been as low as 61%. This means that out of 100 policies purchased in a year, only 61 of them were renewed in the following year. This ill phenomenon leads to high costs for the insurance players in the market as well as for the customers since the amount of premium paid in the first year is higher than that in the following years. The drop in the persistency ratio has been attributed to the lack of communication of insurers with customers regarding the renewal of policies.

Insurance penetration, the ratio of annual gross insurance premium to the gross domestic product, is around 3.4% as compared to the global average of 6.2%. Insurance companies in India not only provide risk cover for various objectives but in some cases, they give some additional benefits as well, for example, a source of long term debt and equity for infrastructure projects. Insurance Regulatory and Development Authority (IRDA) regulations require insurance companies to invest more than 15 percent of their funds in infrastructure and social sector.

Yet 80% of Indian population is without life insurance cover subjecting themselves to weak social security and no old age income. However, the advent of Insurtech might be able to trigger these weak spots and lead to the overall development of the whole sector.

Insurtech–Introduction

Insurtech, a subset of FinTech, refers to several segments of the new technologies that are disrupting the insurance sector through smartphone apps, claim acceleration tools, consumer activity wearables, individual consumer risk development systems, automated compliance processing and online policy handling.

Insurtech has been broadly categorized by CrunchBase (CB) insights into 8 categories, namely: (i) healthcare (ii) automobile/P&C insurance (iii) life insurance (iv) Peer-to-peer insurance (v) small business (vi) insurance software (vii) product insurance (viii) mobile insurance.

Insurtechs follow a different approach as compared to what the incumbents do. Insurtechs consider auto insurance as cash cows since the insurance is recurring in nature and their pricing depends on car characteristics and the experience of the driver. These cash cows can provide finances to the insurtech startups to chase customers differently than how the incumbents do it. Although Insurtechs are smaller and younger companies, they try to target a new base of customers which are at the bottom of the pyramid whereas the incumbents are managing the existing customers. The incumbents also tend to provide simpler functionalities through their products whereas Insurtechs try to avoid competition from incumbents by competing in a different sector altogether. Insurance companies do not innovate and try to focus on existing business models. On the other hand, Insurtechs innovate and try to gauge future consumer needs, hence this gives them additional leverage to become powerful in the future. Insurtechs initially are smaller in size and hence have very little to lose whereas for the incumbents, it's a tradeoff between innovation and the current operations of the business.

Insurtechs are also trying to take the customer experience to “phygital”, which is a mixture of physical and digital. Examples of phygital medium can be a video calling session which is partly physical and partly digital. India shows huge market potential for insurance industries, owing to the demographic dividend. The average Indian age by 2020 will be 29 years as against 40 years in the US, 46 years in Europe and 47 years in Japan. Even as the labor force declines by 4 percent in the industrialized world and by 5 percent in China in 20 years, it could increase by 32 percent in India.

Insurance companies and insurtechs have also tried and tested a number of distribution channels. A number a distribution channels have been discussed below:

Channel-Agencies: Insurance agents have deeper networks to penetrate the retail and SME businesses and they have a better understanding of the minute details of the products. But agents as a distribution channels generally yield lower margins and are not perceived to be profitable by the companies.

Channel-In-house: Such a distribution channel provides a front-end advantage to companies since the employees and internal agents have a better understanding of the product than an external agent would have. One of the limitations of internal agents is the lack of penetration into the rural areas and the lack of understanding of the ecosystem and cultural norms of consumers at the bottom end of the pyramid.

Insurtech, a subset of FinTech, refers to several segments of the new technologies that are disrupting the insurance sector through smartphone apps, claim acceleration tools, consumer activity wearables, individual consumer risk development systems, automated compliance processing and online policy handling.

Channel-Brokers: A broker would have expertise in attracting commercial consumers and can also deliver complex products with a wider reach in the commercial space. The brokers are held back by the limitation in growth rate of commercial products. Also the commissions for brokers are highly negotiated due to the advent of virtual selling channels. This puts a cap on the profitability of the brokers as individuals.

Channel-Bancassurance: Insurance companies scope the clients of the banks in order to cover a wider area of clients that would be interested in integrating insurance products in their portfolio. However, the bank tellers might not understand the intricacies of the insurance products and hence the quality of service provided by the bank tellers might be compromised.

Channel-Referral system: The expansion of consumer base depends solely on the quick reach to and by the customers among themselves. This helps the insurance companies avoid the sensitivity involved in sharing the databases with other channels. Such distribution channels are held back because of absence of volume obtained by referral systems and hence such a distribution channel depends solely on the consumers with minimal investment.

Insurtech has attracted negative criticism as well. In some of the developed economies like Australia, Insurtech has given rise to a number of fraudulent practices. This highlighted the need for regulations in the insurance market. Insurtechs have also not proved to reduce the operating costs either on absolute basis or percentage of gross revenue from sales. Some early birds have adopted technology in their businesses while the others are merely following suit. This is leading to the development of same type of technology and there is no differentiation to become a unique selling point (USP) for insurance companies. The investors are more confident about the FinTechs rather than the Insurtech startups. This makes the FinTech companies grow exponentially faster than the Insurtech startups. Insurtech has not yet solved the industry problems of unpaid claims, advisor's fee, declining profitability and low customer trust. Also, because of the established IT systems, the insurance companies are not yet ready to replace them by new technological advancements.

Classification in Insurtech Segments

The Insurtech startups till now have largely tried to use technology and digital solutions in the supply side vertical. Some of the untapped insurance specific verticals are the reasons that the insurtech startups have not been able to attract investments to a larger magnitude. According to the study conducted by Oliver Wyman, the three segments that can be largely tapped from the insurance industry perspective are:

1. The proposition segment, although being a very small segment comparatively, shows a wide gap between the most active insurtech startups and the startups with greater potential but lesser activity. The startups which are not quite active are perceived to be the ones that depict true innovative solutions on how risk coverage is presented to the consumers. A quick glance at the strategic assessment of this segment is shown below:

STRATEGIC ASSESSMENT

	MARKET POTENTIAL			CHANCES OF SUCCESS			LIKELY WINNERS
	PREMIUM POOL	VALUE GENERATION	TOTAL	CONSISTENCY	DIFFERENTI-ATION	TOTAL	
1 LOW-COST	High	Medium	Medium/ High	High	Medium	Medium/ High	Agile Insurers/ InsurTechs
2 SITUATIONAL	Low	Medium	Low/ Medium	Low	Low	Low	InsurTechs
3 COMMUNITY-BASED	Medium	Low	Low/ Medium	Low	Medium	Low/ Medium	InsurTechs
4 FROM "INSURED" TO "PROTECTED"	High	High	High	High	High	High	Non-insurance players
5 RISK PARTNER	High	High	High	Medium	High	Medium/ High	Insurers
6 DIGITAL RISKS	High	High	High	High	Medium	Medium/ High	Insurers

High ‹ Overall Potential › Low

Source: Oliver Wyman, Policen Direkt

2. The distribution segment does not have any mismatch between the potential and level of activity in the startups. However, the potential explored has been quite limited because of a crunch in resources available or very little opportunity for differentiation. A snapshot of the strategic assessment of this segment is shown below:

STRATEGIC ASSESSMENT

	MARKET POTENTIAL			CHANCES OF SUCCESS			LIKELY WINNERS
	PREMIUM POOL	VALUE GENERATION	TOTAL	CONSISTENCY	DIFFERENTIATION	TOTAL	
1 D2C	Low/ Medium	High	Medium	Medium	Low	Low/ Medium	Agile Insurers/ InsurTechs
2 PCW	High	Medium	Medium/ High	High	Low/ Medium	Medium	General Tech Plays
3 AFFILIATE INTEGRATION	Low	Low/ Medium	Low/ Medium	High	Medium	Medium/ High	InsurTechs
4 CORPORATE PLATFORMS	Medium	Medium	Medium	High	High	High	InsurTechs
5 B2C ONLINE BROKER/VCW	Medium	Medium	Medium	Medium	Low	Low/ Medium	Agile brokers/ InsurTechs
6 B2B ONLINE BROKER/VCW	Medium	Medium/ High	Medium	Medium/ High	Medium	Medium	Agile brokers/ InsurTechs
7 FINANCIAL PARTNER	High	Medium	Medium/ High	High	Medium	Medium/ High	FinTechs
8 LIFE DIGITIZERS	Open	Open	Open	Open	Open	Open	Not expected to happen soon

High ‹ Overall Potential › Low

Source: Oliver Wyman, Policen Direkt

3. The Insurtechs have done fairly well in the operations segment. The next phase in these segments would be to step up and make the processes more efficient and consistent such that they would help companies in the insurance sector produce long term sustainable profits. A brief overview of the strategic assessment of this segment is shown below:

STRATEGIC ASSESSMENT

	MARKET POTENTIAL			CHANCES OF SUCCESS			LIKELY WINNERS
	PREMIUM POOL	VALUE GENERATION	TOTAL	CONSISTENCY	DIFFERENTIATION	TOTAL	
1 DIGITAL SALES ENABLING	High	Medium	Medium/ High	High	Medium	Medium/ High	InsurTechs
2 UNDERWRITING	Medium	High	Medium/ High	High	High	High	Reinsurers/ InsurTechs
3 SERVICE AND ADMINISTRATION	High	Medium	Medium/ High	Medium	Medium	Medium	General Service Plays
4 CLAIMS	High	High	High	High	High	High	InsurTechs
5 BALANCE SHEET AND FINANCIAL RESOURCE MANAGEMENT	High	Low	Medium	Medium	Low	Low/ Medium	InsurTechs

High ‹ Overall Potential › Low

Source: Oliver Wyman, Policen Direkt

Insurtech Tools

The insurance industry is about to go a long way with an amplification in the operational efficiencies guided by technology and other trends. Some of the recent trends that have been seen in the insurance industry are:

1. **Smart contracts:** A smart contract is a computer protocol intended to digitally facilitate, verify, or enforce the negotiation or performance of a contract. A smart contract works on Blockchain technology for transparent and flexible claims management. The amplitude of the insurance premiums to be paid by the customers would be determined by a mathematical algorithm according to a risk based model. Likewise, the insurer can select the insurance policy which is feasible to him/her. Smart contracts allow the performance of credible transactions without the involvement of third parties.

