

Disaster Management

– Role of Insurance in Risk Mitigation



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From the Publisher

The rising challenge of disasters - from disasters to resilience

The combination of the weight of scientific evidence and the dynamics of the financial system suggest that, in the fullness of time, climate change will threaten financial resilience and longer-term prosperity - Mark Carney, Governor, Bank of England & Chairman of Financial Stability Board.



Insurance is born out of uncertainty. Whether it be loss of life, property, income or some other unforeseen expenditure, uncertainty is the common factor. The same applies to natural disasters too. But the difference lies in the fact that, in the case of natural disasters, the quantification of probable loss becomes all the more difficult. And, given the magnitude of loss that they cause, sometimes, they can have disastrous effect on the balance sheets of insurers. The recent floods in Tamil Nadu, for example, caused around Rs.4,800 crore worth of claims to insurers.

Thus, there are two challenges that arise when we talk of insurance of natural disasters - one, the quantification of probable financial loss so as to determine adequate premium; two, appropriate spread of such risk so that no insurer is put to undue strain in the event of loss.

As we all understand, the fundamental principle of insurance is the law of large numbers. So, the solution lies in increasing the penetration of insurance and spreading the covered risks across insurers and reinsurers. In India, the awareness of insurance is low, especially in general insurance segment thus leading to lower insurance penetration levels. It will be in the interest of all stakeholders to direct their energies to bring the uncovered population into the ambit of insurance. Though it may look an uphill task, given the income levels and the mindset of people, concerted efforts towards educating the masses about the benefits of insurance in the event of a natural disaster, would, I believe will result in gradual increase in penetration levels.

Further, innovative and customised products which cater to specific needs of various people will also bring more people into insurance coverage. Creating simple and easy to understand products and diversifying the distribution network for such products, consultation with Village Panchayats, Councils, local bodies and taking them into confidence are other measures that can be thought of to increase coverage. I hope all stakeholders would ponder over these aspects and come out with appropriate solutions to build resilience towards the rising challenge of disasters.

With the above background in view, “Insurance Awareness and initiatives towards development of insurance sector” will be the focus of next Journal.



T.S. Vijayan

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FROM THE EDITOR



“From my perspective, it's really risk management to ensure that humans have the ability to go somewhere else in case there were to be some huge disaster on Earth”

- Gwynne Shotwell

Insurance is one of the important measures of safety and essential tool for financing disaster risk management. The growth of insurance coverage in the country, both for life and non-life risks, is possible only when consumer acquires the knowledge about the importance of insurance in day to day life. One of the main reasons for low levels of insurance penetration and density is lack of awareness about the insurance products and the benefits of various insurance policies. Insurance education helps a consumer to understand his/her needs and risks, availability of insurance for managing risks, value of possessing an insurance product and know about the dos & don'ts before and after purchase of an insurance policy. A financially literate consumer will also be aware of the various channels of redress mechanism available to him including the Insurance Ombudsman along with the rights and responsibilities as regards the risk exposure and insurance coverage offered by insurer through insurance policy. Insurance education, thus, helps to access the services of insurance sector in an informed manner and to promote market efficiency and flow of symmetrical information for orderly growth of insurance industry.

In terms of growth, by end of March 2016, Indian life insurance industry has procured an amount of Rs. 138657.31 crore first year premium registering a growth rate of 22.55% compared to financial year 2015. On the other hand, general insurance industry has garnered an amount of Rs. 96393.94 crore premium registering growth rate of 13.8% compared to previous year.

Yet there are miles to go for reaching the unreached. A happy customer is the best brand ambassador whereas an aggrieved one will spoil the game. The industry needs to empower policyholders by way of adhering to market discipline in letter and spirit. The market force must be aware of the latest products and should be prompt in rendering quality service to gain the confidence of the customers. It is essential to imbibe the principles of code of conduct by intermediaries and strengthen the efforts of insurers for stepping up insurance awareness initiatives towards orderly development of the sector.

Insurance awareness, growth and development of insurance markets will be the focus of the next Issue of Journal which will be the first quarterly journal of this financial year.

K.G.P.L. Rama Devi

ATTENTION:

This is to inform all readers that henceforth, the IRDAI Journal will be published on Quarterly basis. The next issue will be for April-June'2016.

PERSPECTIVE

From this issue, we have started this new feature to air views of the doyens of insurance industry about the various facets of Indian Insurance sector as well as the challenges being faced by them in pursuit of insurance inclusion and sustainable growth.

Shri Anuj Agarwal, MD & CEO, Bajaj Allianz Life Insurance Co. Ltd has given his perspective about the Telecom revolution and What Life Insurers can learn from it in this article.



The previous year 2015 marked the 20th anniversary of the entry of GSM or Global System for Mobile communication in India, one of the most crucial developments in the history of the telecom revolution in our country.

After nearly twenty years, statistics from the Telecom Regulatory Authority of India (TRAI) state that the number of telephone subscribers in India increased from 96.42 crore at the end of November, 2014 to 97.097 crore at the end of December, 2014. The overall tele-density also increased to 77.58 per 100 in this period. Little wonder, then that the domestic telecom industry is the cynosure of all eyes.

This rapid growth of mobile telephony in India ranks as one of the greatest economic success stories among emerging markets. Affordable telephone connectivity has empowered crores of individuals in thousands of ways, and has served as a massive productivity multiplier for the economy by collapsing communication costs.

India's telecom story has been a shining testimony to how political conviction for reforms and private entrepreneurship can deliver outcomes that any government intervention and well-intentioned bureaucratic thinking can rarely conceive of.

Interestingly, our Life Insurance industry too will benefit if it imbibes a few lessons from the telecom sector.

Affordable telephone connectivity has empowered crores of individuals in thousands of ways, and has served as a massive productivity multiplier for the economy by collapsing communication costs.

(A) Cost of services

The first lesson concerns bringing down the cost of insurance and make it affordable for the masses. Many of us can vividly recall those days in the late 1990's when a 1-minute mobile call cost as high as Rs. 32/-. If the telecom industry hadn't reduced its charges drastically (down to 30 paise per minute from 2009 onwards), the phenomenon of the ubiquitous mobile phone would not have happened at all.

And, of course, launch of innovative schemes like 'lifetime prepaid' and bundling cheap call rates with low-cost handsets attracted many first-time mobile users and created product stickiness.

When I look around in the domestic insurance sector, I am quite pleased to see that this industry too is offering low-entry costs much more after the changes in guidelines from January 1, 2014. Even charges imposed on ULIPs have come down drastically. Today, a customer can buy a long-term investment and guaranteed protection for as low as

Rs. 45/- per month. Thanks to the changes brought in by the regulator. But this is just the beginning and a lot more needs to be done.

(B) Shared Infrastructure

The second lesson that the insurance sector can imbibe from telcos is how shared infrastructure helped these companies roll out services in newer areas, including rural areas. The sharing of mobile towers not only led to substantial rural penetration but also contributed to consistent growth for all the telecom operators. Subscribers were also rewarded with improvement in network quality.

Companies tend to pass on the costs to its consumers. If we want the premiums to come down, the costs need to come down as well. Towards this, the regulator is encouraging micro-insurance products and very recently launched the Common Service Centres (CSC) model. Thanks to this effort, prospective insurance buyers can access over 130,000 of such centres. In addition, such models may prove cost-effective, since cost of reaching customers on Group Insurance platform is much lower than the cost of reaching through an individual platform. Relaxation in outsourcing and other expense guidelines would further help in reducing costs for life insurers.

(C) Simplification of product

“Keep it simple, stupid (KISS)” is a well-known management term. Indeed, there is a lot to learn from the domestic telecom industry’s efforts to introduce ‘simple’ and



If we want the premiums to come down, the costs need to come down as well. Towards this, the regulator is encouraging micro-insurance products and very recently launched the Common Service Centres (CSC) model.

easy-to-understand data and voice plans that suits every need and every budget. Taking a cue from such practices, the Know You Customer (KYC) details for the life insurance customers have to be simplified and completed within a handful of questions. At the same time, the policy document has to be drafted in a lucid language and be interactive with illustration for the customers to understand the details easily and get clarity on what is in it for them. More importantly, easier KYC or over the counter products shall go a long way in improving the customer experience.

(D) Mass adoption

The fourth lesson involves how the telecom operators and handset makers collaborated to make mobile telephony popular among the masses. The launch of feature-rich smartphones (sometimes with

dual SIMs) and its ever-increasing popularity among the young people is worth studying.

Telcos, of course, did not stop at this; they ensured the availability of vernacular content which led to increased adoption of VAS applications.

When it comes to life insurance, group insurance platform reduces the cost for buying life insurance cover and gives the flexibility to enter and exit a policy anytime. In addition, group policies and micro group policies ensure better penetration of life insurance.

The recently announced financial security schemes by the Union Government - Pradhan Mantri Jeevan Jyoti Beema Yojana and Pradhan Mantri Suraksha Beema Yojana - should play an important role in reaching out to a large chunk of financially excluded people. These simplified schemes will primarily promote buying life insurance for protection among larger mass. Given the fact that life insurance penetration stands at 3.1 per cent, if these schemes go well, life insurance penetration in India will go up substantially. The idea is to bring more people under social and financial security and hence both banks and insurers will be in a position to leverage the database once the enrollment is done for these schemes. However, it will take some time for the life insurers to gauge the viability after seeing the claim experience and response from the masses.

(E) Innovations

To my mind, for telcos, the handset along with the plans was the ‘pull’ factor. Similarly, life insurers could consider providing Value Added Service to its customers. Life insurers make profit when customers live longer and healthier. Any additional support system with the life insurance policy that helps customers live longer and healthier should be a welcome innovation.

(F) Customer delight

The sixth and final learning is how the telcos contributed to customer delight. Surely, the telecom regulator, TRAI, had played a role in reducing telecom tariffs. Competitive intensity within the industry too has contributed to lower call charges. But, customers did not really care for the reasons.

Reduced tariffs directly led to increased user adoption of VAS applications, and the telecom industry also benefited by way of higher revenues. Therefore, everyone benefitted on account of lower tariffs.

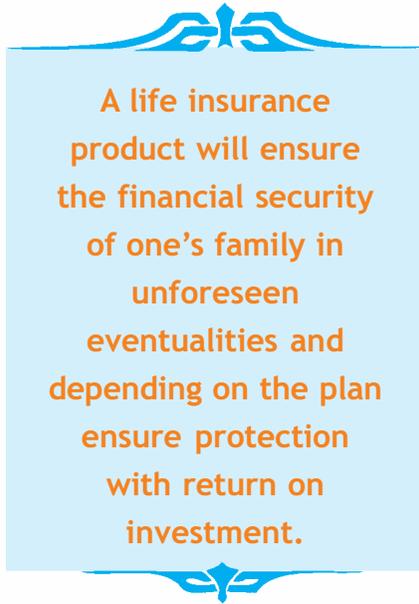
On the subject of customer delight and life insurance, I do expect that IRDAI’s draft guidelines on insurance marketing firms to streamline the distribution channels with more accountability. I completely support the idea of introducing a mechanism to redress customer grievances.

Ups and downs in the life insurance industry

Changes in regulatory guidelines are broadly aimed at ensuring better customer value. Newer guidelines often reinforce a long-term relationship between the insurer

and the insured and creates happy customers. One such example is the changes in guidelines of unit-linked insurance plans such as the five year lock-in period and substantial reduction in charges. However, the new regulations on ULIPs should ideally have been announced much earlier especially to give the life insurance industry some breathing space.

Beginning 2005-06, ULIPs became attractive options for customers buoyed by a boom in the stock market and the contribution of ULIPs to the overall product pie of life insurers went up to more than 80%. But, after the economic slowdown followed by the market crash in 2008-09, people incurred substantial losses and many withdrew their policies. Higher front end charges added to customers woes. Things started improving after the new ULIP guidelines announced in 2010 by IRDAI that mandated a 5 year lock-in period; reduced charges and rationalization in agent commission structure.



A life insurance product will ensure the financial security of one’s family in unforeseen eventualities and depending on the plan ensure protection with return on investment.

These guidelines should have come much before, as lower charges and long-term investment would have compensated the losses incurred due to the stock market crash. An investment horizon of 10-15 years always ensures better return by averaging out huge losses and gains.

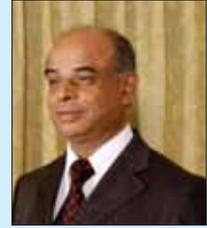
Conclusion

Regulatory changes and innovations in products were broadly introduced to benefit customers or policyholders. Market movements largely influence the business of unit-linked products apart from the guidelines put in place by the regulator. Newer financial security schemes in the field of life insurance are primarily aimed at covering a wider gamut of people. In a nutshell, a life insurance product will ensure the financial security of one’s family in unforeseen eventualities and depending on the plan ensure protection with return on investment at the end of the term. Hence, it is obvious that the benefits of a life insurance product cannot be realized immediately as compared with a telecom provider’s postpaid or prepaid plan. Therein lies our biggest difference as life insurers. Life insurance is the only financial product where the value to customer increases with time and is felt over a longer period.

However, on a broader perspective, the strategies and initiatives adopted by the telecom industry to reach closer to its end users could well inspire life insurers to connect with larger groups of people and ultimately increase penetration.

Anuj Agarwal, MD & CEO, Bajaj Allianz Life Insurance, bajajallianz.co.in; the views expressed are their own

Insurance and Disasters



- P.C. James

Insurance solutions for the deteriorating disaster or catastrophe landscape of the world owing to climate change and other factors are now gaining ground. Governments and aid giving organisations are seeing the end of their options of ex-post (after the event) assistance for those dispossessed and impoverished by catastrophes. Disaster occurrences are mega events which are usually termed as 'Act of God'. The term 'Act of God' predisposes a mindset of resignation and inevitability. This is the traditional view and was held for long despite insurance solutions being available since many years. This could have been because traditionally insurance served business interests and commerce, and insurers also clung on to very selective and restrictive insurance clientele, excluding in the process the wider inclusion of all retail customers, their economic assets and activities. Moreover from a technical view of insurance concepts, catastrophes are considered uninsurable as disaster

risks have high correlations and extraordinary destructive potential. Now mindsets are changing as governments and regulators push for 'rural and social' insurance, micro-insurance, crop-insurance and so on. Insurers are also conscious of the public good that insurance can bring and there is a consensus that catastrophe risks are to be insured.

Disaster relief steps are essential whether ex-post (after the disaster) or ex-ante (before the disaster).

The term 'Act of God' predisposes a mindset of resignation and inevitability. This is the traditional view and was held for long despite insurance solutions being available since many years.

There are diametrically opposite distinctions between ex-post and ex-ante approaches to help the victims and potential victims of disasters. In the ex-post scenario, victims of disaster are helpless and look to families, communities and governments for help. International aid may pour in and many social organisations also pitch in. But all that is mostly short-term 'Band-Aid' like help and soon memories fade and the distressed are often left to fend for themselves as another disaster comes up elsewhere or disaster assistance fatigue sets in. The beneficiaries of such aid are seen as supplicants and their dignity and wellbeing get denigrated in many ways. At the macro-level the money for aid and assistance comes from tax-payers or world aid which could be used for more planned developmental purposes. Regular and repeated cases of disaster can also exhaust the capacity of governments and aid bodies.

Sustainability against disaster threats therefore calls for ex-ante approaches. Disasters normally

happen in any particular region usually after a gap of many years. They take place in a fortuitous and sudden manner. This makes it ideal for pooling and insurance, though they are catastrophic and can exhaust insurance capacity. Losses are payable if the pool can build up a diversified fund across geographies and time. This makes insurance a very natural answer to disasters. There are many positives that insurance can offer to make disasters manageable for those facing them from an indemnification point of view. These are:

1. Insurance is a risk management tool and insurers can help customers, the community and the government to establish risk reduction approaches for managing better disasters such as floods and storms.
2. Insurers can offer affordable premium rates if everyone can be made to insurer against disasters.
3. Insurance pools can be set up where disasters are not easily insurable and governments can look at indemnifying only losses that are in excess of the pool capacity.
4. Insurers across the world could join together to strengthen capacity and open up more options to support indemnification of disaster losses.



A well-designed insurance solution reduces disaster consequences in two ways: (1) It provides early liquidity and thereby prevents long-term loss of livelihood and lives; and (2) It pricing risk on actuarial basis and can incentivise pre-disaster risk reducing behavior.



5. Insurance policies are contracts and hence the policyholder gets legal rights for compensation, which does not happen in case of aid and assistance.
6. Insurers and government organisations could organise quickly assessments of loss at micro-levels to help to finalise settlements. Governments to facilitate quick insurance based reconstruction can regulate rent-seeking behaviours from various agencies that repair and reinstate damaged items.
7. Immediate liquidity is available with insurance covers as both they and the reinsurers etc. will bring in funds

8. The indemnification can help speedy recovery at the point of loss for the multitude of those who have lost in their individual manner, because the indemnity is based on time tested insurance practices.
9. The money saved by governments can be used to restore the common infrastructure and take further action to minimise future losses.
10. Insurance has the capability to offer holistic solutions to reduce human suffering, economic losses, as also fiscal pressures. It will help to kick-start economic recovery.

“Communities value disaster insurance.....because they see it as an instrument of dignity. Financial support to recover from a disaster becomes their right without sacrificing their self-respect. It is far more dignified to claim your right for recovery than to find yourself dependent on the ad hoc generosity of donors.”— Hari Krishna (2007), Expert Workshop on Insurance Instruments for Adaptation to Climate Risks, Austria.

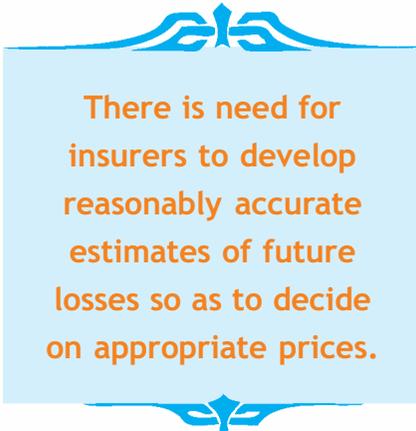
A well-designed insurance solution reduces disaster consequences in two ways: (1) It provides early liquidity and thereby prevents long-term loss of livelihood and lives; and (2) It pricing risk on actuarial basis and can incentivise pre-disaster risk reducing behavior. In countries where disaster construction standards are set home owners who

choose to disaster-proof their assets pay a lower insurance premium, because insurance promotes investing in risk reduction. If insurance is not designed to motivate risk minimisation, investments in loss prevention may not happen and can even encourage negligent behaviour (moral hazard).

Therefore from a primarily reactive or coping approach traditionally resorted to when dealing with natural and other disasters, insurance can introduce useful catastrophe risk management frameworks to quantify, analyze and manage potential losses. All stakeholders would generate inputs that get populations ready to face traditional disasters and avoid deaths and injuries and in time minimise property losses. Therefore insurance inclusion should be given high priority. A systematic enrolment of everyone at risk is to be done to ensure that all of them are satisfactorily insured. There has to be incentives and mandated requirements to ensure insurance habits among the better off households. Catastrophe insurance may have to be made compulsory when financing assets. It can also be tied to property or land tax or their registration systems. Such steps should compel all those above poverty line to take insurance. Governments who bear the brunt of post-disaster aid should make it clear to such households that they will not be eligible for government reconstruction funding or aid.

Insurers should open up on-line and other channels for helping the wider population to take insurance with ease. Proper advices must be exhibited at as many forums as possible on how to insure including how to optimally value assets for insurance. Risk management tips should be offered by insurers along with the policy copy and the Insurance Council could organise a web-site for helping families and industries on how to cope with disasters of various kinds and the best ex-ante approaches for minimizing losses. In case of a catastrophe event, advices should be available on how people can face emergencies and obtain help. Detailed claim settlement processes should be given in websites and at other public domains.

Resilience against catastrophic events need Government as well as Regulator interventions to bring all stakeholders to organise ex-ante protection and take steps that assures sustainability. They need to ensure that the protection pool grows to meet the financial requirements of those distressed.

A light blue callout box with decorative blue flourishes at the top and bottom. The text inside is in orange and black.

There is need for insurers to develop reasonably accurate estimates of future losses so as to decide on appropriate prices.

Catastrophe rates should be actuarially fixed at industry level and it should not be cross-subsided from low-risk, non-catastrophic risks covered or businesses written. The inevitability of catastrophes should be made clear to all citizens. There should be sensitization of such risks and their dangers from school-level onwards.

The future of disasters indicates that loss amounts will go up and move across many non-correlating areas. In the recent Chennai floods the airport was immobilized and many aircrafts were damaged. This has added another frightening dimension for reinsurers about new correlations that suddenly creep up when disasters strike. As the wealth level of the population goes up, so also asset values will go up and premium levels may have to go up to gear up for larger and wider losses and indemnity pay-outs.

Catastrophe risks traditionally did not allow insurability owing to breach of one of the fundamental conditions of insurability. This condition states that risk exposures must be independent and non-correlating so that the insurer does not have to meet with losses from one or a series of events that will destroy its solvency. There is need for insurers to develop reasonably accurate estimates of future losses so as to decide on appropriate prices. They also need large cash flows in case of a call of great magnitude due to a disaster. In order to meet these requirements insurers need to use sophisticated modeling

techniques to try to estimate catastrophe risk and how to diversify the risk exposure therefrom. Efficient risk diversifications are possible through many methods such as:

- 1) Reducing insurer's concentration of exposures, by geographic and other diversifications;
- 2) Designing proper pricing, terms and conditions of the policy;
- 3) Encouraging risk reduction and mitigation by those getting insured;
- 4) Obtaining reinsurance that diversifies risks across global markets;
- 5) Utilizing catastrophe-hedging financial instruments from the capital markets;
- 6) Holding more capital as may be directed by the Regulator
- 7) Establishing catastrophe pools

It is clear that insurance mechanisms have a promising role in facing disasters at the economy level. The potential benefits of wholesale disaster insurance include providing security against the widespread loss of assets, livelihoods, and even lives in the post-disaster period. It minimises the need for aid organizations to provide disaster assistance. More important it gives powerful incentives for risk prevention across the population and the economy. It charges economic development given the promise contained in insurance based sustainability.

The potential benefits of wholesale disaster insurance include providing security against the widespread loss of assets, livelihoods, and even lives in the post-disaster period.

For meeting the disaster protection requirements for the poor and those in the agriculture economy, insurance has created innovations which can change dramatically the coping capability of those in the rural sector. Innovation for the rural sector can help them in many ways such as:

1. Making insurance affordable and accessible to the rural people and their diverse life situations. This includes the poor and landless segments.
2. It can compensate for livelihood losses and repay debt taken for occupational needs.
3. It makes insurance easily implementable given the difficult infrastructure and the poor knowledge levels of those concerned.
4. It eliminates largely scope for moral hazard and adverse selection.

Insurers have now found solutions such as area-based index insurance using weather as a proxy for wide use in rural areas. Area-based index insurance can cover losses that arise from climate based catastrophes such drought and flood using weather data recorded at the local level through many automatic weather stations. Insurance can be sold in standard units within an area with a standard contract (certificate) for each unit purchased. The premium rate will be the same per unit for all those purchasing insurance in the earmarked area for a particular crop in a given season. Everyone will receive the same unit of indemnity if the insured event occurs.

Area-based index insurance has a number of attractive features:

1. As all prospects in a given area pay the same premium and receive the same indemnity, and the cutoff date (called seasonality discipline) for taking insurance is respected, adverse selection is avoided.
2. Since the underlying cover is based on weather indicators, and as the weather cannot be influenced by the policyholder or for that matter by the insurer, moral hazard is unlikely.
3. Formalities for taking insurance are very simple. The insured will have to fill in a simple proposal form and submit it to a bank with the premium and this will reach the insurer and coverage will be confirmed.

4. Formalities with regard to claim are virtually nil. There is no need to intimate the claim in an area based insurance, nor a claim form need to be filled. There will be no survey of the loss. The claim data will come from daily weather reports and can be assessed by the claim experts of the insurer.
5. The claim money will be credited to the bank account of the insureds who sustained losses within a short period after the season ends.

In its wider context this insurance can be sold to anyone in the rural area because all occupations in the area are linked to agriculture and when agriculture fails the rural economy fails. It is directly applicable to the loss of wages for the landless labour, the small shop keeper and other small scale activities that depend on agriculture produce. In due course all those losing from the disaster can be indemnified after their loss is correlated with failure of the weather in a given area. Insurance is already built into the credit system of rural areas and can be extended to the purchases of key inputs such as fertilizer. Further applications are possible as experience on these innovations gather momentum.

Customer Protection for Disaster Insurance

Regulations would be required to ensure that customers/ policyholders are duly protected

while insuring for disaster protection.

Coverage Issues

1. Insurers may deny coverage and hence the standards for covering the risk and the rates and terms of coverage etc. need to be spelt out by insurers in the public domain and coverage must be facilitated for everyone.
2. Standards for the width and depth of coverage, conditions and exclusions applicable should be made to ensure that the policyholder is indemnified as desired by public policy.
3. Renewals cannot be refused except on grounds specified by regulation and renewal facilitation must be made online and offline.
4. Guidance for change in the value of the assets and other requirements for ensuring that the policy is taken in the right manner must be communicated to the insured.
5. The mode of indemnity for retail customers must necessarily be on reinstatement value as cash value would be inadequate for getting the property restored as before the loss.
6. Where reinstatement may not be possible in cases such as crumbling buildings, lesser methods of compensation of property can be mandated.

Claim Settlement Issues

Unfair claim settlement practices are being decried across the world and punitive actions are now being increasingly considered especially in cases of disaster losses. What constitutes fair settlement, the violation of which is treated as unfair settlement is now an expanding field and includes:

1. The insurer has to provide all benefits and coverage as provided in the policy and should not hide or deny the same because the insured is ignorant of the benefit or did not claim in the manner as required by the insurance company.
2. Delay in claim assessment to take advantage of the claimant and appointment of multiple surveyors and investigators and asking for many and possibly unnecessary documents is unfair. In disaster scenarios it is possible that many documents may have been lost in the disaster etc.
3. Underpayment of the claim without sufficient cause so that the insurer is benefitted can be an unfair settlement practice.
4. Insurer adopting a policy of 'standard denial' at the initial stage to unsettle the insured and make insureds fight for the claim interminably is unfair. Innocent policyholders may accept the denial and others may give up the struggle midway.

5. Policyholders should not be forced to be dragged to interminable and expensive court cases, but all retail claims should automatically go to the ombudsman or other inexpensive routes and be disposed of in three months after taking up such references. Fast track dispute resolution forums should be set after disasters in the geographical area concerned.
6. In case of needing to go to court, policyholders must be allowed to fight collectively (class action) to reduce time cost and money cost.
7. In disaster claims the burden of proof of the cause of the loss should not be cast on the insured and the burden of denial of claim and quantum should be on the insurer.
8. The insurance intermediaries who are appointed to survey and investigate must abide by expeditious timelines and should not make onerous

Mindsets and habits across the economic spectrum need to change on reducing the vulnerability in a manner that does not strain on the finances of governments.

- demands for proving the quantum (cause not to be proved by insured in disaster claims). This is especially important if all documents would have been destroyed in the loss.
9. The practice of 'on account' payment should be made mandatory for the peace of mind of the policyholder that the insurer has admitted liability and for the reconstruction to begin. Cash infusions should be in tandem with reinstatement as the cash call power of the insured in disaster will be nil or low.

Disasters are set to continue to trouble the world and countries that are disaster prone are going to face onslaughts in the future perhaps more frequently and almost certainly more severely. Mindsets and habits across the economic spectrum need to change on reducing the vulnerability in a manner that does not strain on the finances of governments (i.e. the tax payer burden). The onus has to be taken on by those at risk by paying adequate premium (for the poor financed by governments, if needed). Premiums will not hurt if the risk holders are incentivized to reduce their risks and all those at risk are compelled to insure. In the aftermath of the disaster, all concerned - the civil authorities, the government machinery, insurer and their partners in indemnification, can jointly work to get over the losses and destruction in the shortest time possible.

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THINK TANK

With changing times, there is a change in the Editorial team and also the content being covered in the Journal. It is proposed to include a number of new features facilitating for free and frank analysis on various issues of relevance and airing of concerns that are vital for orderly development of the insurance industry.

To begin with, the Real Estate (Regulation and Development) Act, 2016 is notified on 25th March, 2016. This is an Act of the Parliament of India and seeks to protect home-buyers as well as help boost investments in the real estate industry. As per provisions of Sec. 16 of the aforesaid Act, the promoter shall obtain all such insurances as may be notified by the Government including but not limited to insurance in respect of title of the land and building as a part of the real estate project etc.

We seek contributions from eminent writers on the subject as well as experts from insurance industry on their perspective on the issue focus Title insurance for publication in next series of Journals.

Role of Insurance in Disaster Management



- Suresh Mathur

Natural disasters often cause extensive damage to life and property. Disasters can have devastating and cascading negative financial impact on individuals, business and economy as a whole. Rapid urbanization, environmental degradation and increasing number and intensity of climate changes are contribute to intensifying the disaster losses.

The year 2015 was witness to a large number of catastrophe events that hit various parts of the globe. According to Munich Re, more than 1000 natural catastrophes were recorded in the year 2015. The overall losses totalled US \$90 billion of which roughly US \$27 billion was insured, which in percentage terms is approximately 30% of total losses. The year's most devastating natural catastrophe was the earthquake in Nepal which occurred in the month of April 2015. The Swiss Re report Sigma no 1/2016, ranked the flash floods in Chennai as 14th, in terms of Insured losses.

Asia, particularly the Indian Subcontinent is prone to various natural disasters like floods, cyclones, droughts and earthquakes. The country has been a witness to a spate of natural

calamities during the past 3 years. The Uttarakhand floods, Jammu & Kashmir Floods, Hudhud cyclone and the recent Chennai floods have caused immense loss of life and property of individuals and have caused colossal damages to the public infrastructure.

At present the statutory arrangement for disaster response in India is by way of two schemes which cover those disasters which are notified in the Disaster Management Act 2005. Disaster Relief and Rehabilitation is provided by the Government through NDRF and SDRF are from the budget set aside for such disaster relief. Both the funds are meant only for immediate relief and rehabilitation of affected persons and immediate

repairs/restoration of damaged infrastructure. However, the funds required for the actual rehabilitation and restoration of affected infrastructure is far greater than what is available in the current funding mechanism.

Risk transfer mechanisms

Achieving financial resilience is a critical component of effective disaster management. It is important to ensure that there is timely availability of resources for response, recovery and reconstruction in the event of a disaster. Therefore evolution of an effective risk transfer mechanism to mitigate the risks arising out of disasters is imperative. The gap between the actual economic losses and the loss mitigation available can only be pegged by using a combination of strategies for disaster risk reduction through risk financing and risk transfer.