2. **Telematics:** Telematics is the branch of information technology which deals with the long-distance transmission of computerized information. Telematics is commonly used by insurers to study the driving patterns of the customers. On the basis of the study patterns, the insurers give a rating that eventually determines the customer's premium. A telematics device can be plugged to the car or even an app can help to transmit the data. The telematics device can also reach out for help in case of an emergency or can automate toll payments too.

3. **Wearables**: Wearables are smart electronic devices that can be incorporated into clothing or worn on the body as implants or accessories. Wearables allow the companies to capture data related to the subject on a close monitoring system. Wearables can provide for some serious data like the cholesterol and glucose levels in a human body that cannot be found otherwise without a formal medical checkup. This would also reduce healthcare costs for humans. Some of the famous examples of wearables are Oura rings, which is a ring to be worn on the finger of the subject. These rings studies the sleep patterns as well as heart beat rates of the subject which can prove to be a substantial piece of data for the

insurers. Another famous wearable was a smart T-shirt worn by Ralph Lauren at US Open in 2014. This t-shirt studies the heart beat rates, breathing patterns, the amount of calories lost while playing or while working out. Some serious concerns with wearable technologies are: 1. It is an unchartered territory where we do not know how a human body would react to such wearables over our body all the time, 2. We might not be very comfortable on providing personal data of such magnitude to our insurers, 3. The security threat in terms of technology would always persist where a hacking of such a wearable can be disastrous.

4. **Bancassurance:** Bancassurance is an arrangement in which an insurance company and a bank form a partnership so that the insurance company can sell its products to the banks' client base. Banks gain from this partnership since they earn extra income from the commission from sale of an insurance policy. They also benefit since they get to add one more product to their portfolio of products while selling services to the customers. Insurance being a long term product can also help in customer retention for the banks. On the other hand, insurance companies can get high market penetration rate by getting access to the bank's client base. Also the employee cost reduces since bank tellers become a point of contact for sale of insurance policies. Hence this becomes a win - win situation for the banks as well as the insurance companies.

Technologies Used in Insurtech

The technology is being driven by the following fundamental pillars that would give an additional thrust to the insurance sector:

1. **Blockchain:** A blockchain is a digitized, decentralized, public ledger of all cryptocurrency transactions. Blockchain is a decentralized system wherein multiple parties share and update information thereby increasing operational efficiency and reducing time. Blockchain can convert the insurance ecosystem into a multi-dimension process where all the insurers are at once notified about an approaching calamity through data transmitted by sensors across regions. Thus, Blockchain will minimize human interaction giving rise to smart contracts and eventually leading to reduction in process time. Blockchain will also eliminate risks in the system by identifying customer profiles, validating claims and avoiding duplication of transactions. This would boost the efficiency in KYC management and fraud detection.

> Channel- Brokers: A broker would have expertise in attracting commercial consumers and can also deliver complex products with a wider reach in the commercial space. The brokers are held back by the limitation in growth rate of commercial products. Also the commissions for brokers are highly negotiated due to the advent of virtual selling channels. This puts a cap on the profitability of the brokers as individuals.

2. **Machine Learning:** Machine Learning helps in finding patterns in data in an automated manner using complex algorithms. All the multitude of available data can be captured from new data sources using Internet of Things, telematics and external data sources. This

empowers the machine to think and tries to capture a specific trend in the data and predict the future outcomes of similar occurrence of the event. Machine learning analyses the unstructured data and starts making sense of dissimilar datasets. Although machine learning has its own disadvantages like initial cost of IT infrastructure, non-readiness of adapting to new systems by the employees, regulatory issues and fraud and security.

3. **Robotics:** Robotic Process Automation (RPA) is a collection of tools like machine learning, virtual agents, natural language classification and computer vision. RPA can deal with real time data, automation of claims in a structured manner without human intervention, flexibility in claim settlement channel, integration of data and precision. The biggest concern with robotics is the encroachment of human jobs by robots. Although unskilled jobs will take an immediate hit, new jobs like coding, monitoring, risk analytics and pattern recognition will be discovered.

4. **Artificial Intelligence:** Artificial Intelligence (AI) is changing the operational patterns of insurance companies drastically. It plays a huge role in the underwriting process by using deep question answering techniques so that the underwriters can attribute the risks associated with a certain policy through an enhanced mechanism. It can also use predictive models of risk assessment with the aid of simulation modeling for commercial and life products. AI also changes the claims management experience with the help of robotics to identify the bottlenecks in the system and make the processes faster. It can also tap social media to keep a check on patterns of frauds in claims.

It is estimated that only 10% of all insurance players will have an algorithmic business strategy by 2019 thereby giving an early bird advantage to those insurance players who would step in sooner and integrate technology in their processes. Regulations are a huge concern for Insurtechs all around the globe. Although various governments appreciate that consumers are open to using technology and saving their premiums, the use of technology is moving away all the risks from the insurer's end to the consumer's end. A regulatory framework named Solvency II was introduced in Europe in 2016. This framework demanded certain parameters to be held by the Insurtech startups, namely, High capital requirements where a startup needs to build up insurance reserves from scratch such that in case of immediate settlements of multiple claims, the startup does not go bankrupt and holds up due to the excess insurance reserves in the chest. Another requirement is the minimum SRC (Solvency Risk Capital) where the insurance startups are expected to own additional amount of own funds on top of the insurance reserves.

Cyber security poses another threat to the establishment of the above mentioned automated digital systems. It is known that about 40% of the Fortune 500 companies are insured against the threat of cybersecurity. However, the insurance cover is not sufficient to claim the full exposure due to the loss. There is a lack of underwriters in case of cyber risks and they rely on the underwriters of other verticals. With new types of cyber attacks being discovered each year and the increased level of sophistication of cyber attacks, the risks and exposure of businesses across the globe keeps on increasing day by day. The roadblock that lies against the defense from such cyber attacks is that the businesses are not well educated in terms of cyber security. A couple of countries have taken huge hits on their respective GDPs (ranging from 0.5%-1.5% of their GDP) due to the rise in such attacks. Hence a need for higher investments in cyber security has been an alarming call for varied businesses all over.

Players in the Insurtech Space

Sr. No.	Name	Parent	Latest Investment (in parent brand)	Comment	Logo
1	PolicyBazaar	ETechAces Marketing & Consulting Pvt Ltd	>$200 million (June 2018)	It is an insurance web aggregator that lets you compare Insurance plans from different insurers and allows you to buy them online, and manage all your policies and related documents at a single place.	policybazaar.com Compare. Buy. Save.
2	Paytm Life Insurance Ltd.	One97 Communications Ltd.	>$1.4 billion (May 2017)	Registered on 21 Feb, 2018; Along with Paytm General Insurance Corporation Ltd., the focus is on insurance categories like health, motor and others	Paytm
3	Digit Insurance	Digit Infoworks	$44 million (July 2018)	Trying to scope categories like motor, travel, health, electronics and home insurance	digit
4	Coverfox	Glitterbug Technologies Pvt. Ltd	$22 million (April 2018)	It plans to expand insurance coverage into Tier II and Tier III cities, and address women's needs as it tries to diversify its product portfolio	Coverfox
5	Acko General Insurance	-	$12 million (May 2018)	Amazon has invested in Acko General Insurance. This can also allow the company to take advantage of Amazon's large pool of database	acko
6	EasyPolicy	-	45-50 Cr	Unilazer Ventures upped its stake to 70% in EasyPolicy. EasyPolicy works with insurers across the country to provide services in segments like health, travel, life and auto	easypolicy
7	Turtlemint	Invictus Insurance Broking Services	Undisclosed	Nexus Venture partners invested in this Mumbai based Insurtech startup with participation of Blume Ventures in 2016	turtlemint

Sr. No.	Name	Parent	Latest Investment (in parent brand)	Comment	Logo
8	121policy	Ideal Insurance Brokers	Undisclosed (by Xelpmoc)	The company is aiming to provide customers with products like family health insurance, maternity cover, senior citizen health coverage, corporate health, overseas health insurance, top up cover	121Policy .com

Future of Insurtech

Indian insurance landscape has not embraced technology yet. The reason for being hesitant towards technology is that the insurance incumbents do not have confidence in the continuity of the startups and hence investing in startups becomes a dicey job for incumbents as well as the investors. Another concern is the security of data. A number of cases have occurred in India where the data is accumulated from the consumers and then sold to third parties at cheaper prices. This has also led to mistrust between the consumers before sharing personal data with any company. Also, since Insurtech has not been tried and tested in India yet, insurers are not sure about the potential of Insurtechs and the value addition that they can provide to the insurance sector.

Insurers and Insurtech startups should come together and try to use each other's strengths to their advantage. They can try to create synergies by entering into a Joint Venture or by acquisition or mergers. Insurers would benefit by gaining the expertise in technology of the Insurtech startups and the insurtech startups will have access to capital, experience and a large consumer base leading to a win-win situation for both of them.

Insurance companies should also target the bottom level of the wealth pyramid. The rural areas of India have been hardly chartered. The rural insurance market shows huge potential and customer base to tap. It has depicted a CAGR of double digit since the last couple of years and this shows an enormous growth potential. IJ

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Liability Insurance Underwriting – Process, Principles and Perspectives

"Cyrus Mistry was sacked as chairman of Tata Sons in September 2016. He was replaced by Ratan Tata. The announcement came after the board of Tata Sons met and decided to replace 48-year-old Mistry, who had taken over from Ratan Tata in 2011. The sacking of Cyrus Mistry and its fallout might trigger a claim under the Directors & Officers Liability insurance cover purchased by Tata Sons. D&O policy of Tata Sons was issued by Tata AIG General Insurance and arranged by Howden Insurance Brokers.

Insurers in this regard said that the most potent development in the Tata battle is the letter from ousted chairman Cyrus Mistry where he raised the issue of impairments and made a statement that Tata Motors was taking loss-making decisions on emotional grounds. "The risks of investor actions are very high in the US where the company is listed," …. In case of proceedings in the US, the defence cost itself runs into millions of dollars and these have typically comprised a large chunk of D&O claims.

There are about three or four scenarios in which a claim might be raised under a D&O liability cover where there is a shake-up at the board level, said Amit Agarwal, practice head, Financial Lines Group at JLT. "If any action of the board results in a drop in share price and erosion of market cap, which leads to loss of shareholder value, then there is a possibility of a section of them bringing a class-action lawsuit against the company and against individual directors". In this case, a section called the 'Side C' coverage will protect the company and its directors. Besides shareholder action, the cover could also be activated if an ousted board member brings about a retaliatory suit against other board members…."

Times of India, 31st October 2016

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We know, D&O liability insurance is a very complex type of liability insurance which covers the third-party liability arising out of the wrongful acts committed by directors and officers. The policy indemnifies the directors and officers of a company or the company itself for the liability of the damage incurred by third-party taking legal actions against the directors and officers or the organization. The coverage includes payment for court award and defence costs incurred during trials and for civil, criminal and regulatory investigations. Sometimes criminal and civil actions are taken simultaneously by certain stakeholders of the company, but the intentional illegal and criminal activities are not covered by any D&O policy. Sometimes it provides a wider coverage safeguarding the past, present and future directors for damages arising out of alleged or actual activities including breach of duty, errors of omission or commission, misstatement or misleading statement etc. Such legal actions are generally initiated by customers, employees, shareholders or authorities against the decisions taken by the top brass in the course of their duties. D&O policy is a very complicated insurance cover which cannot be issued by any insurance company without requisite underwriting skill and experience. From the Tata Sons case we can easily guess rather foresee the complexity and intricacies involved in handling the probable D&O claims. The underwriters need to analyze, examine, explore and probe into the legal, technical, managerial aspects of the decisions taken by the directors inviting D&O claims from stakeholders and also to take proper defence in the court. Here the underwriter is required to consider two important aspects – a) Type of cover and b) Right to Defend or duty of defend of the underwriters apart from taking proper defences.

All these aspects will be discussed separately when the issue of D&O insurance underwriting will be taken up. I have made a brief reference to the Tata Sons case just to indicate the complexities of Liability Insurance.

Liability insurance cover is by nature very complex and for wider jurisdiction. Its complexities have increased immensely in the global market today. Property Insurance cover quantifiable risks of known property but liability insurance cover unexpected risks of unknown or contingent liability. Such liability risks arise or aggravate from the interactions among ever-changing legal environment, technological advancement and dynamic socio-economic conditions. More specifically property insurance is mostly designed, but liability insurance is always for risks of abstract, intangible and contingent liability arising from the legal actions from the third party. Liability risks are always unpredictable. Its probability & severity can hardly be guessed. A business man can't predict every outcome. For example, a customer could slip at the business premises and sustain an injury. Nobody can predict, how much award will come if the customer goes to the court. A businessman cannot predict how and when his employees may meet with an accident and sustain injury when they work with heavy machines. It is very intimidating to deal with those third-party claims without proper liability insurance. Liability insurance provides protection to the insured against third-party claims of bodily injury, property damage, or even personal and advertising injury in certain liability insurance policy.

With increasing globalization of trade, commerce and industry and with the increasing use of cross-border capital, India has had tremendous prospect for liability insurance. Since the liability risks are globally extensive and having far reaching effect in liability risk management, Indian insurers may find better market for liability insurance products like Product Liability, Professional Liability, CGL Policy, D&O Liability Policy provided the underwriters will equip themselves with underwriting skill, knowledge, expertise to the global standard.

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Problems & Prospects of Liability Insurance

Liability insurance covers the legal liability of the insured for their act of negligence or breach of duty either under common law or under specific enactment. Liability insurance covers only civil liability, but not criminal liability. Liability insurance underwriting is much more complicated and intricate compared to property insurance underwriting because of certain special factors such as intangibility, unpredictable court award depending upon legal jurisdiction, inadequacy of statistical data to measure probability and severity of loss, nature and gravity of legal action from third party for damages caused by the insured. All these factors create lot many underwriting difficulties especially in respect of determining the sum-insured or indemnity limit, rating the risks, deciding the, coverage, exclusions, terms and conditions of the cover. The nature and amount of third party liability depend on the judgment of court, which cannot be predicted or forecasted for assessing the loss forecasting.

Liability insurance largely depends upon the legal system of the country. For example, in the US many liability awards come in USD million, if not in USD billion. Study shows, the legal system of the western world comprising US, UK, Canada etc. the third party liability comes in large number for high values. Reportedly the US legal system produces many liability awards for USD 1billion and even more. The rise of billion-dollar verdicts in third party liability in the western world has made liability insurance grow enormously. There Public & product liability insurance counts about 40% of total liability market. For example UK's liability insurance amounted to ₹ USD 9bn in 2013, where Public & Product liability contributed around 40%, Professional liability 32%, employers' liability 20% & D&O liability 3%. Since Indian legal system is not strong and hard-hitting, the liability insurance market is not growing satisfactorily. However current MNC culture, rise of FDI and market globalization has increased prospect and potential of liability insurance. Since liability insurance has not matured in Indian insurance market, the Indian underwriters are not serious enough about liability insurance. Here most of the major liability policies are broker-driven. But the time has come for the Indian insurers to acquire skill and expertise in liability insurance underwriting.

The courts in various parts of countries are pronouncing verdicts for different amounts of awards against the same or similar nature of negligence or breach of duty. Neither the insured nor the insurer can predetermine the frequency or severity of loss like the property insurance in view of the past losses data. The evolving civilization and modernization of life which has increased the frequency and severity of liability lawsuits for third-party losses have increased both problems and prospects of liability insurance underwriting. Unpredictable court judgments in liability law-suits are also another critical aspect of liability insurance underwriting. Liability risks are emerging and evolving today over the world mainly due to the following factors;

- Growing Legal awareness of people
- Growing Industrialization, urbanization & IT Sector
- Growing complexities of life
- Availability of tailor-made new products/ policies
- Increasing number of statutes to ensure public protection
- Increasing number of legal liability actions all over the world
- High and increasing Court awards on liability on breach of duty and lack of professional skill

Since liability insurance also covers the insured's strict liability or vicarious liability arising from negligence or breach of duty of his employees and others under his supervision, it is really difficult for the insured and the insurer to properly predict the sources of the liability and the gravity of negligence impacting the amount of liability awards and claims. This factor makes liability insurance underwriting difficult, which also provides good prospect of liability insurance.

Intangibility / Latency

Intangibility or Latency is one of the major problems for underwriting liability insurance. The insurers face a lot of difficulties in deciding what or which event would trigger loss and the operating clause of liability insurance. The underwriters like to indentify and analyze liability risks on trigger basis to minimize the latency or intangibility exposure. The important triggers that the underwriters need to consider are a) Causation Triggers, Occurrence Trigger, Claim-made Trigger, Manifestation Trigger etc.

Potentials and Prospect of Liability Insurance in Indian Market

Liability Insurance is now emerging and upcoming as a critical insurance requirement in Indian market. Apart from traditional public liability insurance, products like Professional insurance, Directors & Officers liability insurance, Cyber Insurance are progressing at very good pace. In the IT innovations with digitalization and interconnectivity, the liability landscape is changing tremendously and consequently, the demand for cyber insurance growing heavily. IT Companies, Software-developer, Telecom industry, Banking & Insurance sector, all sorts of financial sectors are heavily exposed to cyber risks, Cyber risk arise from any sort of computer network, and the internet. Such risks include destruction, loss, theft, corruption and misappropriation of data, inability to retrieve data loss. Example of cyber risks are Virus/

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Worms/Bugs, Unauthorized Access to data and fraudulent activities like ATM fraud, Data theft, Technical failure of computer, Data extortion causing credit monitoring, Litigation Expenses, Government penalty, loss or damage to brand value, reputation, and so on. In a word, cyber risks are huge and ever-increasing in the cyber world. Country like India is heavily exposed to cyber risks, wich is evident from rising trend of ATM frauds. According to one estimate, the market for cyber insurance will grow globally to USD 9bn by 2010. If it is so, India will also command a very good share of the total market, since India is the 2nd largest user of Internet in the world. The intricacies of Cyber liability Insurance may be discussed separately in the forthcoming issue.

Today India is global economy with cross-border capital, free completion from global giants in trade commerce & industry and the MNC culture. All multinational companies need D&O liability insurance cover for the protection of the interest of the directors & officers of the company so as to ensure smooth functioning of company especially big companies and MNCs. Since the number of big companies & MNCs are rising rapidly in India, the need for D&O liability insurance is also increasing steadily. Since the D&O liability risks are very complex and multifaceted and the Indian premier non-life insurance companies do have requisite underwriting expertise and competence, the MNCs generally purchase D&O Liability Insurance cover either from foreign insurers or global giants. D&O cover has become a regular part of large multinational companies' risk management process today. Although major publicly listed companies have the highest risk of attracting D&O claims, any entity, whether publicly traded or not, as well as any non-profit organization, has potential D&O exposure. There is also an increasing demand from Small and Medium-sized Enterprises. So the Indian insurers need to acquire proper skill, knowledge and expertise in underwriting this complex liability product, so that they can make the use of huge potentials for D&O liability Insurance. Insurance coverage, policy-wordings and other underwriting aspects of D&O insurance may be discussed separately in forthcoming issues.

International Perspective of Liability Insurance

In the advanced markets like US, UK, Canada, liability insurance has been growing faster than property insurance with the increasing legal awareness of the people and speedy settlement of court cases there unlike India.. Analysis shows that liability insurance is more prevalent and considered more important in the advanced countries compared to emerging markets. The advanced markets account for 93% of global liability premiums in 2013.

The US is the largest market, with about 51% of the global liability premiums written in 2013. This is due to two factors– firstly the size of the US economy and secondly the increasing trends of court awards in the third party legal liability cases. In 2013, US businesses houses paid premium about $84 billion for various liability insurances - about $50bn on commercial general liability, $12 billion for Errors and Omissions (E&O), $5.4 billion for Directors and Officers (D&O)., $13 billion on the liability portion of commercial multi-peril policies, $9.5 billion for medical malpractice and $3 billion for product liability covers.

UK is the second largest market for liability insurance, with $9.9bn liability premiums in 2013, where public liability and product liability insurance contribute substantially. In continental Europe, the largest liability insurance markets are Germany, France, Italy and Spain. Together they made up almost $22 billion of global liability premiums in 2013.

Japan and Australia are the major markets in the Asia Pacific region, with commercial liability premiums of $6bn and $4.8bn respectively in 2013. In Australia liability insurance is mandatory form of insurance for the sector like aviation, maritime oil pollution and residential construction. In many countries, medical practitioners, property brokers and stock brokers are required to take professional insurance covers mandatorily.