Role of Insurance

Insurance has been found as a viable alternative funding mechanism for Governments in different parts of the World. A study of insurance schemes and practices prevailing in disaster prone countries have revealed that these Insurance

It is important to ensure that there is timely availability of resources for response, recovery and reconstruction in the event of a disaster.

mechanisms have provided significant liquid funds to governments for immediate relief and rehabilitation in the event of Natural disasters. As per the World Bank the availability of insurance offers the best mitigation approach against real and fiscal consequences of disasters.

However, studies estimate that approximately 80-90% of the economic costs of natural disasters in the developing world are uninsured. The uninsured proportion is significantly less in developed countries where there is greater insurance penetration. The uninsured losses in these countries generally fall in the range of 44% to 60%.

The insurance penetration, in India is only 0.7% which is significantly low. The actual economic loss on account of the Chennai flood is estimated to be around Rs 25000 Crs whereas, the insured losses were accounted as approx US\$755 million or INR 5000 crs which is around 20% of the total economic loss.

The economic loss because of Cyclone Hudhud was approximately Rs 45000 Crs with insured losses accounting for only about 10% of it. Similarly, during J&K Floods in 2014 the state suffered a total loss of approximately Rs 5000 Crs. The insured losses were less than 10% of the economic losses. (source)

We observe a huge gap between the actual economic loss and insured losses. The proportion of insured losses is higher in Chennai floods as compared to the insured losses on account of Hudhud cyclone or Jammu & Kashmir floods. This evidently, is on account of higher level of insurance penetration in



Studies suggest that increased insurance penetration would lead to better insurance coverage and subsequently accelerate the process of recovery from the aftermath of a disaster.



metropolitan cities like Chennai and Mumbai as compared to other lesser developed parts of the country.

Studies suggest that increased insurance penetration would lead to better insurance coverage and subsequently accelerate the process of recovery from the aftermath of a disaster. The government, the insurance regulator and various other stakeholders are in the process of developing a suitable risk transfer mechanism so as to mitigate the risks arising out of disasters. The various measures have been identified which can facilitate greater penetration and thereby build a robust risk transfer mechanism.

Suggested Measures

- Increasing awareness amongst the masses about insuring their assets against possible losses on account of natural disasters. This can be achieved by way of preparation of simple literature and making it available to the general public, introduction of modules and sessions which covers subjects like Disaster

Management and the importance of insurance.

- Mandatory insurance of public infrastructure, critical infrastructure and public utilities like airports, railways, ports etc.
- Development of affordable standalone catastrophe insurance products including parametric insurance solutions covering risks like earthquake and Cyclones.
- State sponsored or subsidised insurance cover for the life and property of the masses belonging to the BPL segment.
- Mass insurance schemes for protection of agriculture sector against the onslaught of disasters.
- Focussed research and studies on various aspects of Risk transfer Mechanism in Disaster Management.

The implementation of the above measures requires concerted efforts on the part of the central government, various state governments, regulatory bodies, insurance companies, educational institutions and various other stakeholders. Implementation of the above cited measures would definitely help in increasing insurance penetration in the country. These measures would facilitate in mitigation of the hardships of masses affected by disasters and would thereby ultimately contribute to the long term financial stability of the economy.

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Catastrophic Losses and Insurance



- Sanjay Datta

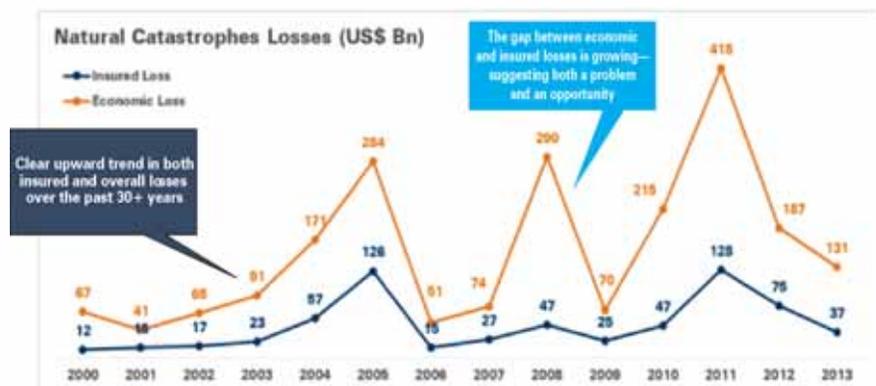
Catastrophic events are occurring at an alarmingly rate. Natural calamities such as earthquakes, floods, cyclones and severe weather are striking countries across the globe. Statistics point to an average of 260 events occurring every year based on a 10 year average. The Asia Pacific region registers the highest number of catastrophic events every year, an outcome of its large size and susceptibility to natural disasters. Even developed countries like the US and Japan that are technologically advanced and equipped with early warning systems have not been spared from nature’s wrath.

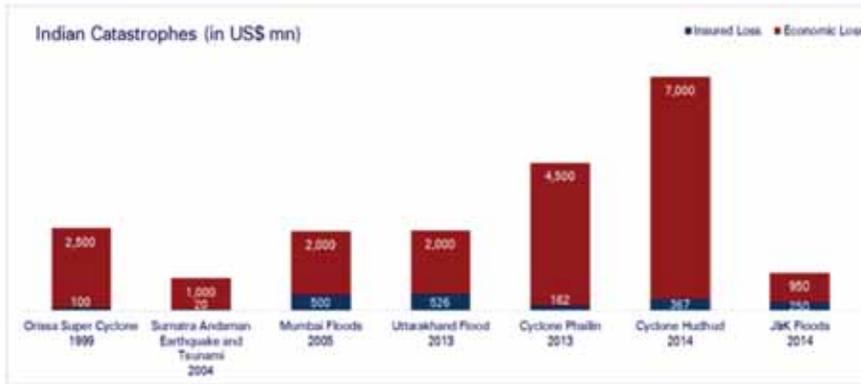
The economic loss arising out of these natural disasters is immense. As per estimates, Hurricane Sandy that hit the US in 2012 led to an economic loss of USD 68 bn. Similarly, Hurricane Katrina resulted in economic loss of USD 125 bn when it occurred in 2005. The Japan earthquake in 2011 led to losses of

USD 210 bn and over 15,800 fatalities.

Despite the regular occurrence of these events worldwide, economic losses remain largely uninsured. As per data analyzed over 10 years, on an average, only about 30% of catastrophe losses have been covered by insurance over the last 10 years. That means that about 70% of catastrophe losses have been borne by individuals, firms and governments. Secondly, the gap between economic loss and insured loss is increasing, even as the economic cost of natural catastrophes is growing markedly.

India too, has experienced an increasing number of natural catastrophes in the recent past, mostly floods and cyclones, resulting in considerable economic loss. The last 10 years or so has witnessed calamities such as the Mumbai floods (economic loss - USD 2 bn), Uttarakhand floods (USD 2 bn), Cyclone Phailin (USD 4.5 bn) and Hudhud (USD 7 bn), J&K floods (USD 1 bn) and the most recent Chennai floods (USD 6bn). Though the quantum of loss for India has been lower compared to its larger counterparts, insured losses were far less compared to the global average. For instance, insured





losses in case of Cyclone Phailin were only 3.6% of the economic loss, insured losses for Cyclone Hudhud were a mere 0.5% of economic losses leaving the exchequer and individuals to bear the impact and restoration cost from the event.

This clearly shows the need for stakeholders across the world, including India to take steps towards increasing the proportion of insured loss when it comes to natural catastrophes. More so, given that the quantum of loss in case of a catastrophe is far higher compared to manmade events such as terrorism or riots.

Insurers abroad and in India have already displayed prowess in terms of handling large scale claims from catastrophic events. If one were to consider the recent Chennai floods, the industry received claims amounting to Rs. 0.7 bn. In specific categories e.g. motor insurance, out of 11,000 motor claims, 500% more than the average. 95% of the claims were settled within 10 days of receipt of documents. The role that an insurer plays in this case is not limited to passing claims efficiently,

but handholding the insured through the calamity including reaching out to the customer, offering critical information and emergency assistance services to enable them to return to a situation of normalcy at the earliest. This is made possible by organizing customer outreach camps that enable the insured to get their queries related to insurance and otherwise addressed first hand. At the same time, these camps help ensure a hassle free claim process by handholding the insured throughout the journey.

Apart from efficiently managing the claim settlement part, insurers help reduce the financial and downtime impact for all stakeholders, for instance, by salvaging losses as they appoint loss management and restoration experts that would otherwise not be feasible for the insured as an individual customer or entity. In the case of Chennai floods again, we had deployed restoration experts from across the country to help the insured customers limit losses and speeden up recovery.

Catastrophic events will continue to rise amid a multitude of factors, climate changes being one of them. 15 of the 16 warmest years have occurred since 2000. While one cannot directly correlate impact of global warming on catastrophic events, one of the possibilities could be in terms of increase in intensity of storms and increased risk of drought. Having said this, it is important that all stakeholders including the Government, Regulator and individual entities including Insurers come forward to collectively address the increasing menace of natural calamities. At the current levels of under-penetration for insurance amid rising level of impact, it will only increase the load on the government authorities and individuals to absorb the financial loss arising out of the unforeseen event. It is time that concrete steps are taken in this area by all concerned on a war footing.

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Natural Disasters - Closing the Protection Gap, and the Role of the Government



- G. Satish Raju

A. The Protection Gap

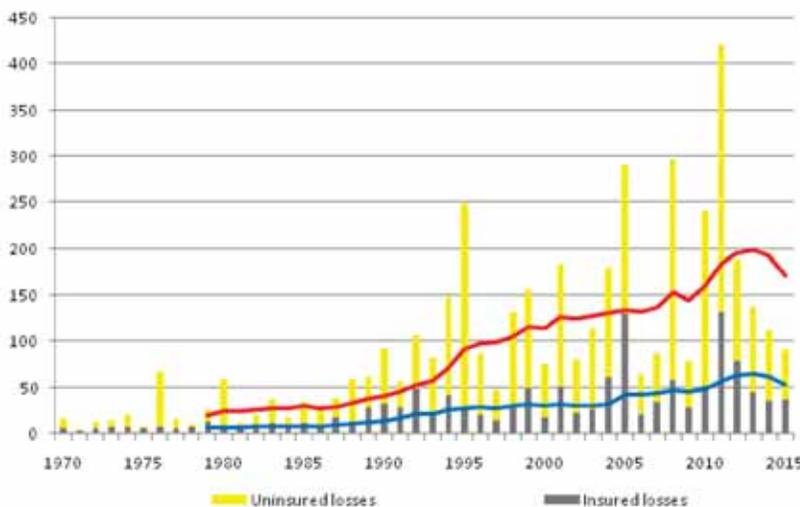
Natural disasters are never far from the news, whether local or international. And they come in all shapes and sizes and in all of nature's forces. The last one month has been remarkable - with devastating forest fires in Canada, and one closer home in Uttarakhand. Forest fires are not unusual, but then two such events in quick succession is not something we usually see, brought up as we are on an otherwise regular diet of floods, drought, earthquakes and cyclones.

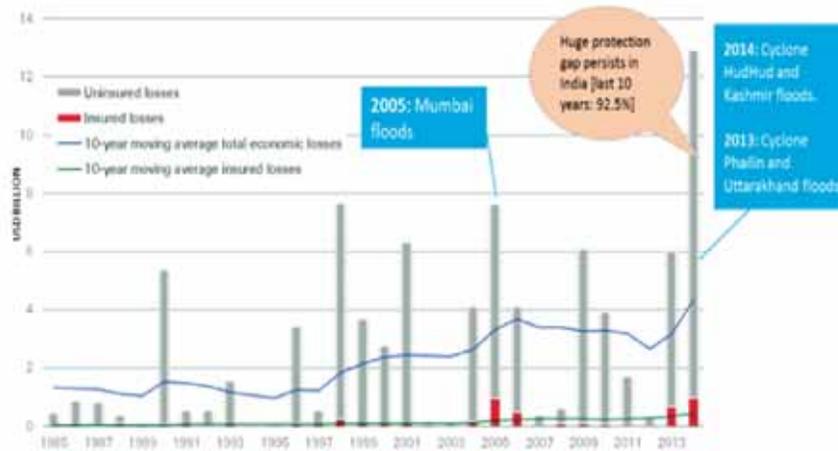
Whatever be the nature of disaster however, what remains undisputed is that the magnitude of such disasters increases year on year. The below chart shows the total losses (in USD billion) from disasters (natural and manmade) in the last 45 years - while there's a slight dip in the 10-year moving average of losses (represented by the continuous lines across the chart below) in the last couple of years, the long-term trend, at current prices, does show a marked increase in losses .

The largest annual losses were in 2011, driven mainly by the earthquakes in Japan and New Zealand. The above figure also shows up the difference between insured and total or economic losses over time, termed as the insurance protection or funding gap. This gap is the amount of total losses from catastrophes which is not covered by insurance. Of the total loss of USD 80 billion from natural disasters in 2015, only USD 28 billion was covered by insurance, leaving a protection gap of USD 42 billion.

Developing countries with their relatively lower insurance penetration have an even higher protection gap. The below figure shows the economic and insured losses from natural disasters in India in the period 1985-2014 . Uninsured losses from natural disasters in India in the 10 year period to 2014 amounted to an average of 92.5% of total economic losses.

As the devastating floods in Mumbai in 2005 and the more recent Chennai floods in 2015 showed, even urbanized areas in India have





a significant protection gap. While insurance loss estimates in the Chennai floods are of the order of Rs 5000 crores, the economic losses have been reported in the range of Rs 25,000 to 50,000 crores. Even at the lower end of the estimated losses, the funding gap would amount to at least 80% of economic losses.

B. The Burden of the Protection Gap

The financial impact of severe natural disasters on economies can be significant. The Japan and New Zealand earthquakes for example had an estimated impact of 4% and 10% respectively on the GDP of the country. The impact of course is more severe on under-developed countries. The 2010 Earthquake in Haiti is estimated to have had a financial impact of 121% GDP ; while the Nepal earthquake last year is estimated to have caused losses of around 35% of its GDP .

Risk mitigation as part of an overall Risk management framework is crucial to reducing the impact of

natural disasters on livelihoods and property. Severe natural disasters can however often overwhelm the strongest of defences, and the quick availability of post-disaster funding then becomes critical to recovery efforts.

Insurance is one key component of a disaster-financing framework - but then, even advanced economies carry the burden of the protection gap. The Japan and New Zealand quakes cited above may be viewed in the context of the still considerable protection gaps - only 17% and 20% of the losses were insured in Japan and New Zealand

Risk mitigation as part of an overall Risk management framework is crucial to reducing the impact of natural disasters on livelihoods and property.

respectively. And not too unexpectedly, the protection gap for the above mentioned Haiti and Nepal disasters was estimated to be much higher, at as much as 99%. The financial burden of disasters is borne by individuals and organisations for their uninsured assets, but more often than not, the most significant impact is on the public sector, or the government, which ultimately has to bear the major part of the cost of disasters.

C. Mind the Gap - Disaster Risk Financing

Current general insurance penetration levels in India, estimated at 0.7% (premiums in % of GDP, 2014) are expected to accelerate and outpace economic growth over the next several years, as can be expected in a developing economy. However, this also implies that the protection gap as regards natural disasters will remain significant during this period. This gap is partly met currently through the institution of the State and National Disaster Relief Funds (SDRF, NDRF). However, these funds have limitations, in that they are meant primarily for relief and rehabilitation, and cannot be used for long-term reconstruction of public assets and infrastructure damaged by disasters. Moreover, the fund amounts sought by states are often challenged by the Centre, resulting inevitably not only in lower amount of funds getting released but also in considerable delays after the occurrence of a disaster.

Institution of Reserve Funds is one measure taken by governments to deal with the financial consequences of disasters. Another option is by way of having contingent loans from multilateral institutions. Both these funding sources carry costs by way of the opportunity cost of reserve funds or the more explicit fees and interest cost of loans. Poorer economies may simply rely on donor funds to tide over financial crises brought by disasters. When reserve and other pre-event funding sources are no longer available, governments may resort to issuing debt to cover costs of relief and reconstruction, or even fresh taxation measures-for example, following the recent (April 2016) earthquake in Ecuador, its government announced that it will hike some taxes as well as issue bonds to finance reconstruction. Such post-disaster funding will inevitably carry higher costs too.

Pre-event financing by way of risk transfer to the insurance markets is increasingly being considered by governments as an important source of financing for addressing the protection gap from natural disasters. It can be argued that insurance markets, by way of assessing and pricing exposures and vulnerabilities to natural disasters in a region, are able to point towards the true economic value of risk and provide a benchmark to governments to assess the utility of insurance vis-à-vis other funding sources. The increasing use of disaster risk linked insurance instruments by public sector authorities, across the Americas and

The increasing use of disaster risk linked insurance instruments by public sector authorities, across the Americas and UK to the Caribbean and Africa, points to the utility of the insurance industry.

UK to the Caribbean and Africa, points to the utility of the insurance industry in closing the protection gap. Examples include:

- a. Mexico (FONDEN) : a parametric catastrophe bond providing cover for earthquake and hurricane risks.
- b. Alabama, USA: State Insurance Fund, Cover for hurricane risks
- c. CCRIF (Caribbean Catastrophe Risk Insurance Facility): Starting with a few countries, this facility has now grown to cover 16 countries for earthquake and hurricane risks. The facility's scope further expanded in 2014 to include excess rainfall coverage based on satellite and ground data, for 12 countries. Flexibility for member countries is available to choose cover limits up to \$ 100 million.
- d. ARC (African Risk Capacity): Drought cover inception in 2014

with 4 African countries, using satellite information on rainfall levels to derive modelled losses by country. Cover available is up to \$ 30 million per country. 5 countries joined for the 2015 season, and the facility is expected to add more countries as well as possibly include flood risk going forward.

- e. Flood Re: A UK government facilitated insurance pool scheme to cover flood risks for homeowners, inception April 2016.

Countries under the some of the above risk transfer schemes have received various payouts for triggered events. The growth of the schemes, both by way of more countries joining regional pools or adding perils to existing coverages over a period of time, points to the utility of such schemes. They can certainly provide rich content to study for planning similar risk transfer initiatives for other countries including India.

D. Disaster Risk Financing (DRF) in India - Government can play a key role

The current DRF framework in the country comprises mainly the NDRF and SDRF. A joint IRDA-NDMA (National Disaster Management Authority) Discussion Paper published in 2013 had presented several insurance solutions to complement the NDRF and SDRF such as natcat-risks pooling, simplified natcat products for urban areas, parametric insurance for state governments etc. The paper suggested the utilization of up to

5% of the SDRF for purchase of insurance solutions by state governments.

This is an opportune time to revisit these recommendations and reiterate the utility of insurance in plugging the protection gap. Whether it is the floods in Uttarakhand or Cyclone Phailin in 2013, Cyclone Hudhud or Kashmir floods in 2014, or the Chennai floods of 2015, or droughts across the country in 2014 and 2015, availability of funds for relief and reconstruction has fallen far short of requirements. It is in this context that it is suggested that index-based risk transfer, that can make available funds to regions affected by disasters relatively quickly, will be a very useful addition to the DRF framework in India. And such solutions are best implemented by the Central and State governments, which can use the existing administrative machinery to distribute funds for immediate relief as well as utilize the funding for long-term reconstruction of public infrastructure.

Index-based risk transfer has already been implemented in the country through weather-based crop insurance schemes (WBCIS). Similar index based solutions, also called parametric insurance, which make available funds upon the occurrence of pre-defined and agreed event-magnitudes - such as Earthquake Moment Magnitude, wind-speed of cyclone at landfall, intensity of rainfall, etc. - can be implemented by governments to complement the SDRF and NDRF. Funding from such

parametric insurance is contingent on the event magnitude which is known relatively quickly (generally, in a matter of 2-6 weeks), and is not dependent on actual loss settlement on ground which can take several months. Thus these funds are an important source for the insureds to tap into in the event of disasters. And the huge impact on society from disasters is best addressed by the government stepping in to implement such risk transfer solutions.

A number of arguments have been advanced against the government insuring public property or plugging the protection gap. One, that the government has a vast public asset base and can very well self-insure. Second, on a more simplistic level, that insurance comes at a cost and that insurers will ultimately recover any payouts over a period of time. Such arguments ignore the value brought by insurance in pricing disaster risk and understate the economic or indirect costs of severe disasters on society. Imposition of taxation, as cited in the Ecuador

example above, or a sharp rise in borrowing costs following a disaster is one example of such costs.

Risk transfer also provides for stability in planning and budgeting as opposed to financial shocks imposed on economies by uninsured disasters. At an individual level, the non-availability of immediate liquidity in the aftermath of a drought, may well push the farmer to get loans from private moneylenders at rates that push the farmer into a debt trap. These costs are often ignored in a simplistic trade-off of costs and benefits while evaluating insurance schemes.

On the subject of risks to agriculture and livelihoods, it is well accepted that the current insurance schemes cover no more than around 20% of the farming population and that this too is largely limited to farmers who have availed crop loans. While the government's stated ambition to bring at least 50% of the farmers into the insurance net within 3 years under the new crop insurance scheme is to be lauded, it also needs to be recognized that the vulnerable population- small and marginal farmers, tenanted farmers, non-loanee farmers- will continue to bear the brunt of the financial consequences of adverse weather in the short-term. The insurance industry and government can work together to mitigate such financial impacts and cover the uninsured as well by way of risk transfer by governments. Such initiatives can further be dovetailed into the Financial Inclusion schemes of the government.



Such arguments ignore the value brought by insurance in pricing disaster risk and understate the economic or indirect costs of severe disasters on society.



A more holistic approach to assessing the utility of risk transfer as an important complement and component in the DRF arsenal is therefore the need of the hour for governments. Further, advancement in technologies such as remote-sensing has made satellite data of weather affordable and available for framing credible risk transfer solutions. Flood and Drought insurance based on satellite data has been increasingly adopted by governments in Africa and the Caribbean countries to provide independent measures of event severity and to trigger payouts. And ongoing advancements in technology as well as improved modelling by insurers will drive down costs and basis risk (i.e. risk of losses on ground differing from that modelled by event parameters) of indexed or parametric risk transfer.

E. Additional Considerations for Central and State governments

A number of recent policy developments offer an interesting backdrop to DRF considerations of the Central and State governments in the country:

a. The move towards Cooperative Federalism and financial empowerment of States, with 10% higher share of tax revenues being allocated to states from 2015 following the recommendations of the Finance Commission. Grants to states by way of CSS (Central Sponsored schemes) have also been cut down. Part of this financial empowerment may



It is important too to take note of developments on the global front recognizing the impact of Climate change as well as the explicit role of risk transfer in mitigating such impact.



well include the need to build in a disaster-risk financing framework independently by State governments.

- b. The Fourteenth Finance Commission has recommended that should the cess on NDRF be discontinued or subsumed under GST (Goods & Services Tax); an assured source of funding ought to be ensured by the Union Government. Given that GST implementation is more a matter of time than anything else, the Central Government can actively explore risk transfer to markets as the funding source for NDRF.
- c. The new crop insurance scheme of 2016 (PMFBY) caps insurance premiums to be paid by farmers (at 1.5-2% for crops other than commercial/ horticulture), with the rest to be funded by central and state governments. Also, the liability of insurance companies at the national level

is capped at 350% of premiums or 35% of Total Sums Insured of yield-based schemes, beyond which, the funding will have to be shared between Centre and States on 50:50 basis. Here too, risk transfer should be considered by both Central and State governments for the higher severity natural disaster events that could lead to payouts over and above the national level limits of insurers under the PMFBY.

And last week's directive from the Supreme court to the government to set up a National Disaster Mitigation Fund for drought should open up another avenue for discussions of the insurance industry with the government to explore how the industry can support the government's efforts to leverage funds without having to provide for the full allocation of budgetary resources that may otherwise be required.

It is important too to take note of developments on the global front recognizing the impact of Climate change as well as the explicit role of risk transfer in mitigating such impact. Two such initiatives may be highlighted here:

- a. In June 2015, at the G-7 summit, Climate Risk Insurance found explicit mention in the leaders' Declaration. The G7 Climate Risk Insurance Initiative aims to increase the number of people benefiting from direct or indirect insurance covering the negative impacts of climate change induced hazards in low

and middle-income countries by up to 400 million by 2020, including by building on existing risk insurance facilities in Africa, Asia, Small Island Developing States, Latin America and the Caribbean.

Considering that current climate risk insurance target population coverage is estimated at 100 million, the 2020 target is ambitious but not unattainable. India's insurance industry can work with the government to structure risk transfer schemes to benefit its people and make use of available funding from such international platforms.

- b. Credit rating agencies such as S&P are beginning to evaluate the impact on sovereign and sub-sovereign ratings (countries and provinces/ states) from natural disasters. An S&P report

in September 2015 studied the impact of earthquakes, storms and floods with return periods of 250 years, on the economies of 48 countries. It concluded that such events can weaken sovereign ratings, and suggested catastrophe insurance as one way to mitigate the impact on sovereign ratings.

The rating impact on India as a country may be relatively low owing to its size and geographical diversification. However, in the context of States having to manage their finances more independently, and given that individual states are more susceptible to financial impacts of natural disasters, a disaster financing strategy will become key to the financial robustness of states. As pointed out in the S&P report, this may also contribute to more

economic financing as and when states approach markets to raise funds for ongoing expenditure.

Conclusion

A robust Disaster Risk Financing approach is key to the overall Disaster Risk Management strategy of any country. Innovative risk transfer schemes tailored to the disaster-management needs of a country or region, and making use of latest technologies are being implemented worldwide. The insurance sector in India would do well to collaborate with the Central and State governments in closing the Protection Gap and improving the country's resilience to natural disasters.

G. Satish Raju, Head GP South Asia, Swissre Services (P) Ltd., E-mail: satish_raju@swissre.com

The deadliest Nepal earthquake with a magnitude of 7.8Mw or 8.1Ms has killed more than 8000 people, injured many more thousands and made hundreds of thousands of people homeless. Tremors of this earthquake were also felt on Indian side of border. Besides property damage, around 78 people were reported to be killed in India. It was reported by the global reinsurer Swiss Re in their Sigma publication that the loss potential of a similar intense event to the National Capital region where tremors of earthquake felt would result in total losses to the extent of at least USD 4 billion, which are largely uninsured and under insured risks.

According to NDMA's report, 59% of the land mass of India is prone to earthquakes of different magnitudes - 11% in very high risk zone V, 18% in high risk zone IV and 30% moderate risk zone III. The capital cities of Guwahati and Srinagar are located in seismic zone V, while national capital of Delhi is in zone IV and the mega cities of Mumbai, Kolkata and Chennai are in zone III. 38 cities with population of half a million and above each and a combined population of million are located in these three regions. Of the 7,516 km long coastline, close to 5,700 km is prone to cyclones and tsunamis and 12% of land is prone to floods and river erosion.

Role of Insurance and Catastrophe Modeling in Financing Disaster Management



- Naveen Venkat Achi

India faces a tremendous challenge in understanding and minimizing the growing “protection gap” that exists between economic losses, insurable losses, and insured losses when a natural disaster strikes. Property and population have been increasing exponentially in the past decade. In turn, the likelihood of potential losses from a disaster also has been increasing due to a lack of understanding and poor management of the risks involved. For instance, more and more properties are being constructed in high-hazard areas, such as near an earthquake fault line, along the coast, and in flood-prone areas.

Given the competitive rates for protection from natural disasters in India, insurance companies are unable to price these risks fairly based on their true loss potential. At the same time, the insured often do not understand the potential threats to their property from natural disasters and either avoid insurance or underinsure property. These circumstances provide a growth opportunity for insurance

companies and opportunity for the regulator to reduce the insurance protection gap.

Understanding the Protection Gap

India has witnessed some major catastrophes in the last few years. Figure 1 highlights the gap between the economic and insured losses from some of the recent major catastrophe events. Insured losses are the losses incurred by the insurance companies. Insurable

losses are those that could arise from all exposures eligible for insurance coverage assuming standard limits and deductibles. If we add the losses from non-insurable sources—such as infrastructure and lost economic productivity—to the insurable losses, we get the “economic” losses.

In order to get a comprehensive view of catastrophe risk worldwide, AIR has been releasing the global

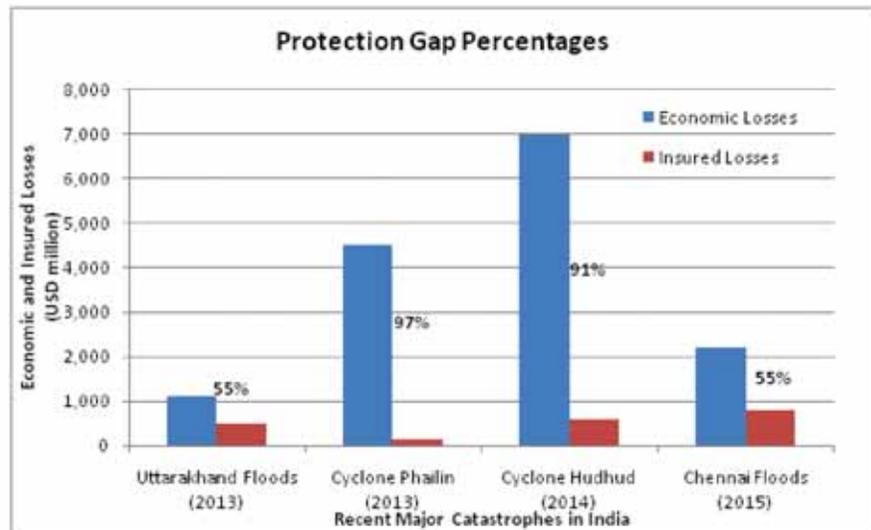


Figure 1. Economic and insured losses from recent major catastrophes in India, with the percent of uninsured losses—the protection gap percentage—indicated. (Source: Swiss Re Sigma Reports)

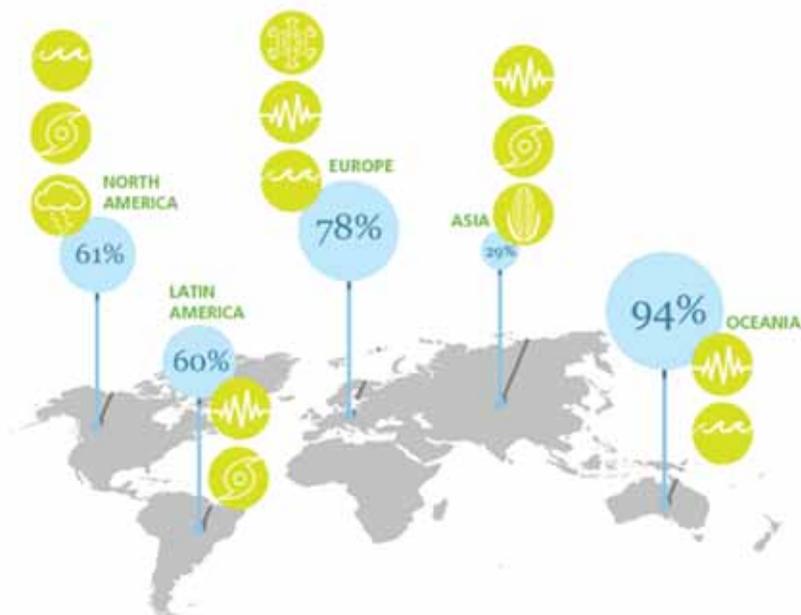


Figure 2. Percentage of average annual insurable losses that are insured by region. (Source: AIR 2015 Global Modeled Catastrophe Losses)

industry exceedance probability (EP) curve annually since 2012. The global industry EP curve can be used by companies to get an aggregate view of the risk on a global scale, as well as to help risk managers contemplate if the global industry is prepared for losses from natural catastrophes. In the 2015 update to the report, AIR presented the EP metrics on both an insurable and insured basis. A large difference between insurable and insured losses indicates inadequate preparation for natural disaster response. For the insurance industry, this difference presents opportunities to offer essential protection to vulnerable home and business owners, in addition to avenues of potential business growth.