Underwriting Considerations

Underwriting Considerations basically include i) Identification of Liability Risks with examination of origin of Legal Liability risks, ii) Risks Analysis with systematic CASE Study, iii) Analysis of moral hazards of the prospects since in liability iv) Rating the Risks in consultation with Reinsurer and brokers, v) Deciding Retention limit depending upon the nature and size of cover and vi) Deciding Policy wording in consultation with reinsurers having wider experience and exposure in particular type of liability insurance.

i) Identification of Liability Risks;

Risk Identification and Risk analysis are the fundamental step towards insurance underwriting. For risk analysis in liability insurance a detailed study called "Case Study" is a must for an underwriter. Before we discuss about CASE Study, we need to know common questionnaire on Risk Identification for liability risk;

- What types of activities are carried out by the prospect or the proposer?
- What is the volume of the business or activities of the prospect?
- What sort of third party legal liability risks are involved in the activities of the prospect?
- Whether all those legal risks are insurable?
- If yes, what could be general trends of court awards –both probability and severity?
- What is area or spread of activities-local, regional, national or global
- What is the legal jurisdiction and trend of the court awards?
- What parties might be harmed by firm (customers, suppliers etc)?
- How might these parties be harmed?
- What are the security measures taken by the prospect to minimize probability and severity?
- What is the potential magnitude of damages?
- What is the potential magnitude of defense costs?
- Will revenues decline on possible damage to firm's reputation?
- What is the potential magnitude of this loss?
- What actions may reduce this indirect loss and at what cost?
- Will products likely to be abandoned or products recalled?
- Will the firm have to raise additional capital if cash flows decline?
- Could large uninsured losses push the firm into financial distress?
- What is the past experience of loss and what preventive actions taken by the prospect?
- What is the next possible event which may affect the existing probability and severity?
- What are the existing liability insurance covers and the insurers, if any?

ii) Risk with Systematic CASE Study-

The above few questions set in a example for risk identification and analysis can be programmed into a detailed and systematic study called CASE Study. In Property Insurance Underwriting, risk analysis is basically based on COPE study while Liability Insurance requires CASE Study for risk analysis which helps in effective underwriting and rating the risk. It also helps in deciding coverage with proper exclusions, terms & conditions. CASE implies examination of a) Circumstances, b) Activity Level, c) Security & Preventive Measure and d) Event analysis impacting risk exposure;

a) **Circumstances:** Nature and condition (social, economic, plant, process, product, people, plant, personal, professional etc), spread of activity (local, regional, national and global). For example – drugs or products of a pharmaceutical company may be used globally and customers thereof may exist all over the world and consequently liability risk exposure for such pharmaceutical product will be much higher compared to products used locally or nationally. In those circumstances, for a product liability policy for the producer of internationally used drugs, the policy terms and conditions will be decided in view of international standards or trends and premium rate will be also determined at the higher rate compared to product liability insurance meant for producer of drugs locally used. Similarly in Doctor's Indemnity Policy, the underwriter must consider the nature and circumstances of his professional service of the proposer – whether his professional service as a general practitioner or a medical surgeon. Legal liability risk exposure for a medical surgeon is much higher than that of a general medical practitioner.

b) **Activity Analysis:** Volume, Value and variety or multiplicity of the activities carried out by the prospect insured need to examined and considered for determining policy terms, conditions, exclusions and rates. For example- In a public liability insurance policy, premium amount consists of two components- **Indemnity Limit &**

Turnover Loading. Indemnity limit is decided on the basis of AOA limit, Risks Group, Ratio of Limits of Indemnity (AOA; AOY) and Turnover Loading depends on Annual Turnover or volume of transaction.

c) **Security**: The Security measures of the prospect insured count a lot in respect of deciding coverage, exclusions, terms, conditions and finally rating for the risks to be covered by the policy. In case of a company which is professionally managed and is having proper quality control system, for product liability policy, terms and conditions may be lenient and relaxed and rate may be less while in case of a company which is not professionally managed and is having poor quality control system, policy terms and conditions should be standard or stringent and rate of premium may be comparatively high.

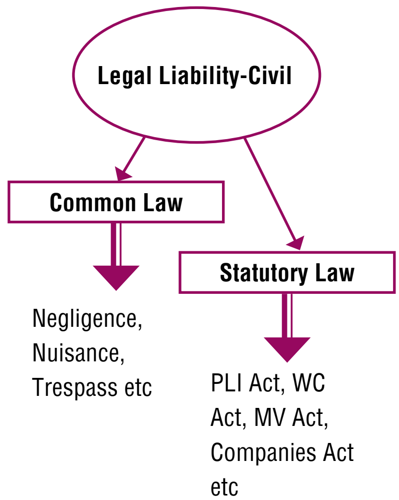
> Underwriting Considerations basically include i) Identification of Liability Risks with examination of origin of Legal Liability risks, ii) Risks Analysis with systematic CASE Study, iii) Analysis of moral hazards of the prospects since in liability iv) Rating the Risks in consultation with Reinsurer and brokers, v) Deciding Retention limit depending upon the nature and size of cover and vi) Deciding Policy wording in consultation with reinsurers having wider experience and exposure in particular type of liability insurance.

In IT age today Internet of Things has become a much bigger issue for cyber security as more and more devices link to the internet, commuter system, and various control systems. From the recent event that Chinese students hacked a Tesla Motors electric car, as part of a competition, in 2014, remotely controlling the car's locks, horn, headlights and skylight while the car was in motion. This indicates that almost all operating system based on IT and Internet must have adequate security measures, which the underwriter must consider while accepting any liability risks of any MNC especially. It is said, the 'Internet of Things' could bring increased potential for physical loss or data breaches which poses a huge risk for every underwriter for liability risks.

- **Event Analysis:** Legal liability risk exposure may increase if the individual or enterprise concerned change the even or take up the project or extend their operations into area, market or jurisdiction. For example- if an enterprise may launch new product or export products to a new country, liability exposure will increase for the intended product liability cover. Similarly a manufacturing company might have plans for producing a new product which requires handling and storing more hazardous chemicals unlike before. Developments in technology and their use in mobile devices, like smart phones, ATMs, watches, glasses, computers, internet, Apps etc are constantly increasing cyber risks which count event risks for future. All such events which increase third party liability risks need to be thoroughly enquired, examined, and analyzed for issuing the cover so that appropriate terms, conditions and exclusions can be decided for the policy to be issued or renewed.

1) Origin of legal Liability

Liability arising from the following sources may be covered by various insurance policies to provide protection to civil wrong doers either individual or enterprise;



i. **Common Law / Law of tort** gives a person the right to claim damages for injury or loss sustained by him from negligence, nuisance or trespass from the wrong doer. Tort also includes libels and slanders, but they are not covered by all liability policies, but by specific liability policy like CGL. 'Tort' is a French word meaning 'wrong'. It refers to wrongful conduct of a person or an organization causing injury to another person or damage to a property or economic losses suffered by others. The law of tort gives the victim (sufferer) a right to recover monetary compensation from the person or organization causing the damage or economic loss to the victim. Law of Tort also provides for compensation to the victim under the legal principle of strict liability independent of the personal involvement of the accused. Tort law originated from common law, which is known as 'Case Law'. Unlike statutory laws, the law of tort is constantly changing and evolving in tune with the socio-economic aspects. Since law of tort is the basic foundation of third party liability which is the subject matter of insurance, liability insurance is also always evolving in tune with the engineering and re-engineering process of society and advancement of civilization.

ii. **Statutory Law** brings liabilities to insure. For example Public Liability Insurance Act 1991, The Motor Vehicles Act 1988, The W. C. Act 1923, etc are some of the important enactments that necessitate purchase of Insurance policies to meet our legal liabilities to third parties and employees.

iii. **Breach of contract** (not willful) giving rising to violation of right created by an agreement enforceable at law.

No liability Insurance covers criminal liability. Pl note that **Crime** is a breach of public rights which the entire society. Crime is subject to prosecution by the State and punishable by fine and/or imprisonment.

Tort is a civil wrong for which the remedy is a common law of action for un-liquidated damage. The law of tort is a part of common law implying some breach of duty usually – the general duty that lies on all sections of society to take care that no injury or damage is caused to other people. A breach of contract is normally less frequent cause of claims than the tort. The breach of duty under common law is common for all liability insurance while the liability from the breach of contract is considered only in professional indemnity insurance policy or errors and omission insurance policy. The underwriter must understand the breach of contract and tort properly before he underwrites liability risks through any policy. Law of tort is basically a law of negligence being the foundation of legal liability in most of the cases.

2.1; Negligence

As mentioned above, negligence is the most common form of tort, which is found to be covered by all liability insurance policies. Now question comes-what is negligence for which action can be initiated against the negligent person? Negligence is failure to exercise due care in a case where a duty of care exists. Negligence may arise from any of the following breaches of duty:

Negligence Under Common Law

Every citizen under any common law has the duty to take reasonable care or exercise reasonable skill so that his action does not harm others. In **Blyth v. Birmingham Waterworks Co.** (1856) negligence has been defined as the omission to do something which a reasonable man guided by those considerations which ordinarily regulate the conduct of human affairs would do, so or doing something which a prudent reasonable man could not do. Lord Atkin in a leading case namely **Donoghue V. Stevenson** (1932) observed that "… the rule that you are to love your neighbour …who, then in law is my neighbour? The answer seems to be persons who are so closely and directly affected by my act that I ought reasonably to have them in contemplation as being so affected when I am directing my mind to the acts or omissions, which are called in question."

As mentioned above, negligence is the most common form of tort, which is found to be covered by all liability insurance policies. Now question comes-what is negligence for which action can be initiated against the negligent person? Negligence is failure to exercise due care in a case where a duty of care exists.

Later on he in another case further emphasized "Every person…is under Common law obligation to some persons in some circumstances to conduct himself with reasonable care so as not to injure those persons likely to be affected by his want of care."

The above legal decisions have precisely described the nature and extent of our liability arising from negligence and breach of duty under common law. We all owe to others for our every activity in the society and thus liability insurance policy to transfer our liability risks to others.

Negligence Under Contract

A breach of duty arising from the express or implied terms contract to take reasonable care and skill in the performance of the contract constitutes a negligence giving rise to a right to the other party to bring action against the negligent party.

Negligence Under Statute

A beach of common duty of care imposed by PLI Act 1991, Sales of Goods Act, W.C. Act 1923, Companies Act or any other specific enactments in vogue in India, SEBI Regulations or any other regulations imposing specific duty of care for others.

Negligence or breach of duty as explained above does not automatically involve liability unless there is an action for damages and the following conditions are proved by the plaintiff in his action:

- The defendant was under a duty to exercise care towards the plaintiff
- There was a breach of that duty
- The plaintiff sustained damages from such breach.
- The breach of duty is the proximate cause of the damages.

Example; When a plaintiff in an action for negligence suffers no damage to his person or property, the common law does not permit him to recover notional loss except under the cases of economic loss or financial loss in certain cases. **In S. C. M –V- W. J. Whittall and Sons (1970)** --- a contractor cut an electric cable running alongside road and supplying electricity to the plaintiff's factory. The plaintiff's action for damages included;

a) £368 for loss of metal in the course of processing,

b) £400 loss of profit which would have been made on the metal and

c) £1767 the estimated profit that could be made on further lots of metal, which would have been processed in the time, it took for restoring the electricity supply.

It was held that only £368 for loss of metal and £400 loss of profit thereupon were recoverable, but not £1767 being remote and indirect economic loss.

Imputed Negligence

Under certain circumstances, the negligence of one person may be attributed to another. For example the negligent act of an employee may be imputed to the employer. Due to negligent act of a nurse causing injury to the patient the doctor or surgeon is held liable legally. This is also called Vicarious Liability law by which a motorist's negligence is imputed to the vehicle owner. Imputed negligence may arise in partnership business or joint venture business. Liability arising from imputed negligence is also covered in liability insurance.

2.2; Nuisance

It is a wrong done to another person by unlawfully disturbing him in the enjoyment of his property or in the exercise of common right. Nuisances are divided into two groups-Public and Private.

Public nuisances generally do not fall within the purview of law of torts except in particular case constituting some form of tort under common law. Keeping a house disorderly, throwing fireworks in the street, selling food unfit for human consumption. A member of public who suffers damages over and above the inconveniences suffered by public at large may sue the wrong doer under public nuisance, which is criminal offence.

Private nuisance is interference for a substantial length of time by owner or occupier of property with the use or enjoyment of neighboring property. Interferences with rights that are actionable may be exemplified as: Wrongful disturbance of rights to land, lights, air, water, rivers etc. Wrongful act of causing noxious things such as smoke, smell, noise etc

A nuisance to be sustainable in an action must have two features namely Injuria and Damnum. The former refers to a wrongful act that constitutes or causes damage, while the later implies that damage or loss actually suffered by the plaintiff. No action for nuisance will sustain unless actual damage is caused and suffered. Mere discomfort or inconvenience is not actionable unless it is substantial.

Trespass is a wrongful act committed with force or violence on the person, property or relative right of another. Thus if a person collides with another, it will be a trespass to the person who may suffer damage as a result of collision by the defendant. However trespass to be fit for action and to be covered by liability policy must be negligent act.

3. Types of Liability Insurance

All individuals and organizations exposed to liability from third party may obtain protection under various types of liability insurance policies. Liability insurance policies provide indemnity to the insured for his **legal liability**, which may arise under common law, under statute, or under contract to other persons including customers, employees and the public at large being affected various activities of the insured.

There are different types of liability insurance policy. One particular type of risk may be covered by a specific policy like public liability policy, product liability policy etc or a combined policy like commercial general liability policy may be issued against several eventualities. The following are the major liability insurances available in India.

- Public Liability Insurance
- Product Liability Insurance
- Professional Liability Insurance
- Aviation Liability Insurance
- Motor Third Party Liability Insurance
- Commercial General Liability Insurance
- Employers' Liability Insurance
- Directors & Officers' Liability Insurance
- Errors & Omission Liability Insurance
- Clinical Trial Liability Insurance
- Stock Brokers Liability Insurance
- Insurance Brokers' Liability Insurance
- Cyber Liability Insurance
- Environmental Impairment Liability Insurance

All these liability insurances may be discussed separately in the forthcoming issues

4. Classification of Covers

Liability insurance can be classified into a) Claim-Made Liability Insurance and b) Occurrence Liability Insurance in view of the nature and extent of liability of the insurer to the insured in terms of a liability policy.

4.1; Occurrence Based/Trigger Liability Insurance- Basic Features:

Initially in long past liability insurance was written on an occurrence basis, meaning that the insurer agreed to defend and indemnify the insured against any loss which allegedly "occurred" as a result of an act or omission of the insured during the policy period. This was originally not a problem because it was thought that the insureds' tort liability towards third party was predictably limited by doctrines like proximate clause and law of limitation. But the said doctrine was overruled or rejected in the 1970s and 1980s, when a large number of tort actions succeeded in respect third party legal liability on claims asbestos disease and injuries, which subsequently opened a flood gate of scandals and frauds from the long-trail occurrence-based claims. In the US and the UK numerous judicial decisions and statutes radically extended the so-called "long tail" of potential liability chasing occurrence policies during that period. The result was that insurers who had long-ago closed their books on policies written 20, 30 and even 40 years back, subsequently found that their policyholders were being hit with hundreds of thousands of lawsuits from third parties which implicated or triggered the very old liability policies. Consequently they had to bear the brunt of occurrence based liability policies. That was a very costly experience of the insurers for their issuance of occurrence based liability policies.

Salient aspects of occurrence based policy:

- The bodily injury or property damage must occur during the policy period.
- The policy applies or triggers to a legal liability of the insured for a particular claim even if made until many years after the policy expires
- But that particular injury or property damage must occur during policy period.
- So, only condition to be complied for determining the liability of the insurer to the insured is occurrence of accident from insured perils during policy period. Claims may come in any number of years after occurrence.

Example: M/s A&Co were earlier regularly purchasing product liability policy from Insurer 'X' since January 1, 2010 which was the retroactive date. On 1.1.2014 they changed the insurer and took the product policy from the Insurer 'Y' and gain on 1.1.2015, the insurer was changed and they purchased the product policy from insurer 'Z'.

On July 1, 2015 a claim was made by a customer against A& Co for an injury occurred on Oct.1-2014 for the use of their product manufactured in December 2013. A&Co has been insured continuously covered since 2010 under occurrence-based product policies purchased from the insurers X, Y & Z. At present their product liability policy is with insurer Z.

Q. Which insurer X, Y or Z is to pay the claimant's damage?

Ans: The events depicted in the following figure:

Product Mfd.	Accident Occurred	Claim Made
2013	2014	2015

As the injury occurred in 2014 while insurer Y's policy was in effect, Y would respond to the claim. The policy issued by X would not respond, because the injury did not occur during the period of policy issued by X. The policy from Z shall not respond because that policy has been issued much after the occurrence of the injury. The occurrence coverage trigger is easy to understand and apply to claims resulting from accidents that occur at a definite time, such as motor vehicle accident, fire explosion etc. But applying the occurrence trigger cover can be sometimes very costly and difficult to be managed like claims for disease resulting from prolonged exposures to asbestos after 40yrs from occurrence.

4.2: Claim-made Liability Policy:

To address the problems of Occurrence Based/Trigger Liability Insurance insurers have developed Claim-made policy to pay claims that are first made during period of insurance. Under this policy the insurer will not be liable to the insured for any legal liability incurred by him unless the third party makes claim within the period of insurance. In almost all countries Claim-made version of liability policy is widely used for limiting their liability and ensuring prudent underwriting in view of loss forecasting.

A major problem posed for insurers by these long-tail claims is that their ultimate cost cannot be accurately predicted when they calculate or develop the premium for such policy. The insurer may not realize that the product or the accident from business activity of the insured can cause latent injury and the unanticipated claims for many years in future may be subject to liberalized law or monetary inflation.

Having learned the worst experience of the occurrence-based liability policies as explained earlier, the industry began issuing claims-made policies, where the policy covers only those claims that are first "made" against the insured during the policy period. The insurers brought a related variation in the claims-made-and-reported policy, under which the policy covers only those claims that are first made against the insured and reported by the insured to the insurer during the policy period. (There is usually a 30-day grace period for reporting after the end of the policy period to protect insureds who are sued at the very end of the policy period.)

Claims-made policies enable insurers to sharply limit their own long-term liability on each policy and in turn, to close their books on policies and determine underwriting profit or loss from liability insurance and then review their underwriting policy, strategies and rate making for liability insurance. Hence, claim-made-policies are much more affordable than occurrence policies and are very popular all over the world for the reason that insurers will not be responsible if the claims are not reported during the period of insurance. The claim-made policy makes the insured to become more proactive and professional about liability risk management and finding ways to control their own long-tail liability.

Claims-made policies often include strict clauses that require the insured to report even potential or probable claims and that combine an entire series of related acts into a single claim.

Claims-made coverage also makes it harder for the insureds to switch over or change their insurers, as well as to wind up and shut down their operations. It is possible for the insured in certain cases to purchase "tail coverage" for such situations as may be specified by the insurers to offer back-dated retroactive date. But it is possible only at premiums much higher than for conventional claims-made policies, since the insurer is being asked to re-assume the kind of liabilities which claims-made policies were supposed to push to the insureds to begin with since the premium charged by the insurer under conventional liability policy is inadequate to pay covered claims.

Now the most of liability policies (public, product professional Indemnity) are issued on claim-made basis instead of occurrence basis all most everywhere unless it is specifically required and agreed by insurer on special considerations.

Example

- Mr. X purchased 1 year claim made product policy from RI Insurance with an inception date of January 1, 2014, which was the retroactive date.
- On January 1, 2015, the insurer was changed the policy was purchased from PI Insurance Co. for 1yr with retroactive date of January 1, 2015.
- On July 1, 2015 claim was made against Mr. X for an injury occurred on Oct. 1, 2014 for the use of product manufactured in December 2013. The claim was reported to the insurer PI on 31st Aug. 2015.

Questions

Q 1; Would 2015 policy of PI Insurance cover the claim reported to the insurer on 31st August 2015?

Q 2; If not, would 2014 policy of RI Insurance Co. cover the said claim?