The percentage of average annual insurable losses that are insured by region is shown in figure 2. The

difference is most pronounced in Asia, where insurance penetration remains very low.

Using Models to Anticipate Catastrophe Losses

By definition, catastrophes have low frequency and high severity. Traditional actuarial methods are inefficient in estimating the losses from future catastrophes because of

the scarcity of historical loss data and the constantly changing landscape of properties. Catastrophe models, however, can help companies and public entities anticipate the likelihood and severity of potential future catastrophes before they occur so the cost of recovery can be anticipated. Insurance companies, for example, use the output from catastrophe models to set insurance rates and establish underwriting guidelines, analyze the effects of various policy conditions, make reinsurance purchasing decisions, and optimize their portfolios.

Most of the damage from cyclones Phailin and Hudhud (see Figure 1) resulted from wind. While insured losses from Cyclone Phailin were relatively modest, Cyclone Hudhud caused significantly more in insured losses (as well as in economic losses). If either of these events had affected more-populated states of India—conditions that can be assessed with catastrophe models—both economic and insured losses would have been a lot higher.

Figure 3 shows the contribution of different perils to the insurable and insured global average annual loss (AAL).

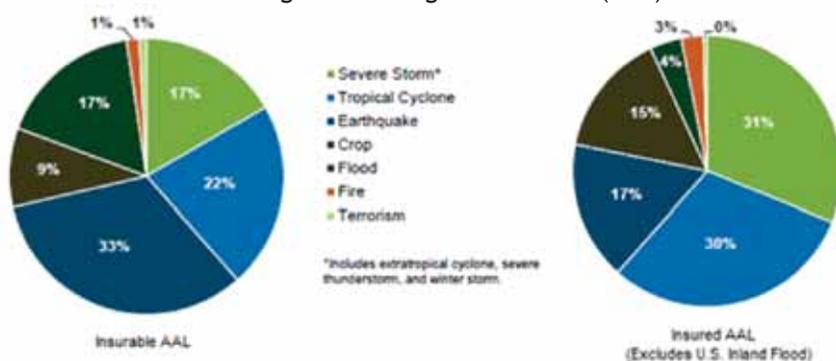


Figure 3. Insurable and insured global AAL by peril. (Source: AIR 2015 Global Modeled Catastrophe Losses)

The recent earthquake in Nepal highlighted the high potential damage from earthquakes in the Himalayan region, another peril that can be assessed with catastrophe models.

The AIR Cyclone Model for India captures the losses from both wind and precipitation-induced perils. The AIR Earthquake Model for India captures losses from both shake and liquefaction. To support these models, AIR has developed an industry exposure database (IED) for India, which details where insurable exposures are present within the country.

Benefits of High Insurance Penetration

On a regional basis, the percentage of economic loss from natural disasters that is insured varies just

as the percentage of insurable loss that is insured (shown in figure 2). In North America, for example, about half of the economic loss from natural disasters is insured, while in Asia and South America, which have much lower take-up rates than North America, insured losses make up just 8% and 13% of economic losses. As shown in Figure 4, which compares combined cyclone and earthquake insured, insurable, and economic losses for India at the AAL level and at selected return periods between 20 and 500 years, a low take-up rate places a tremendous burden on governments and other sources of financing to pay for catastrophe recovery.

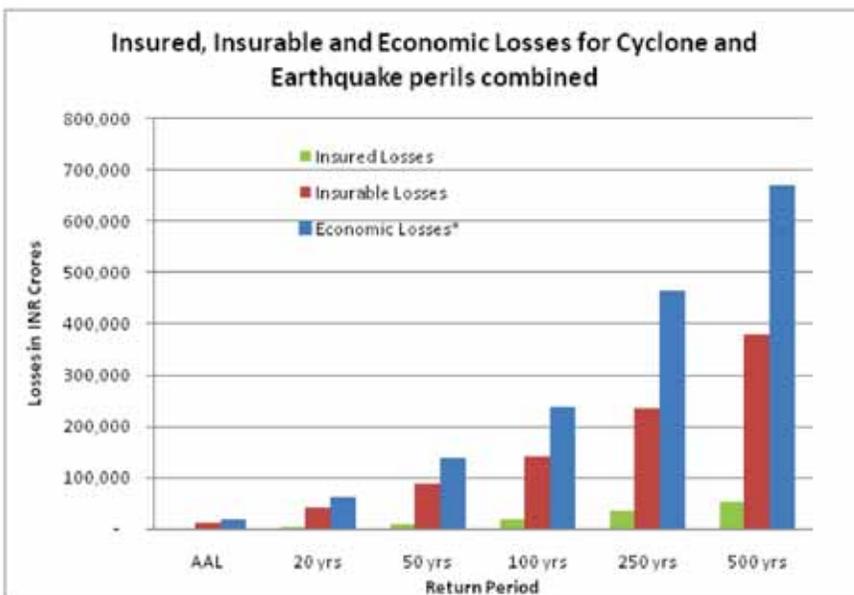
Conclusion - Important To Bridge the Protection Gap

Globally, the economic losses from catastrophes can exceed insured

losses by a sizable amount, depending on the region and peril. In the public sector, governments are increasingly recognizing the importance of moving from ex-post to ex-ante risk management, especially in countries where a risk transfer system is not well established. Economic loss estimates can be used to facilitate public risk financing and the development of regional resiliency plans to help societies better prepare for catastrophes, as well as to reduce the ultimate costs.

Insurance can help reduce the burden of economic recovery on governments after a natural catastrophe strikes. It also helps the economy get back on track faster. Countries with high insurance penetration, like Japan, many European countries, and the United States, likely will return to their normal functioning faster than countries with low insurance penetration after disaster strikes.

Finally, with high penetration comes better preparedness, since insurance involuntarily leads to better data collection and hazard assessment, which can be used by governments to be better prepared for a disaster.



* To arrive at the Economic losses, Insured losses for India have been divided by 8%, the factor for Asia.

Figure 4: A comparison of insured, insurable and economic losses from cyclone and earthquake catastrophes in India, combined (Source: AIR)

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Urban Flood Risk in India



- Pushpendra Johari

India, a peninsular country surrounded by the Arabian Sea, Indian Ocean and the Bay of Bengal on three sides, faces a big flood risk due to an erratic monsoon season, huge coast line that is exposed to cyclones and innumerable rivers. Out of a total geographical area of 329 million hectares, 40 million hectares is prone to floods. Almost every year, multiple floods of varying magnitude hit some part of the country, causing significant damage to property and lives. On an average, every year 7.5 million hectares of land is affected, 1600 lives are lost and the damages of Rs. 18 billion are caused to crops, houses and public utilities (NDMA, 2008).

In last two decades, there has been a significant surge in urban floods across cities in India - Ahmadabad (2001), Delhi (2002, 2003), Chennai (2004, 2010, 2015), Mumbai (2005), Bengaluru (2005), Surat (2006), Kolkata (2007), Jamshedpur (2008), Srinagar (2014). The urban floods cause considerable damage to the property and life which in turn triggers large insurance claims. The

Mumbai 2005 and Surat 2006 events are a case in point, with estimated claims of about INR 5000 Cr and 3500 Cr respectively. The most recent Chennai Floods in 2015 is also expected to generate claims between INR 3500 to 5000 Cr.

Urban floods are a result of combination of one or more of the following reasons:

Meteorological Factors

- Rainfall
- Cyclonic storms
- Climate change affects magnitude and frequency of rainfall and resulting into flood

Hydrological Factors

- Soil moisture conditions
- Ground water level before storm
- Surface Infiltration capacity
- Slope and surface roughness High tide

Human Factors

- Change in land use
- Obstructions in flood plain
- Lack of flood control measures
- Improper and poor maintenance of drainage

The Chennai Event

To understand the flood risk to prevailing in major urban agglomerations in the country, RMSI used its India FloodRisk™ model to simulate the flood extent and flood depth losses for the Chennai event on real time basis. The same was shared with the Indian Insurance industry through event advisories. Using the final extents RMSI estimated a loss of about INR 3,500 Cr from the event. The event loss map shows maximum losses in MGR Nagar, Thygarayanagar, Chennai central and Parry's corner. Tidel Park, Taramani, Triplicane, Royapettah, Guindy, K.K Nagar, Anna Nagar and Tondiarpet are expected to have suffered losses ranging between ₹90-110 crores each. While Tidel Park and Taramani are home to major IT parks in the state with well developed residential exposure, Tondiarpet, Triplicane and Royapettah have commercial and residential exposure, and K Nagar and Guindy have all types of exposure.

Post Disaster Survey

After the event RMSI conducted a post disaster survey by a team of

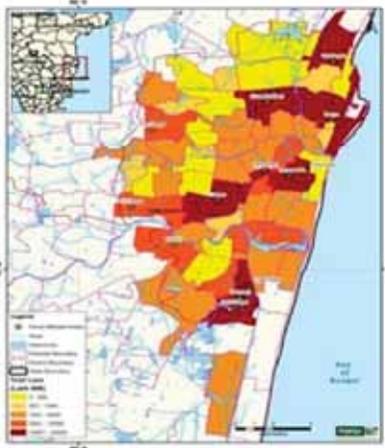


Fig. 1: Modeled Chennai Flood Losses

experts comprising civil engineers and flood modelers. The objective of the survey was to capture flood depths at various places using the high water marks left on the buildings and get a better understanding of the business interruption to calibrate and validate our flood loss model (India Flood Risk™). Over 100 post disaster survey samples covering 30 locations in and around Chennai were collected. The Modeled v/s Observed Flood Depths map shows a comparison between the observed flood depths as recorded at various locations on the ground and the modeled flood depths. At Perumbakkam, Tambaram, Santhome, IT parks/East coast road, and Adyar locations there is an exact match between the modeled and observed flood depths. At all other locations the variation between the modeled and observed flood depths is within 10%.

Reasons for flooding in Chennai

Based on the survey findings, Chennai flooding could be attributed to the following reasons:



Fig. 2: Modeled v/s Observed Flood Depths Map

- Heavy rainfall associated with depressions or cyclonic storms
- Two major rivers with reduced water carrying capacity
- Failure of drainage systems
- Increased impervious surface
- Water bodies reduced from 150 in 1923 to 27 by 2015
- Encroachment along major waterways (River Cooum, River Adyar and Buckingham canal)

In addition to Chennai, RMSI used its India FloodRisk™ model to simulate 100 year return period flood losses for major cities in India. The figure shows the loss estimates for Top 10 cities in India.

Minimizing Future Losses

It is possible to mitigate the impact of such catastrophes, by adopting NAT CAT modeling and adopting better risk management practices. This includes:



Fig. 3: Top 10 City 100 year scenario Losses

- Exposure modeling for optimal retention - optimal target portfolio design, setting accumulation limits, monitoring of limits
- Stress testing of net retention scenarios - PML scenarios, combined loss scenarios from different perils
- Development of NatCat Loss Cost by peril, occupancy and type of structure
- Early intelligence on NatCat losses from events for better claims handling
- Detailed risk location and attribute information for better risk estimation
- Developing rating zones and designing products basis the estimation

Pushpendra Johari, Vice President - Risk and Insurance, RMSI, email: pushpendra.johari@rmsi.com

Tete-a-Tete with

A new kid in town - Terrorism Risk Insurance



- Rohit Agarwal

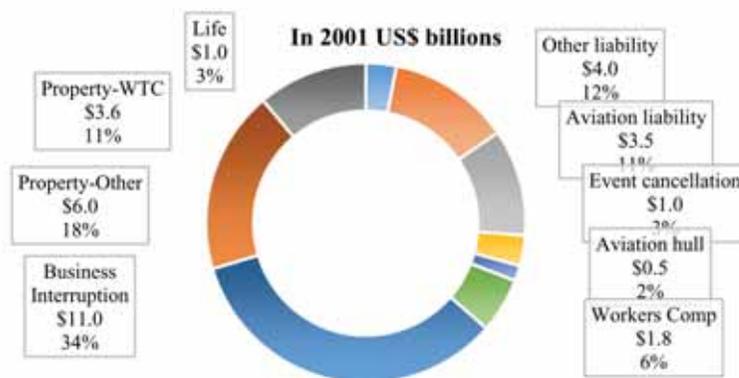
According to International Disaster Database about 346 natural disasters were reported, taking lives of 22773 people, affecting another 98.6 million people and inflicting economic loss of around US\$ 66.5 billion in the year 2015 only. There is an onus on the respective governments to find a way in order to ensure the effective rehabilitation process after such natural perils. And this process of rehabilitation of the affected is facilitated by the Insurance Industry. If the above staggering numbers are not enough to show the impact of disasters on world economy and human life, there is a single peril which can shame the numbers put above by all natural disasters combined. This peril which took away over 32500 lives and with economic loss of US\$ 52.9 billion spread across 93 countries in the year 2014 itself is Terrorism. It is of great concern that even though terrorism posed a very adverse impact, it remains uninsurable by the private insurance market worldwide until respective

governments pitched in with laws and regulations.

The terrorist attacks on World Trade Centre of September 11, 2001, drastically changed the way the insurance industry viewed the terrorism risk. Before this event, generally insurers did not exclude or charge separately for terrorism risks coverage for commercial property and casualty policies. After September 11, 2001, insurers and reinsurers started excluding the coverage as the impact of the terrorist attack was substantial, insured losses from

World Trade Centre attack alone ran up to \$32.5 billion as can be seen from Fig [1]. Claims were paid across various LOBs of insurance, including life, property, workers compensation, aviation and liability and loss of profit due to interruption. As the risk of loss from a catastrophic terrorist event was unacceptably high, Insurers started charging policyholders premiums to cover the expected losses from claims, as well as expenses, which includes administrative costs, and for the cost of capital to cover unexpectedly high losses for the insurance company. In this

Figure 1: Claims distribution by LOBs type of insurance from Sept 11 terrorist attack; Total: \$32.5 billion



Source: Insurance Information Institute

aftermath of exclusion or exorbitant increase in premiums, the real estate industry envisioned a negative future with investment hard to come by without enough insurance coverage. Governments & regulators across the globe relooked into their terrorism risk and created a variety of approaches to reinstate the insurance blanket through various mechanisms which will be dealt later in this paper.

Terrorism Risk and where India stands

The scope of Terrorism Risk Cover depends on the very definition of terrorism and the applied exclusions. If we compare the definition of terrorism across different countries, we can see disparity between them as every country defines terrorism based on its risk exposure from domestic or/ and separatist terrorism threats. So it becomes very important for corporate/individual buyers to understand the scope of coverage that is being offered and its sufficiency according to their needs.