Answer:

Product Mfd.	Injury Occurred	Claim Made
2013	2014	2015

1) No, 2015 policy of PI will not respond even though the claim occurred during policy period since it has occurred before retroactive date
2) No, 2014 policy of RI will not respond even though the injury occurred within retroactive as claim made in 2015 (after policy period)

4.3. Retroactive Date & Claim-made policy

A retroactive date is very vital in a liability policy and is more vital in a Claims-made policy. There may be a situation where a claim made policy may contain

- No retroactive date, or
- A retroactive date (same as the policy inception date) or
- A retroactive date that precedes policy inception date.

The above three situation will imply different nature of liability of the insurer to the insured in respect of his legal liability as explained below briefly;

If it has no retroactive date, the policy will cover claims first made during the policy period regardless of when the injury occurred.

If it has a retroactive date, the policy will cover claims first made during the policy period only if the injury occurred on/after retroactive date.

Once a retroactive date has been established, insurer may not advance the retroactive date without the consent of the insured, and may do so if any of the following has occurred:

- The insured has changed insurers.
- The insured's operations have changed substantially.
- The insured failed to provide the insurer with material information
- The insured has requested the change.

If a retroactive date is advanced in a new or renewal policy, the new policy will not cover claims made during the new policy period if the injury occurred before the retroactive date shown in the new policy. However, the claim may be covered under the extended reporting period provisions of an earlier claims-made policy.

5. Liability Insurance Common Clauses

Liability insurance is subject to specified terms and conditions which are determined by the clauses attached or annexed with the liability policy concerned. The operative clause generally provides that, the insurer will, subject to exceptions and conditions contained herein or endorsed hereon. indemnify the insured against all sums which the insured shall become legally liable to pay as damages and claimant's costs & expenses in respect of

- Accidental bodily injury to or illness of any person (third party)
- Accidental loss of or damage to property (happening during any policy period of insurance and occurring within the country in connection with the business).

Here **bodily injury** includes death, sickness, illness any consequential losses and even nervous shock arising physical injury or damage as decided in **Milne v. Greater Manchester Passenger Transport Executive (1980)**.

Following are the important clauses which are common to almost all types of liability Policies with some modifications according to nature policies:

Indemnity Clause

- The indemnity only applies to claims arising out of accidents occurring in the Insured premises during the **period of insurance** first made in writing against the Insured during the **policy period** and the insured is indemnified in accordance with Operative clause for and/or arising out of **injury/ damage** but only against the claims arising out of or in connection with the business specified in the schedule and not against claims arising out of or in connection with a) Pollution howsoever caused unless specifically covered, b) any product.
- Here **Injury** means death, bodily injury, illness or disease of or to any person. **Policy Period** means the period the period commencing from effective date and hour and terminating on the expiry date as shown in policy schedule. **Period of Insurance** means the period commencing from the retroactive date and terminating on the expiry date. **Retroactive Date** means the date when the risk is first incepted &thereafter renewed without break **Premises** includes pipelines running outside upto 1km from it.
- **Notification Extension Clause:** If the company accepts any notification of the insured during the policy period about any specific event or circumstances which may give rise to a claim which form the subject matter of indemnity by the policy, the company will deal with such claim as if they had been first made against the insured during the policy period up to the max. time limit laid down in the Indian Limitation Act.
- **Extended Claim reporting Clause:** In case of non-renewal or cancellation of policy, the company will allow a time limit not exceeding 90days from the date of expiry or cancellation of the policy, provided no insurance is in force during the extended reporting period for same interest, for notification of claims for accidents which had taken place during period of insurance.
- **Indemnity Limits:** Company's total liability to pay compensation, defence costs, fees and expenses shall not exceed the Indemnity limit

stated in the schedule. Indemnity Limit applies to any one claim or series of claim arising from one originating cause and to total liability of the company during policy period.

- **Claim Series Clause:** All claims arising out of the same cause or error are to be aggregated & treated as one claim and no coverage foe claims made arising from one specific cause which are made later than 3 years after the first claim of the series.
- **Compulsory Excess:** The insured shall bear as Compulsory excess the amount or percentage of the limit of indemnity per any one accident so stipulated. Such excess shall be applicable to both a)death/bodily injury and b)property damage inclusive of costs.

6. Risks Rating:

- **Complete Proposal Form:** Distribution, Location, brochures, use, guarantees /warranties, standard compliance, accident report, Govt. regulation, turnover, Export details, AOA & AOY, Insurance history, claim history etc.
- **Risk Assessment Report:** Analysis of risks associated with products, process, people, plants and place of operations, Safety Measures, Internal check & quality control system, hazard analysis, product design, raw-materials used, manufacturing process, packaging materials and process, customer grievance compliance, management etc.

Rating factors

- Classification of risk group
- Turnover –Domestic & Export
- AOA limit & AOA :AOY
- Legal Jurisdiction
- Probability and severity of risks on operation of insured perils
- Forthcoming events of the prospect
- Past Experience of claims on legal liability
- Global Experience especially in case of policy to be issued to MNCs
- Reinsurer's prescriptions and conditions
- Trend in court awards in actions for negligence, nuisance and breach of statutory provisions

As mentioned earlier, underwriting considerations for liability insurance are many and only few of them which are common to almost all liability insurance policies are highlighted here and others will be discussed in detailed in the respective liability policies to be covered in the forthcoming issues.

A few Fundamental Considerations of Liability Insurance Underwriting

The legal aspects play a very important role in liability insurance underwriting. The most important consideration for underwriting liability insurance is the CASE study as mentioned earlier. Following are the few underwriting factors which the liability insurer need to examine and analyze;

- The names and professional approach are also critical aspects to be considered to assess the entire risks to which the insurer will be exposed. The applicant may present a low risk level at the point of application, but later on the forthcoming events of the applicants may expose the insurer to unacceptable high risks. For example the event of merger and acquisition of company in future may increase the level of risks of directors and officers.
- The age of the applicant and the members of his business is also important consideration, survey shows that young as well as old people may bear a higher risk
- Unsafe vicinities may have a higher risk level and may require to impose additional condition to limit the risks or to collect a higher premium
- Risks classification – High Risks, Very high risks and moderate risks – is the important consideration for examining the insurability of risks, rating the risks and finally deciding the limit of risk retention.
- The character, reputation and lifestyle of the applicant, applying for liability insurance, and the members of his household or business provide an indication whether they are exposed to more than normal risk due to the level of their dangerous or harmful lifestyles.
- Claims history of an applicant is very important as it indicates probability and severity of risks.
- The implementation of safety precautions by the applicant in respect of physical, financial or procedural nature to avoid liability exposures is an important underwriting consideration

There are many more factors which need to be considered by the liability insurer while underwriting a specific type of liability insurance products. The underwriting factors largely depend upon the type of liability policy, nature & volume of activity, the size of cover, and jurisdiction of the cover and so on. However these aspects may be discussed separately in forthcoming issues under specific liability policy. IJ

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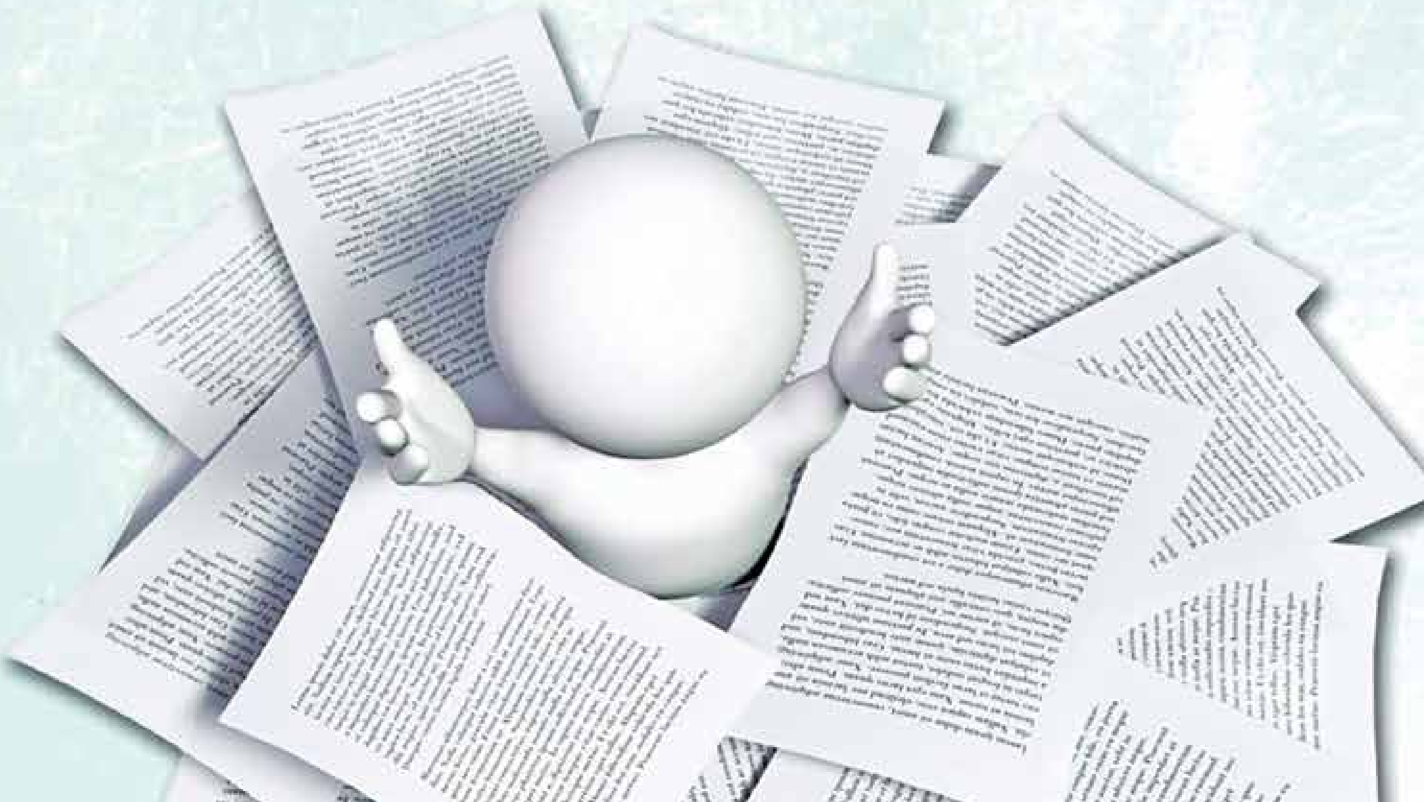

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Guidelines to the Contributors:

1. Manuscript submitted to the Editor must be typed in MS-Word. The Length of the articles and case studies should not exceed 5000 words. Research papers length can be upto 10,000 words. For book reviews and commentaries the word limit may be upto 1500-2000 words.