In India the definition of Terrorism goes as “Act of terrorism is defined as an act or series of acts, including but not limited to the use of force or violence and/or the threat thereof, of any person or group(s) of persons, whether acting alone or on behalf of or in connection with any organization(s) or government(s), or unlawful associations, recognized under Unlawful Activities (Prevention) Amendment Act, 2008 or any other related and applicable national or state legislation formulated to

combat unlawful and terrorist activities in the nation for the time being in force, committed for political, religious, ideological or similar purposes including the intention to influence any government and/or to put the public or any section of the public in fear for such purposes.”

According to the “Global Terrorism Index 2015” by the Institute for Economics and Peace (IEP) there is an upward trend in terrorist activity globally. Some of the key findings of the report are as follows:

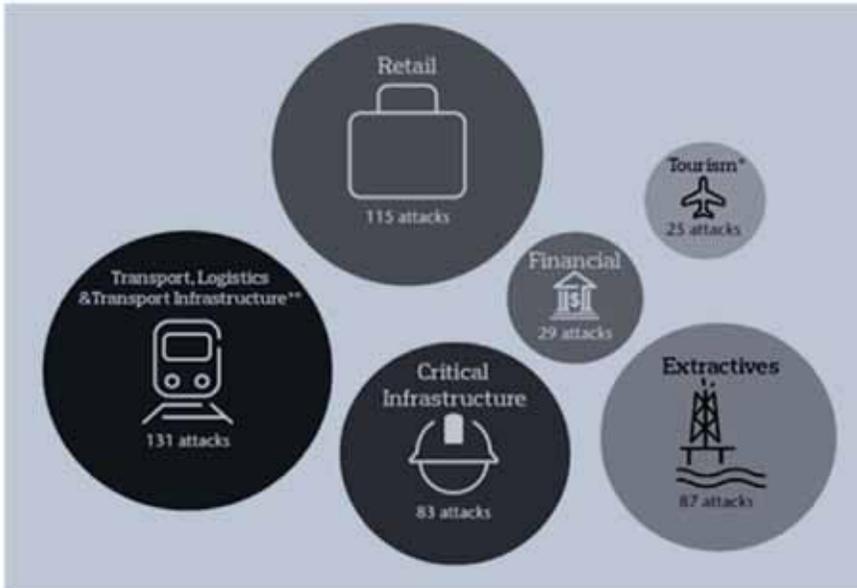
- There is an increase in Terrorist activity by 80 per cent in 2014 to its highest level
- Number of countries experiencing a terrorist incident increased to 93 in 2014 up from 88 in 2013
- More countries are now exposed to high levels of terrorism
- Terrorist attacks on private citizens are increasing
- In the Western countries, recent terrorist attacks are perpetuated by lone wolf attackers
- These attacks are giving rise to refugee movement and internal displacement
- The economic cost of terrorism stood at US\$52.9 billion, its highest ever level in 2014
- The costs of containing terrorism are much greater at around US\$117 billion

This shows a very grim picture of the future with rise in terrorism across the globe at this astounding pace. This also raises the nature and scope of terrorism risk which the countries are facing in the near future.

In last fifteen years, India is ranked 14 times in the top ten most affected countries by terrorism according to the Global Terrorism Index 2015 by IEP, all this for being a part of troubled neighbourhood. Also according to Aon’s guide to Terrorism & Political Violence risk 2016, terrorism threat in India remains high. Around 188 attacks were carried out by various Maoist factions, ethno-separatist groups, and domestic and regional Islamist groups in 2015 itself. The attacks killed 145 people and 241 left wounded. Around 50% of attacks in 2015 targeted government, military and security personnel and interests. Only around 13% of attacks were against business interests, particularly targeting construction and electricity infrastructure in sabotage attacks. Nearly all of these occurred in areas where Maoist and ethno-separatist groups operate in central, eastern and northeastern states.

But this picture will change in future keeping in trend with the Western countries where there is a rise in terrorist attacks on private citizens and public gatherings. This is a significant shift from previous trends when terrorist attacks were more on government institutions like police, and military. With major high-profile international attacks

Figure 2: Top six targeted business sectors in 2015



Source: Aon's guide to Terrorism & Political Violence risk 2016

targeting tourism related sectors and crowded public spaces, terrorism has re-emerged as a significant business risk over the past year as can be seen from Fig [2].

Why there is a need for Terrorism Risk

With ever increasing terrorism threat, organizations across the world should consider to create a comprehensive terrorism risk coverage buying additional lines of insurance together.

For any terrorism risk insurance, the basic coverage includes both property damage and business interruption. But with increased terrorist activities organizations can seek coverage for employers' liability as well as third party liability, depending on their regulatory environment. Coverage can also include event cancellation, threats that impact operations

(actual or assumed), non-damage & contingent business interruption.

With increasing events of mass-casualty attacks like Charlie Hebdo, Boston blasts etc. firms may also want to consider death in-service benefits planning, as well as personal accident and business travel accident coverage for travelling employees who may be

affected by international terrorism events. Also kidnap and ransom (K&R) coverage can be included.

As the spectrum of potential impacts has become broader than ever before, risk managers are face with increasing challenges to stay ahead of the threat.

The Difficulty of Insuring Terrorism Risk:

After the terrorist attacks of 9/11, the problem for Berkshire Hathaway and other large property and casualty insurance companies was aptly described by Warren Buffet as below: "We did not price for manmade mega-cats, and we were foolish in not doing so. In effect, we, and the rest of the industry, included coverage for terrorist acts in policies covering other risks-and received no additional premium for doing so. That was a huge mistake."

This happened because terrorism risk insurance was a de facto coverage offered to policyholders with standard policies without being

Figure 3: Relationship of Terrorist Threats to Particular Lines of Business

Threat/Hazard	Property/ Liability	Business Interruption	Workers' Compensation	Health	Life
Armed Attack	●	●	●		●
Arson/Incendiary	●	●	●		●
Biological Agent	●	●	●	●	●
Chemical Agent	●	●	●	●	●
Conventional Bomb	●	●	●	●	●
Cyber Terrorism		●			
HAZMAT release	●	●	●	●	●
Nuclear Device	●	●	●	●	●
Radiological agent	●	●	●	●	●
Surveillance		●			
Unauthorized entry		●			
	● - Probable relationship		● - Potential relationship		

Source: Krimgold, Frederick et al. Insurance, Finance, and Regulation Primer for Terrorism Risk Management in Buildings.

separately priced, modeled, or contractually termed. However, it was not for lack of any experience with terrorism-related events but, due to huge amount of insurance losses from single terrorist activity and the probability of risk cannot be ascertained so it was not explicitly mentioned in standard policies and hence the cost for providing such coverage to firms was never calculated.

Terrorism risk in its inherent nature is so fundamentally different from other risks, making it uninsurable by the insurance industry and thus requiring a government solution. Lack of publicly available data about the probability and severity of terrorist act makes terrorism risk uninsurable.

According to Emmett J. Vaughan and Therese Vaughan, Fundamentals of Risk and Insurance, there are four ideal elements of an insurable risk:

1. A sufficiently large number of insured to make losses reasonably predictable;
2. losses must be definite and measurable;
3. losses must be accidental or fortuitous; and
4. losses must not be catastrophic

So now we can check the insurability of terrorism risk on these parameters:

1. Assessability - Terrorism being a low frequency, high severity risk, historical data are helpless in calculating future risk probability

2. Randomness - Terrorist attacks are being taken out on a purpose to maximise damage and to surprise so doesn't fall under same as perils having random pattern of occurrence
3. Mutuality - Each terrorist attack are independent of each other due to differences in hazard exposure, such diversity hampered the cause of ascertaining insurability of risk
4. Economic feasibility- As quantification of terrorism risk is unpredictable so the economic feasibility of insurers.

Based on the aforementioned parameters, we can say that terrorism risk posed specific challenges to risk managers and insurers as below:

Firstly, terrorist attacks has the potential to inflict huge losses due to its evolving nature.

Secondly, given the risk uncertainty the pricing of terrorism insurance is difficult. Even recently developed terrorism risk models can only specify insurer's potential exposure to losses not the estimation of the likelihood of occurrence. Where we have publicly available historical databases and studies for catastrophic risks such as natural hazards, federal agencies don't disclose data on terrorist activities and threats for the purpose of national security. This poses a hindrance in predicting future terrorist attacks.

Thirdly, the risk of future terrorist attacks depends on the terrorists'

will to attack and their chosen modes. Terrorism risk depends on actions taken by both the private and government sectors and is continuously evolving, making it difficult to estimate future terrorism risk.

A fourth challenge arises in pricing terrorism risk insurance due to the existence of linkage between firms exposed to this risk. The susceptibility of one organization, sector or country depends not only on its own security measures, but also on the actions of other agents in the network. Failures of a weak link in a networked system can have devastating impacts on all parts of the system.

IMTRIP: India's solution for Terrorism Risk Coverage

Following the upheaval in the Insurance Industry worldwide post 9/11 and subsequent withdrawal of insurance and reinsurance coverage for terrorism risk in the international market, Indian insurers had a choice of either going with the industry for the non-availability of terrorism cover or organizing the cover pool internally. In order to be self-reliant, all the non-life insurance companies in India then joined hands in April 2002 and established the Indian Market Terrorism Risk Insurance Pool (IMTRIP). The Pool has now completed 13 years of successful operations. The Pool being administered by GIC Re has all Indian non-life insurance companies and GIC Re as its members. Pool members share the entire terrorism risk on Property Insurance policies.

Figure 4: IMTRIP Membership over the years



Source: IRDA Annual report

The Pool Underwriting Committee determines terms of cover, premium rates, and deductibles. All members provide capacity to the Pool in specified shares. Reinsurance protection is taken on excess of loss basis. Pool results i.e. investment income and losses are shared among them in same proportion as the capacity provided.

According to IRDA Annual report (2015), “the limit of indemnity per location has been enhanced to ₹1500 crores from 1 April 2014, against the previous level of ₹1000 Crores. The premium rates have been revised downward under the Terrorism Pool arrangement from the same date. To improve the market penetration for Terrorism Risk Insurance commission of upto 5% on Terrorism premium was allowed from 01.01.2014 for Terrorism Insurance business procured through Brokers/ Agents.”

Also “The Pool’s premium income for 2014-15 was ₹472.33 crore compared to ₹471.13 crore in 2013-14. The claims paid by the Pool during 2014-15 were ₹2.58 crore. No major losses were reported to the Pool during 2014-15.”

IMTRIP: Premiums, Administrative expenses, Insured Classes & Exclusions

With the formulation of the insurance pool, terrorism was made available as a separate add-on cover and optional brought at the discretion of the insured at additional premium. The rate of premium varies as per the latest guidelines by IRDAI from 1st April, 2014. The premium rate varies from ₹0.50 per mille to ₹0.23 per mille on the total sum insured (TSI) of the property for Residential/Non-Industrial/Industrial buyers. Also there is a provision for an Add-on Covers for Start-up expenses and

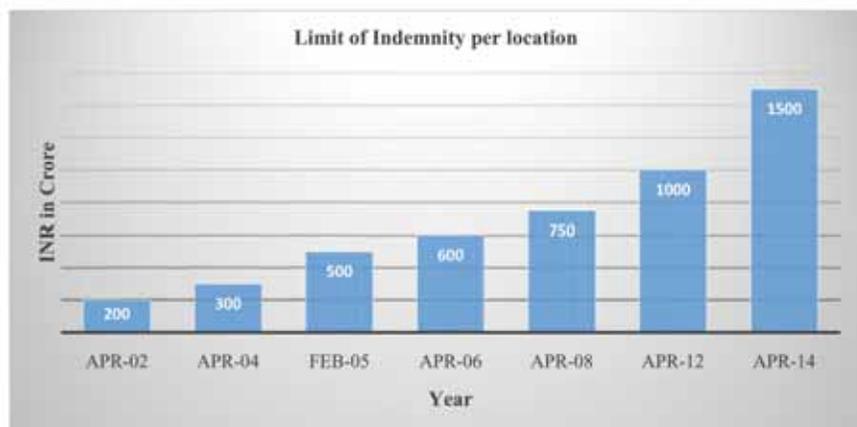
Alternate Accommodation within the limit of ₹1500 crore.

The pool employs 5 staffs to carry out work relating to collection of the premiums and fees, purchasing private reinsurance, and paying claims. The costs for carrying out these responsibilities are 1% of premiums.

The insurance classes presently covered under pool are Fire, Industrial All Risks (IAR), Fire section of package, Property section of Engineering/Project insurances including Erection All Risk (EAR), Marine Cum Erection (MCE), Storage Cum Erection (SCE), Contractor’s All Risk (CAR), Contractor’s Plant & Machinery (CPM), Electronic Equipment Insurance (EEI), Civil Engineering Completed Risk (CECR), On-shore drilling rig equipment, Property Sections of Miscellaneous policies, On-shore assets of Port Package policies.

The insurance classes which are excluded are Risks other than property in Fire & Engineering class,

Figure 5: Growth in IMTRIP Indemnity/Location Capacity over the years



Source: IRDA Annual report

Risks other than property sections of miscellaneous class as defined by IRDAI.[7]

Terrorism Risk Insurance plans across various countries

The terrorism risk insurance program for various countries can structurally varied as per three broad categories:

1. A multilayered structure where everyone from insurers, reinsurers and governments provides coverage based on level of risk, like in Australia and the United Kingdom (UK)
2. Government entities provide all the coverage for terrorism risk, and insurers and reinsurers do not take on any risk like in Spain and Israel
3. Coverage is provided by insurers and reinsurers entirely and the government has no financial liability like in Austria and India

On the other hand the U.S. program TRIPRA (Terrorism Risk Insurance Program Reauthorization Act) involves coverage from the government as well as insurers, but it does not have any provision of reinsurance.

Conclusion

In recent years with the increase in terrorist activities in India territories there is a huge surge in demand for insurance against terrorist risk either as an add-on provision or standalone terrorism insurance. Under such recent terrorist activities, the attack on

the Taj Palace & Oberoi's Trident in Mumbai on 26-29 November 2008 was first major claim related to terrorism in India. The total amount of financial losses from the 2008 Mumbai attacks was \$321 million (INR 3,769 million), and the pool paid \$128 million (INR 1,500 million) as per then limit. Subsequently the limit of the IMTRIP was extended on year on year basis depending on the risk emanating from increased terrorist activities.

Another area of growing concern is of cyber terrorism, which remains excluded from any type of insurance coverage. Cyber terrorism can occur imminently and posed gravest security risks to critical infrastructure- like water, electricity and gas.

So as a buyer of insurance coverage for either individual or businesses, one should be very clear of their requirements and should be able to read the fine prints on the policy offered by Insurance agency about the inclusion and exclusion. As even a single strike of terrorism can pose a huge amount of losses for the insured.

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प्रकाशक का संदेश

आपदाओं की उभरती चुनौती - आपदाओं से आघात-सहनीयता तक

वैज्ञानिक साक्ष्य के भार और वित्तीय प्रणाली के गतिसिद्धांत का संयोजन यह संकेत करता है कि समय की पूर्णता में जलवायु परिवर्तन वित्तीय आघात-सहनीयता और दीर्घकालिक समृद्धि के लिए संकट पैदा करता है - मार्क कैर्नी, गवर्नर, बैंक ऑफ इंग्लैंड एवं अध्यक्ष, वित्तीय स्थिरता बोर्ड।



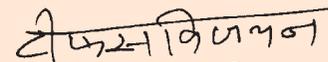
अनिश्चितता से बीमे का जन्म हुआ है। हानि चाहे जीवन की हो या संपत्ति की, आय की अथवा किसी अप्रत्याशित व्यय की, अनिश्चितता तो सामान्य कारक है। यही बात प्राकृतिक आपदाओं पर भी लागू होती है। परंतु अंतर इस तथ्य में निहित है कि प्राकृतिक आपदाओं के मामले में संभावित हानि का परिमाण-निर्धारण अपेक्षाकृत अधिक कठिन है। और, उनके कारण जो हानि होती है उसकी मात्रा के संदर्भ में बीमाकर्ताओं के तुलन-पत्रों पर अनर्थकारी प्रभाव हो सकता है। उदाहरण के लिए हाल ही में तमिलनाडु में जो बाढ़ आई है, उसके कारण बीमाकर्ताओं को लगभग 4,800 करोड़ रुपये के दावों का निपटान करना पड़ा।

इस प्रकार, दो प्रकार की चुनौतियाँ उभरती हैं जब हम प्राकृतिक आपदाओं के बीमे के संबंध में बात करते हैं - एक तो संभावित वित्तीय हानि के परिमाण की, जिससे पर्याप्त प्रीमियम का निर्धारण किया जा सके; और दूसरी ऐसे जोखिम के उचित विस्तार की, जिससे हानि की स्थिति में कोई भी बीमाकर्ता अनुचित दबाव में न आये।

जैसा कि हम सब समझते हैं, बीमे का मूलभूत सिद्धांत बड़ी संख्याओं का नियम है। अतः समाधान बीमे के व्यापन में वृद्धि तथा बीमाकर्ताओं और पुनर्बीमाकर्ताओं के संबंध में बीमारक्षा प्राप्त जोखिमों की व्यप्ति करने में है। भारत में बीमे के विषय में जागरूकता कम है, विशेष रूप से साधारण बीमा खंड में जिसके कारण बीमा व्यापन के स्तर निम्नतर हैं। यह सभी हितधारकों के हित में होगा कि वे अपनी शक्ति बीमारहित जनसमुदाय को बीमे की परिधि में लाने की दिशा में लगाएँ। हालाँकि यह एक कठिन कार्य प्रतीत हो सकता है, लेकिन लोगों के आय स्तरों और मनोदशा को देखते हुए, मुझे विश्वास है कि प्राकृतिक आपदा की स्थिति में बीमा के लाभों के बारे में जनसाधारण को शिक्षित करने की दिशा में संगठित प्रयास किये जाएँ तो उनके परिणामस्वरूप व्यापन के स्तरों में क्रमिक वृद्धि होगी।

इसके अलावा, नवोन्मेष और आवश्यकतानुरूप तैयार किये गये उत्पाद जो विभिन्न प्रकार के लागों की विशिष्ट आवश्यकताओं को पूरा करते हैं, भी अधिकाधिक लोगों को बीमा रक्षा के दायरे में लाएँगे। सरल और सासानी से समझने योग्य उत्पादों का निर्माण और ऐसे उत्पादों के लिए वितरण के नेटवर्क का विविधीकरण, ग्राम पंचायतों, परिषदों, स्थानीय निकायों के साथ परामर्श और उनको विश्वास में लेना ऐसे अन्य उपाय हैं जिनके संबंध में बीमारक्षा की वृद्धि करने के लिए विचार किया जा सकता है। मुझे आशा है कि सभी हितधारक इन पहलुओं पर चिंतन करेंगे और आपदाओं की उभरती चुनौती के प्रति आघात-सहनीयता निर्मित करने के लिए उपयुक्त समाधानों के साथ आगे आएँगे।

उपर्युक्त पृष्ठभूमि को ध्यान में रखते हुए, जर्नल के अगले अंक का फोकस "बीमा जागरूकता और बीमा क्षेत्र के विकास की दिशा में पहले" पर होगा।


टी.एस. विजयन
अध्यक्ष

वित्तीय आपदा प्रबंधन में बीमा की उपयोगिता।



- डॉ अजय कुमार मिश्रा

प्रत्येक व्यक्ति के लिये यह अत्यंत ही आवश्यक है कि वह वित्तीय आपदा प्रबंधन करें। न केवल व्यक्ति बल्कि राज्य एवं केंद्र सरकार भी वित्तीय आपदा प्रबंधन की व्यापक व्यवस्था अपने क्षेत्र के गरीब लोगों के लिये अवश्य करें जिससे आर्थिक क्षति की भरपाई की जा सके। यहाँ ध्यान देने योग्य तथा यह है की वित्तीय आपदाओं के विभिन्न स्वरूप हो सकते है। उदाहरण के लिये किसी व्यक्ति की आकस्मिक मृत्यु हो जाने पर उसके आश्रितों के लिये वित्तीय समस्या हो सकती है, किसी वाहन के दुर्घटना घटित होने पर, किसी के घर में चोरी/आग लगने पर, किसी किसान की फसल नुकसान होने पर इत्यादि के अलावा भी वित्तीय आपदा आ सकती है, परन्तु इन सबसे कहीं अधिक वित्तीय आपदा प्राकृतिक आपदाओं के होने से होती है। जिसका न केवल स्वरूप अत्यंत बड़ा होता है बल्कि अधिक मात्रा में जीवन को सामान्य रूप में लाने के लिये धन की आवश्यकता होती है। मानव जीवन और आपदाएँ एक ही सिक्के के दो पहलु है। सम्पूर्ण पृथ्वी पर शायद ही कोई व्यक्ति हो जिसने

आपदाओं को न महसूस किया हो। अर्थात् मानव जीवन का एक चिंतित और अभिन्न अंग आपदाएँ भी है। आपदाओं का स्वरूप अलग-अलग हो सकता है परन्तु परिणाम सभी आपदाओं का भयावह ही होता है। कुछ आपदाएँ मानव निर्मित होती है जबकि कुछ आपदाएँ प्रकृति द्वारा की जाती है। मानव जीवन को आपदाओं के पश्चात नियमित करने में सबसे अत्यधिक योगदान धन का होता है। उसके तत्पश्चात मानव की अपनी इच्छाशक्ति, सहनशक्ति, परिस्थितियों में सामंजस्य बनाकर वर्तमान में जीना और भविष्य के लिये अग्रिम आवश्यक कार्यवाही करना आता है। आपदाओं के विभिन्न स्वरूपों में जहाँ जीवन को पुनः पटरी पर लाने की आवश्यकता हो और उस आवश्यकता की पूर्ति के लिये धन की आवश्यकता हो ठीक वही से बीमा की आवश्यकता को प्रबल बल मिल जाता है। अर्थात् मानव जीवन का अभिन्न अंग बीमा है, जो विभिन्न माध्यमों जैसे - व्यक्ति बीमा, समूह बीमा, साधारण बीमा, आपदा प्रबंधन बीमा, कृषि बीमा और न जाने कितने स्वरूपों में मानव

को आर्थिक नुकसान को न केवल सहने की शक्ति प्रदान करता है बल्कि जीवन को आगे बढ़ाने में आर्थिक आवश्यकताओं की पूर्ति करता है। संसार के समस्त निवेश के साधनों में एकलौता निवेश का साधन बीमा ही है जो किसी जन की अनुपस्थिति में आर्थिक रूप से उनके आश्रितों को मजबूत करता है जिससे वो जीवन को बेहतर बना सकते है। इसीलिये कहा गया है बीमा बेमिसाल है। प्राकृतिक आपदाओं से धन और जन दोनों की हानि होती है। जन हानि का पिछले कई दसको का विवरण चित्र संख्या एक में प्रदर्शित है। यहा आकडे स्वयं में यह सोचने को विवश कर रहे है की आपदाएँ कितनी भयानक होती है।

सड़क दुर्घटना, चोरी, असामयिक मृत्यु, मेडिकल आवश्यकता, के नियमित आपदाओं के अतिरिक्त आपदाओं के बड़े स्वरूप को यदि विभाजित किया जाय तो दो भागों में विभाजित किया जा सकता है। प्राकृतिक आपदाये जिसके अंतर्गत शामिल है - भूकंप, बाढ़, भूस्खलन,

विवरण संख्या-1 प्राकृतिक आपदाओं से पीड़ितों (मारे गए और प्रभावित लोग) की कुल संख्या

	1974-78	1979-83	1984-88	1989-83	1994-98	1999-03
अफ्रीका	17,508,792	52,512,857	64,218,089	74,326,985	39,829,959	99,583,503
अमेरिका	9,412,304	46,719,655	21,510,762	9,595,998	25,917,605	22,861,100
एशिया	16,728,618	603,985,726	720,881,573	704,328,791	969,061,214	1,373,557,427
युरोप	2,238,584,	1,819,847	383,468	4,906,478	10,262,461	10,961,321
ओसीनिया	98,622	684,893	712,930	7,320,767	10,296,472	268,817
कुल	194,986,920	705,722,978	807,706,822	800,479,019	1,055,367,711	1,507,232,168

स्रोत: www.fincomindia.nic.in/

विवरण संख्या-2, भारतीय शीर्ष दस प्राकृतिक आपदायें

रैंक	मरने वालों की संख्या (अनुमानित)	घटना	वर्ष
1.	20 लाख	डेकन अकाल	1632-33
2.	100 लाख	बंगार में अकाल	1769.1773
3.	3.2 लाख	कलकत्ता चक्रवात	1737
4.	3.2 लाख	जोकर चक्रवात	1839
5.	15-40 लाख	बंगाल में अकाल	1943
6.	00.20 लाख	लातूर भूकंप	1993
7.	00.10 लाख	ओड़िशा सुपर चक्रवात	1999
8.	00.20 लाख	गुजरात भूकंप	2001
9.	2.30-280. लाख	सुनामी	2004
10.	00.06 लाख	उत्तराखंड बाढ़	2013

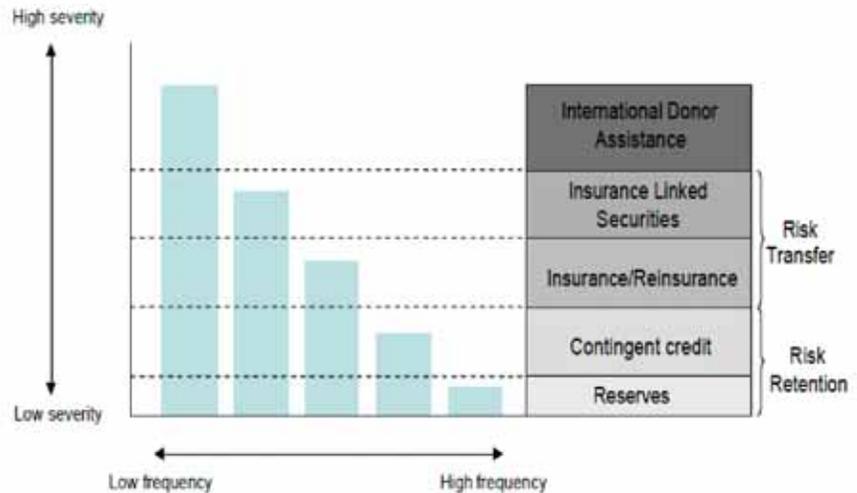
स्रोत: <http://www.indiatvnews.com/news/india/top-10-natural-disasters-that-rocked-india-29492.html>

चक्रवात, सुनामी, शहरी बाढ़ और गर्मी की लहर 2. मानव निर्मित आपदायें जिसके अंतर्गत शामिल है - परमाणु आपदा, रासायनिक आपदा और जैविक आपदा। प्राकृतिक आपदाओं को मानव अपने कार्यों से कम कर सकता है और मानव द्वारा निर्मित आपदाओं को समाप्त भी किया जा सकता है और यह प्रत्येक परिस्थिति में स्वागत योग्य भी है की आपदाओं को कम किया जाय। मानव अपने प्रयास से आपदाओं को कम करने के लिए विभिन्न कार्य सम्पादित कर सकता है। परन्तु यह भी शाश्वत सत्य है की आपदाओं को समाप्त नहीं किया जा सकता। और भविष्य में होने वाली आपदाओं से आर्थिक रूप से बचने के लिये बीमा ही एक मात्र विकल्प है जिसका सहारा लिया जा सकता है। लोग जो आपदा संभावित क्षेत्र में रहते हैं उन्हें और उनकी सुरक्षा के लिए राज्य सरकार और केंद्र सरकार को मिलकर आपदाओं को कम करने हेतु समस्त संभावित कदम उठाने के साथ-साथ उन लोगों का और क्षति योग्य समस्त सम्पतियों का बीमा भी करवाना चाहिए जिसके उनकी आर्थिक स्थिति को मजबूत किया जा सके। आपदायें कितनी भयावह होती है इसका आकलन विवरण संख्या-2 से भी किया जा सकता है।

कोई भी प्राकृतिक आपदा स्वयं में यह सत्यापित करती है की आपदा के पश्चात् की स्थिति कितनी भयावह होती है। समस्त आपदाओं का सीधा सम्बन्ध जोखिम से है। कोई भी व्यक्ति कितना वित्तीय जोखिम उठा सकता है वह उसके आर्थिक सबलता पर निर्भर करता है। अर्थात् जोखिम को सहन करने की व्यक्तिगत क्षमता ही बीमा के लेने या न लेने का निर्धारण करती है। किसी एक व्यक्ति के लिये 500 रुपये का कोई मूल्य नहीं हो सकता जबकि किसी अन्य व्यक्ति के लिये 500 रुपये का मूल्य बहुत भी हो सकता है और

अमूल्य भी। लेकिन यही स्वरूप जब व्यक्ति से निकलकर समूह तक आती है तो आर्थिक मूल्यांकन की सीमा विस्तृत हो जाती है और सामाजिक सरोकार के तहत सरकारें इसके लिये जिम्मेदार होती है आर बड़े पैमाने पर आपदा होने और न होने की हो उसका निर्धारित नियमों के तहत बिहित की उपस्थिति के मुल्यांकन के पश्चात् बीमा किया जा सकता है। बीमा के लिये जोखिम का होना अति आवश्यक है। इस संसार में माँ लक्ष्मी और कुबेर के अलावा प्रत्येक व्यक्ति को पैसे की आवश्यकता है। वित्तीय आपदा प्रबंधन में बीमा की उपयोगिता सर्वश्रेष्ठ है क्योंकि बीमा जोखिमों को विस्तृत बीमित समूह में विभाजित कर देता है। परिणाम स्वरूप वित्तीय निश्चिन्तता प्राप्त होती है वो भी नामामत्र के लागत पर। भारत सरकार की अनेको योजनायें आपदा प्रबंधन से राहत के लिये है जैसे -मार्जिन मनी योजना, आपदा राहत कोष, आपदा राहत के लिए राष्ट्रीय कोष और राष्ट्रीय आपदा आकस्मिक कोष। इन सबसे माध्यम से केंद्र सरकार आपदा प्रभावित क्षेत्र के लोगों को सहायता प्रदान करती है। इसके अलावा राज्य सरकारों की भी अलग-अलग योजनायें प्रचलन में है। बीमा की उपयोगिता को चित्र संख्या 1 के माध्यम से समझा जा सकता है।