2. General rules for formatting text:

    i. Page size : A4 (8.27" X 11.69")

    ii. Font: Times New Roman – Normal, black

    iii. Line spacing: Double

    iv. Font size: Title-14, Sub-titles–12, Body- 11 Normal, Diagrams/ Tables/Charts– 11 or 10.

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4. **Abstract:** A concise abstract of maximum 150 words is required. The abstract should adequately highlight the key aspects or state the objectives, methodology and the results/major conclusions of analysis. The abstract should include only text.

5. **Keywords:** Immediately after the abstract, provide around 3-6 keywords or phrases.

6. **Tables and Figures:** Diagrams, Tables and Charts cited in the text must be serially numbered and source of the same should be mentioned clearly wherever necessary. All such tables and figures should be titled accurately and all titles should be placed on the top after the number. Example: Table 1: Growth Rate of Insurance Premium in India (1997-2010).

7. **References:** all the referred material (including those from authors own publication) in the text must be appropriately cited. All references must be listed in alphabetical order and sorted chronologically and must be placed at the end of the manuscript. The authors are advised to follow American Psychological Association (APA) style in referencing.

    Reference to a Book: Author. (Year). *Title of book*. Location: Publisher.

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    Reference to a Web Source: Author. (Date published if available; n.d.--no date-- if not). Title of article. *Title of web site*. Retrieved date. From URL.

    Example: Landsberger, J. (n.d.). Citing Websites. In *Study Guides and Strategies*. Retrieved May 13, 2005, from http://www.studygs.net/ citation.htm.

8. Usage of abbreviations in the text should be avoided as far as possible and if used should be appropriately expanded.

9. The papers and articles submitted must be original work and it should not have been published or submitted for publication elsewhere. The author(s) are required to submit a declaration to this extent in the format specified in Appendix 1, while submitting their articles.

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2. The review should not be more than 2000 words; word limit can be more/less depending on the scope of the book.

3. The reviewer should clearly mention the details of the book reviewed such as Title, Author(s) name, publishers detail, year of publication, place of publication, number of pages and listed price as mentioned on the cover page of the book. If the ISBN number is provided, it should be specified. Beside the above, the components of the book review should be brief summary of the intended objective/ purpose, description of the approach, logical and objective evaluation.

4. The references should be kept to the minimum or completely avoided in a book review.

5. Avoid replicating tables and figures from the book, or directly quoting from the book.

6. The review should not be just a summary of the book, but it should bring out the essence of the book and focus on the objective, theme, scope of coverage, etc. The book review should put forward an objective and fair opinion about the significance, strengths and weaknesses. The review should be about the books contribution to the subject rather than what the reviewer feels about the book.

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Specific Guidelines for Case Studies:

1. Cases usually describe complex issues and readers are forced to take optimum decisions/action in a dilemmatic situation. Cases are meant to create challenges of decision making in the mind of readers regarding conflicting situations, insufficient information, dynamic environment and the like.

2. The authors of the case studies can take organization specific or industry specific issues and present the facts of the case in a logical way.

3. The case study should be well documented and well researched and must be realistic in its context and relevance.

4. Sufficient data (primary or secondary) should be incorporated within a case study for discussion and generating alternative solutions and identifying the best possible alternative. Prior approval for disclosure of information (company specific) must be taken by the author wherever applicable.

5. The issues that are raised in the case should be focused and must be effectively presented without any ambiguity or contradictions.

6. All the referenced material should be adequately and accurately cited at the end of the case.

7. Discussion questions can be provided at the end of case (optional).

Appendix I

Declaration by the Authors

I/We (Full Name of the Author(s))……………………………………………………………………………

…………………………………………, hereby declare that I/We are the author(s) of the paper titled

"………"

(Title of the paper), which is our original work and not the intellectual property of any one else. I/we further declare that this paper has been submitted only to the Journal of the Insurance Institute of India and that it has not been previously published nor submitted for publication elsewhere. I/we have duly acknowledged and referenced all the sources used for this paper. I/we further authorize the editors to make necessary changes in this paper to make it suitable for publication.

I/we undertake to accept full responsibility for any misstatement regarding ownership of this article.

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(Signature Author I)	**(Signature Author II)**
Name:	**Name:**

Date:

Place:

TRAINING PROGRAMS

SR No	CODE	SUB CODE	PROGRAM	DATE FROM-TO	FEES FOR RESIDENTS	FEES FOR NON-RESIDENTS	DESIGNED FOR
Training Programs at Mumbai							
April 2019							
1	CP	C1	Compliance Governance and Risk Management in Insurance	8-10 Apr, 2019	₹ 12900 + G.S.T.	₹ 9300 + G.S.T.	Exclusive Program for those registered for the Compliance Governance and Risk Management Course.
2	CP	L1	Insurance Marketing for Corporate Agents	22-23 Apr, 2019	₹ 8600 + G.S.T.	₹ 6200 + G.S.T.	Specified Persons of Corporate Agents dealing with Insurance Marketing.
May 2019							
3	CP	L2	Underwriting Management and Challenges - Life	2-3 May, 2019	₹ 8600 + G.S.T.	₹ 6200 + G.S.T.	Underwriting Managers and Executives with Life Insurance Companies.
4	CP	G1	Handling of Marine Cargo Claims And Fraud	6-7 May, 2019	₹ 8600 + G.S.T.	₹ 6200 + G.S.T.	Executives from Insurance Companies, Brokers, Surveyors, Investigators and Insured.
5	CP	G2	Motor Insurance Fraud	13-14 May, 2019	₹ 8600 + G.S.T.	₹ 6200 + G.S.T.	Professionals in Motor, Audit, Fraud Control in Insurance Companies, Brokers, Surveyors or Investigators.
6	CP	G3	Health Medical Management including Fraud Control	20-22 May, 2019	₹ 12900 + G.S.T.	₹ 9300 + G.S.T.	Executives woking in the claims departments of health insurers/EB lines of Brokers and TPAs. Offficials working in Government Health schemes.

SR No	CODE	SUB CODE	PROGRAM	DATE FROM-TO	FEES FOR RESIDENTS	FEES FOR NON-RESIDENTS	DESIGNED FOR
7	CP	G4	Programme on Agriculture Insurance	20-22 May, 2019	₹ 12900 + G.S.T.	₹ 9300 + G.S.T.	Professionals in Insurance Companies, Brokers / Surveyors having 2 years exposure to Agriculture Insurance.
June 2019							
8	CP	B1	Appreciation programme for Principal Officers	6-7 Jun, 2019	₹ 8600 + G.S.T.	₹ 6200 + G.S.T.	Principal Officers of Corporate Agents including Banks.
9	CP	G5	Engineering Project Claims	10-11 Jun, 2019	₹ 8600 + G.S.T.	₹ 6200 + G.S.T.	Officials having Insurance knowledge / Brokers / Surveyors / Customers having awareness about Project Insurance.
10	CP	G6	Aviation and Satellite Insurance	10-12 Jun, 2019	₹ 12900 + G.S.T.	₹ 9300 + G.S.T.	Executives working in the Aviation department of General Insurance Companies / Brokers / Surveyors.
11	CP	G7	Title Insurance - Liability	17 Jun, 2019	₹ 4300 + G.S.T.	₹ 3100 + G.S.T.	Participants dealing with/ keen to learn about Title Insurance-Liability.
12	IP	C2	Regulatory Drawing Board - A Comprehensive Program for Insurance Regulators	17-21 Jun, 2019	$ 500 USD		For Insurance Regulators and Self Regulatory bodies from all countries.
13	CP	L3	Life Insurance Claims Management	20-21 Jun, 2019	₹ 8600 + G.S.T.	₹ 6200 + G.S.T.	Executives Working at Middle Management levels in Life Insurance Companies.
14	CP	G8	Appreciation Program on Liability Lines	24-25 Jun, 2019	₹ 8600 + G.S.T.	₹ 6200 + G.S.T.	Junior and Middle Level Executives dealing with Liability Insurance.
15	IP	G9	International Program -Reinsurance Management	24-29 Jun, 2019	$ 600 USD		International Participants-Executives working in General Insurance Companies in Reinsurance, Underwriting and claims.

SR No	CODE	SUB CODE	PROGRAM	DATE FROM-TO	FEES FOR RESIDENTS	FEES FOR NON-RESIDENTS	DESIGNED FOR
July 2019							
16	CP	L4	Marketing Strategies – for Branch and other Marketing Unit Heads : Life	1-2 Jul, 2019	₹ 8600 + G.S.T.	₹ 6200 + G.S.T.	Branch Managers / Marketing Unit Heads with 2-3 years experience.
17	CP	B2	Bancassurance	8-9 Jul, 2019	₹ 8600 + G.S.T.	₹ 6200 + G.S.T.	Managers / Executives dealing with Bancassurance in Banks.
18	CP	G10	Claims Management of Fire Insurance	22-23 Jul, 2019	₹ 8600 + G.S.T.	₹ 6200 + G.S.T.	Middle Level Executives of General Insurance Companies.
19	CP	C3	Certified Insurance Anti Fraud Professionals	22-24 Jul, 2019	₹ 12900 + G.S.T.	₹ 9300 + G.S.T.	Exclusive program for those registered for Certified Insurance Anti-Fraud Professionals Course.
20	IP	G11	International Program -Excellence in Insurance Technical - Non Life	29 Jul - 9 Aug, 2019	$ 1200 USD		International Participants - Mid/ Junior level Executives working in General Insurance Companies and Brokers.
August 2019							
21	CP	G12	Rural Marketing (Insurance)	1-2 Aug, 2019	₹ 8600 + G.S.T.	₹ 6200 + G.S.T.	Executives looking after Rural and Microinsurance in General Insurance Companies, Brokers, Communities, Reinsurers and Banks.
22	CP	L5	Finance and Accounts for Non Finance Executives of Life Insurance Companies	5-6 Aug, 2019	₹ 8600 + G.S.T.	₹ 6200 + G.S.T.	Executives working at Senior and Middle Management levels in Non Finance departments of Life Insurance Companies.
23	CP	G13	Special Purpose Policies-Jewellers' Block Policy And Bankers' Indemnity and other Special Contingency Policies	19-20 Aug, 2019	₹ 8600 + G.S.T.	₹ 6200 + G.S.T.	Officials dealing with Special Purpose Policies / Miscellaneous policies in Insurance Companies, Brokers, Surveyors and Insured.

SR No	CODE	SUB CODE	PROGRAM	DATE FROM-TO	FEES FOR RESIDENTS	FEES FOR NON-RESIDENTS	DESIGNED FOR
24	CP	G14	Customer Relationship Management	19-20 Aug, 2019	₹ 8600 + G.S.T.	₹ 6200 + G.S.T.	Executives handling Customer Relationship functions at Corporate offices and Divisional / Branch Managers of General and Life Insurance Companies having direct Client dealings. The Business/ Customer Service heads of Brokers may also attend the same.
25	CP	G15	Liability Insurance Focus - Cyber Crime	26-27 Aug, 2019	₹ 8600 + G.S.T.	₹ 6200 + G.S.T.	Practitioners in Insurance Companies, Brokers, Customers, Information Technology Industry and related areas.
September 2019							
26	CP	G16	Management of Fire Insurance	16-17 Sep, 2019	₹ 8600 + G.S.T.	₹ 6200 + G.S.T.	Executives from the Underwriting Department of Insurance Companies.
27	CP	S1	One Day Technical Workshop on Renewable Energy	20-Sep-19	₹ 4300+ G.S.T.	₹ 3100+ G.S.T.	Participants dealing with / keen to learn about Renewable Energy.
28	CP	G17	ERM of Insurance Companies	23-24 Sep, 2019	₹ 8600 + G.S.T.	₹ 6200 + G.S.T.	Risk Managers and Risk Analysts handling Risk Assessment functions in the Insurance Industry.
29	CP	G18	Comprehensive Marine Hull Insurance	23-25 Sep, 2019	₹ 12900 + G.S.T.	₹ 9300 + G.S.T.	Executives working in the Marine Hull departments of Insurance companies / Brokers / Loss Adjusters / Customers.
October 2019							
30	CP	G19	Comprehensive Port Package Policies	14-15 Oct, 2019	₹ 8600 + G.S.T.	₹ 6200 + G.S.T.	Officials handling Port Policies in Insurance Companies and various Port Authorities in India and abroad.
31	CP	S2	Data Analytics - Appreciation Program	14-15 Oct, 2019	₹ 8600 + G.S.T.	₹ 6200 + G.S.T.	Participants working or interested to learn about the impact of digitization on Insurance and data analytics.

SR No	CODE	SUB CODE	PROGRAM	DATE FROM-TO	FEES FOR RESIDENTS	FEES FOR NON-RESIDENTS	DESIGNED FOR
32	IP	L6	International Program - Life Insurance	14-19 Oct, 2019	$ 600 USD		International Participants - Senior/ Middle level Executives working in Life Insurance Companies and Brokers.
33	CP	G20	Reinsurance Treaty issues and Challenges (Focus - Reinsurance treaty designing)	21-23 Oct, 2019	₹ 12900 + G.S.T.	₹ 9300 + G.S.T.	Participants presently working in designing or placing treaties with Reinsurance Companies or RI Brokers.
November 2019							
34	CP	G21	Comprehensive Motor Insurance Workshop	4-6 Nov, 2019	₹ 12900 + G.S.T.	₹ 9300 + G.S.T.	Executives from Insurance Companies, Broking firms and Surveyors dealing with Motor OD and TP Insurance.
35	CP	C4	Compliance Governance and Risk Management in Insurance	4-6 Nov, 2019	₹ 12900 + G.S.T.	₹ 9300 + G.S.T.	Exclusive Program for those registered for the Compliance Governance and Risk Management Course.
36	CP	G22	Comprehensive Program on Management of Engineering Projects	18-20 Nov, 2019	₹ 12900 + G.S.T.	₹ 9300 + G.S.T.	Middle Level Executives from the Underwriting Department of Insurance Companies Brokers / Customers.
37	CP	L7	Appreciation of Insurance Regulations - Life	25-26 Nov, 2019	₹ 8600 + G.S.T.	₹ 6200 + G.S.T.	Officers in Senior Level and Middle Management in Life Insurance Companies.
Decembr 2019							
38	CP	G23	Liability Insurance Focus - Financial Lines	2-3 Dec, 2019	₹ 8600 + G.S.T.	₹ 6200 + G.S.T.	Executives of Insurance Companies, Brokers, Surveyors, Customers.
39	CP	B3	Appreciation programme for Principal Officers	5-6 Dec, 2019	₹ 8600 + G.S.T.	₹ 6200 + G.S.T.	Principal officers of Corporate Agents including Banks.
40	CP	G24	Advanced Program for Young Leaders (Life and General)	9 -11 Dec, 2019	₹ 12900 + G.S.T.	₹ 9300 + G.S.T.	Young Managers / Executives keen to acquire leadership qualities from both General and Life Insurance Companies.

SR No	CODE	SUB CODE	PROGRAM	DATE FROM-TO	FEES FOR RESIDENTS	FEES FOR NON-RESIDENTS	DESIGNED FOR
41	CP	G25	One day Technical Workshop on Nuclear Civil Liability	13 Dec, 2019	₹ 4300+ G.S.T.	₹ 3100+ G.S.T.	Participants dealing with / keen to learn about the impact of Nuclear Liability.
42	CP	G26	Comprehensive Health Insurance	16-18 Dec, 2019	₹ 12900 + G.S.T.	₹ 9300 + G.S.T.	Middle Level Executives of Third Party Administrators, Insurance Companies, Broking Firms and Hospitals.
43	CP	C5	Certified Insurance Anti Fraud Professionals	18-20 Dec, 2019	₹ 12900 + G.S.T.	₹ 9300 + G.S.T.	Exclusive Program for those registered for the Certified Insurance Anti-Fraud Professionals Course.
January 2020							
44	CP	G27	Comprehensive Marine Cargo Insurance	13-15 Jan, 2020	₹ 12900 + G.S.T.	₹ 9300 + G.S.T.	Junior /Middle level Executives dealing with Marine Cargo in Insurance Companies, Brokers and Surveyors and Insureds.
45	IP	G28	International Program -Excellence in Insurance Technical - Non Life	13-24 Jan, 2020	$ 1200 USD		International Participants - Mid/ Junior level Executives working in General Insurance Companies and Brokers.
46	CP	L8	Finance and Accounts for Non Finance Executives of Life Insurance Companies	20-21 Jan 2020	₹ 8600 + G.S.T.	₹ 6200 + G.S.T.	Executives working at Senior and Middle Management levels in Non Finance departments of Life Insurance Companies.
47	CP	G29	Claims Management of Fire Insurance	20-21 Jan, 2020	₹ 8600 + G.S.T.	₹ 6200 + G.S.T.	Middle Level Executives of General Insurance Companies, Brokers, Surveyors, Customers.
February 2020							
48	IP	L9	International Program -Excellence in Insurance - Technical - Life	3-14 Feb, 2020	$ 1200 USD		Senior and Middle level Executives of the International Life Insurance Industry.

SR No	CODE	SUB CODE	PROGRAM	DATE FROM-TO	FEES FOR RESIDENTS	FEES FOR NON-RESIDENTS	DESIGNED FOR
Training Programs at Kolkata							
May 2019							
1	CP	G1	Miscellaneous Insurance Management (Except Health and Liability)	20-22 May, 2019	₹ 12900 + G.S.T.	₹ 9300 + G.S.T.	Junior and Middle level executives who deal with Fire Claims.
June 2019							
2	CP	G2	Marine Cargo Underwriting & Claim	17-19 Jun, 2019	₹ 12900 + G.S.T.	₹ 9300 + G.S.T.	Junior and Middle level executives who deal with Marine department.
July 2019							
3	CP	G3	Program for empowerment of women employees of Insurance Industry	15-16 Jul, 2019	₹ 8600 + G.S.T.	₹ 6200 + G.S.T.	Women Executives from Insurance Companies and Divisional / Regional in charges.
4	CP	G4	Management of FIRE INSURANCE (Material Damage and LOP)	29-31 Jul, 2019	₹ 12900 + G.S.T.	₹ 9300 + G.S.T.	Junior and Middle level executives who deal with Miscellaneous Underwriting and Claims.
August 2019							
5	CP	G5	Liability Insurance	19-20 Aug, 2019	₹ 8600 + G.S.T.	₹ 6200 + G.S.T.	Executives who deal with Liability Insurance.
September 2019							
6	CP	G6	Managing Grievance, Handling Consumer and Ombudsman Cases	02-03 Sept, 2019	₹ 8600 + G.S.T.	₹ 6200 + G.S.T.	Executives who deal with Consumer and Ombudsman Cases.
7	CP	G7	Management of Distribution Channel-Non-Life (within Frame work of IRDAI guidelines)	23-24 Sept, 2019	₹ 8600 + G.S.T.	₹ 6200 + G.S.T.	Executives who are involved in Managing Distribution Channels in Operating offices.

SR No	CODE	SUB CODE	PROGRAM	DATE FROM-TO	FEES FOR RESIDENTS	FEES FOR NON-RESIDENTS	DESIGNED FOR
November 2019							
8	CP	G8	Handling Motor Third Party Claims and Controlling Fraud	04-06 Nov, 2019	₹ 12900 + G.S.T.	₹ 9300 + G.S.T.	Executives dealing with Motor TP claims.
9	CP	G9	Managing Project Insurance	25-26 Nov, 2019	₹ 8600 + G.S.T.	₹ 6200 + G.S.T.	Executives dealing with Project Insurance and claims.
December 2019							
10	CP	G10	Motor OD Claims Workshop	09-10 Dec, 2019	₹ 8600 + G.S.T.	₹ 6200 + G.S.T.	Executives who dealing with Motor OD claims.
January 2020							
11	CP	G11	Aviation Insurance	20-21 Jan, 2020	₹ 8600 + G.S.T.	₹ 6200 + G.S.T.	Executives working with the Aviation Department.
February 2020							
12	CP	G12	Management of Marine Hull Underwriting and Claims	10-11 Feb, 2020	₹ 8600 + G.S.T.	₹ 6200 + G.S.T.	Executives working in the Marine Hull department.

NOTES

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