चित्र संख्या-1



स्रोत: www.fincomindia.nic.in/

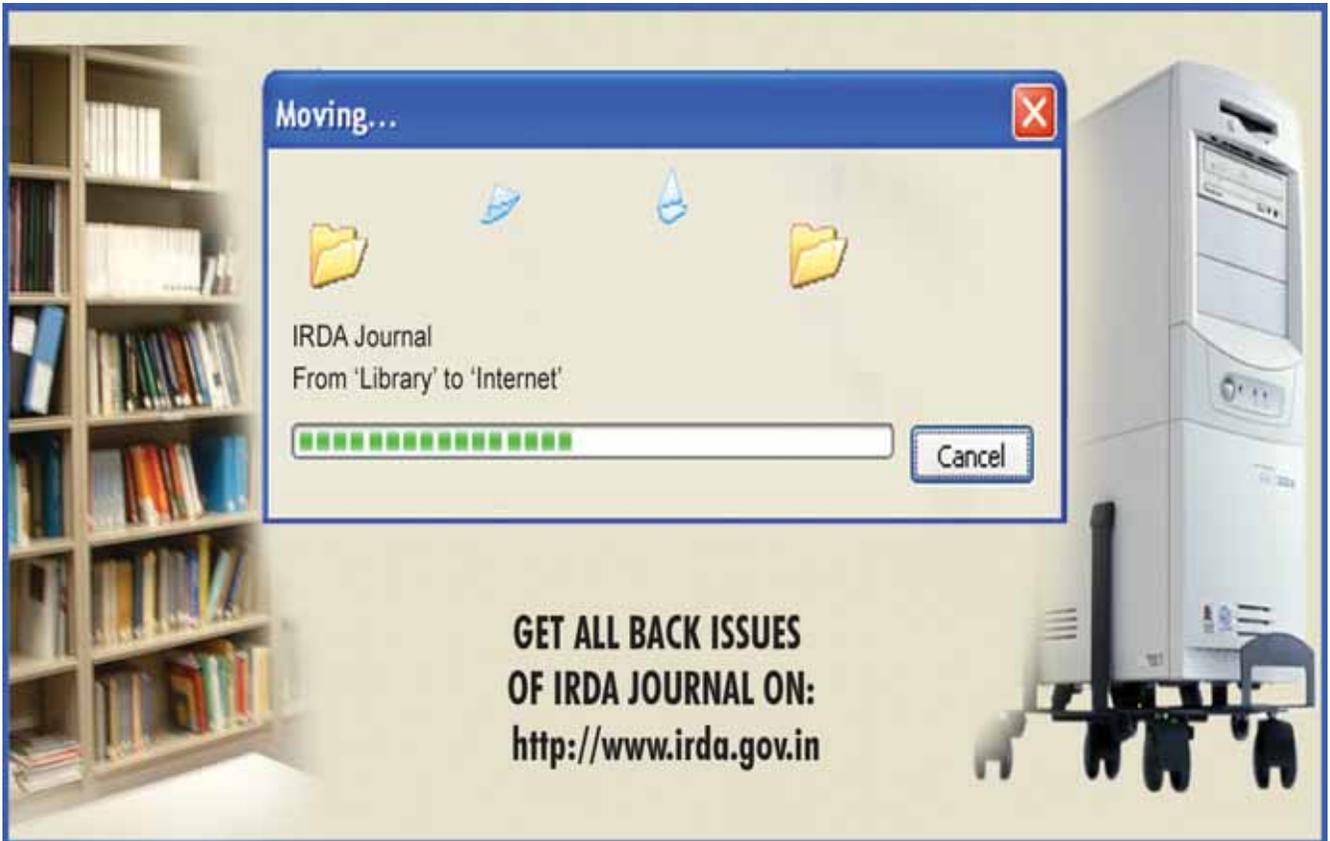
3 खरब डॉलर की सकल घरेलू उत्पाद एवं क्रय शक्ति समता के आधार पर आज भारत दुनिया की चौथी सबसे बड़ी अर्थव्यवस्था है। भारतीय अर्थव्यवस्था चीन के बाद दूसरी सबसे ऊंची दर से बढ़ रही है। भारत दुनिया में चीन और अमरीका के बाद आपदा में तीसरा सबसे अधिक खतरे वाला देश है। वर्तमान में भारत में बीमा की पैठ का स्तर प्राकृतिक या मानव निर्मित आपदाओं के लिए 1% से कम है। यह प्रतिशत स्वयं में यह दर्शाता है की आपदाओं में बीमा की उपयोगिता के स्तर में वृद्धि की असीम संभावनाएँ विद्यमान है। जरूरत है तो सिर्फ सरकार और आम जनता को इस विकल्प पर ध्यान देने की। अग्रलिखित जोखिम के लिए जीवन और संपत्ति का बीमा किया जा सकता है - आग, बाढ़, भूमि, समुद्र और हवा या द्वारा माल के

पारगमन में जोखिम भूकंप दंगा या नागरिक हंगामा, और गड़बड़ी, सेंधमारी, चोरी या डकैती, चोरी, आग टक्कर से नुकसान, पारगम और किसी भी “भगवान के अधिनियम” () हानि या जीवन यां संपत्ति को नुक़ास इत्यादि का।

आश्रितों का जीवन सही रूप में चले यह प्रत्येक व्यक्ति की आकांक्षा होती है। इन समस्त इच्छा और आवश्यकता की पूर्ति बीमा के माध्यम से ही की जा सकती है और इसके लिये अत्यंत आवश्यक है की हम आप स्वयं में जागरूक बनने के साथ-साथ अपने आस-पास भी जागरूकता फैलाये और बीमा के माध्यम से मिलने वाली अनूठे लाभ का विस्तार करें। जब अधिक लोग शामिल होंगे तो निसंदेह प्रीमियम हिस्सेदारी में भी कमी आयेगी। इन सबके अलावा यदि

आकस्मिक मृत्यु न भी हो तो कम से कम व्यक्ति अपने बुढ़ापे में अपनी आवश्यकताओं की पूर्ति के लिये किसी पर आश्रित नहीं होगा। समूह में लोगों का हित सरकार बीमा के माध्यम से आसानी से पूरा कर सकती है और हर विषम परिस्थिति में लोगों के साथ खड़ी भी दिखेगी।

डॉ. अजय कुमार मिश्रा, विचार लेखक के व्यक्तिगत है। ई-मेल: drajaykmishra@gmail.com



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Snapshot of Life Insurance Industry as at 31.03.2016

The Life Insurance Sector procured Rs.138657.31 crore First Year Premium with a growth of 22.55% as at the end of 31st March, 2016. LIC procured Rs 97674.32 Cr with a growth of 24.74% where as Private Sector procured Rs 40983.00 Cr posting a growth of 17.63%. Private sector experienced a growth in both Individual NB and Group NB where as LIC shown a growth in Group NB and decline in Individual NB.

The number of individual policies has shown a growth of 1.88% by public sector and 7.93% by private sector and an overall growth of 3.22% at the industry level. The number of lives covered under Group policies has shown a growth by 40.02% at the industry level.

ULIP business has shown a growth of 32.03% up to the period ended 31st March, 2016 compared to the corresponding previous period. The Life Insurance Industry has procured Linked Premium of Rs.17598.49 crore as at 31st March, 2016 as against Rs.13329.45 crore for the same corresponding period of previous year. This entire growth may be attributed to the Private Sector (growth of 31.82%) while LIC has a growth of 4123.19% with Rs.29.14 crore against the Rs. 0.69 crore business in the previous year corresponding period.

The share of Pension (31.82%), Annuity (8.15%) and Health (0.13%) segments has shown growth where as Life (59.90%) segment has

shown a decline when compared to last year's performance. The individual pension business shows a decline both in terms of number of policies and premium. Group Pension premium has a growth of 20.94% for private sector and 63.23% for LIC. However, the share of individual pension premium out of the total pension premium remains at just around 2.5%.

Analysis of ULIP business:

The Life Insurance Industry has procured Linked Premium of Rs.17598.49 crore as at 31st March, 2016 as against Rs.13329.45 crore for the corresponding period of previous year. It showed an increase of 32.03%.

LIC's Premium is Rs.29.14 crore compared to previous year's Rs.0.69 crore), an increase of 4123.19%.

Private players have collected linked Premium of Rs.17569.35 crore (PY Rs.13328.76 crore), an increase of 31.82%.

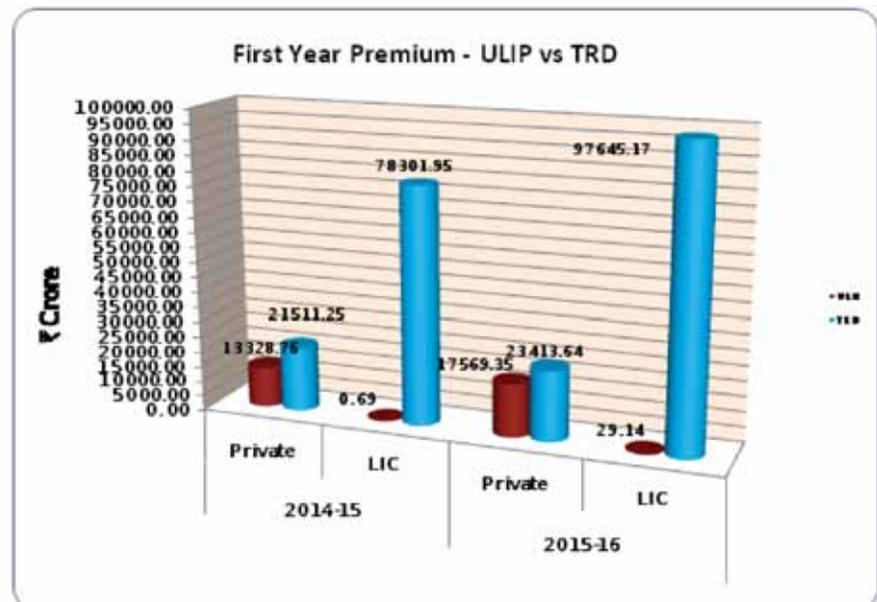
Analysis of Traditional Business:

The Life Insurance Industry has procured Non-Linked Premium of Rs.121058.82 crore as at 31st March, 2016 as against Rs.99813.20 crore for the same corresponding period of previous year. It shows a growth of 21.29 %.

LIC's Premium is Rs.97645.17 crore (PY Rs. 78301.95 crore), a growth of 24.70%.

Private players have collected Non-linked Premium of Rs.23413.64 crore (PY Rs.21511.25 crore), an increase of 8.84%.

Compiled by Life Dept., IRDAI



First Year Premium of Life Insurers for the Period ended 31st March, 2016
(Premium in ₹Crore)

Sl No.	Insurer	Premium		Growth	No. of Policies / Schemes		Growth	No. of lives covered under Group Schemes		Growth
		2014-15	2015-16		2014-15	2015-16		2014-15	2015-16	
1	Bajaj Allianz Life	2702.05	2884.72	6.76%	295917	260941	-11.82%	37321923	44738471	19.87%
2	Exide Life	645.16	631.26	-2.15%	161881	192272	18.77%	237214	863986	264.22%
3	Reliance Life	2069.69	1558.33	-24.71%	479078	364764	-23.86%	2460607	3362729	36.66%
4	SBI Life	5528.10	7106.62	28.55%	1126211	1273515	13.08%	1057361	7916239	648.68%
5	Tata AIA Life	313.08	740.58	136.55%	72055	136492	89.43%	278670	406722	45.95%
6	HDFC Standard Life	5493.18	6487.66	18.10%	876781	1150924	31.27%	4861059	14226737	192.67%
7	ICICI Prudential Life	5333.30	6765.89	26.86%	639137	580685	-9.15%	921137	1229885	33.52%
8	Birla Sun Life	1941.55	2221.15	14.40%	289637	287610	-0.70%	971319	1442336	48.49%
9	Aviva Life	557.04	320.81	-42.41%	84805	49523	-41.60%	1093910	175682	-83.94%
10	Kotak Mahindra Life	1540.18	2209.66	43.47%	187120	260868	39.41%	6849364	9022367	31.73%
11	Max Life	2574.02	2881.93	11.96%	490498	460495	-6.12%	1901530	1442875	-24.12%
12	PNB Met Life	826.60	1003.89	21.45%	199640	240927	20.68%	2497917	1022530	-59.06%
13	Sahara Life	38.70	43.40	12.14%	21167	19542	-7.68%	93106	86207	-7.41%
14	Shriram Life	511.83	706.28	37.99%	191008	266976	39.77%	2924525	8726503	198.39%
15	Bharti Axa Life	475.37	539.30	13.45%	94139	96757	2.78%	86865	99939	15.05%
16	Future Generali	252.52	255.60	1.22%	38735	29601	-23.58%	381377	245574	-35.61%
17	IDBI Federal Life	484.50	588.40	21.44%	88658	109011	22.96%	583038	616067	5.66%
18	Canara HSBC OBC	476.94	859.30	80.17%	60606	76015	25.42%	98894	116936	18.24%
19	Aegon Life	207.50	136.33	-34.30%	65258	56844	-12.89%	27686	35660	28.80%
20	DHFL Pramerica	577.41	725.92	25.72%	54144	56250	3.89%	3901478	6927536	77.56%
21	Star Union Dai-Ichi	629.93	654.19	3.85%	100106	90401	-9.69%	692575	2868477	314.18%
22	IndiaFirst Life	1538.73	1478.12	-3.94%	92988	95045	2.21%	1003793	3427526	241.46%
23	Edelweiss Tokio	122.64	183.67	49.76%	29243	37881	29.54%	344517	412454	19.72%
	Private Total	34840.01	40983.00	17.63%	5738812	6193339	7.92%	70589865	109413438	55.00%
24	LIC	78302.64	97674.32	24.74%	20171063	20546749	1.86%	52271508	62619715	19.80%
	Grand Total	113142.65	138657.31	22.55%	25909875	26740088	3.20%	122861373	172033153	40.02%

Note: 1. Cumulative premium upto the month is net of cancellations, which may occur during the free look period.
2. Compiled on the basis of data submitted by the insurance companies

GROSS DIRECT PREMIUM INCOME UNDERWRITTEN BY NON-LIFE INSURERS WITHIN INDIA (SEGMENT WISE) : FOR THE YEAR ENDING 31ST MARCH 2016 (PROVISIONAL & UNAUDITED) (RS. IN CRS.)

Insurers	Fire	Marine Total	Marine Cargo	Marine Hull	Engine-ering	Motor Total	Motor OD	Motor TP	Health	Aviation	Liability	P.A.	All Other Misc.	Grand Total	Growth %	Market %	Accre-tion
Private Sector Insurers																	
Royal Sundaram	100.66	33.21	32.34	0.87	38.89	1273.77	874.24	399.53	197.84	0.00	11.26	39.40	7.96	1702.99	8.53%	1.77%	133.78
Previous year	79.58	34.03	33.25	0.78	36.55	1159.43	816.40	343.03	204.36	0.00	9.13	37.69	8.44	1569.21			
Tata-AIG	384.94	265.43	265.43	0.00	79.01	1411.36	897.47	513.89	269.19	2.13	275.62	129.21	141.66	2958.55	9.01%	3.07%	244.41
Previous year	348.63	249.05	249.05	0.00	72.39	1224.58	790.54	434.04	237.82	2.20	245.25	141.46	192.75	2714.14			
Reliance General	259.08	50.79	41.37	9.42	53.20	1660.52	794.77	865.75	537.09	5.46	40.69	27.47	157.26	2791.56	2.79%	2.90%	75.73
Previous year	189.32	45.99	41.56	4.43	67.45	1642.54	758.14	884.39	482.09	3.11	26.12	37.61	221.61	2715.83			
IFFCO-Tokio	265.95	116.73	109.57	7.16	63.75	2407.15	1328.99	1078.16	432.48	0.75	75.15	49.31	280.07	3691.34	10.85%	3.83%	361.37
Previous year	232.40	113.94	100.94	13.00	60.58	2141.97	1237.06	904.91	353.96	1.31	17.77	36.43	371.61	3329.97			
ICICI-lombard	632.70	299.80	230.43	69.37	198.34	4149.81	2523.09	1626.72	1480.63	51.73	191.47	278.56	807.66	8090.70	21.16%	8.39%	1412.91
Previous year	544.74	246.43	194.36	52.07	171.19	3415.81	2131.88	1283.93	1317.82	49.44	50.95	232.67	648.75	6677.79			
Bajaj Allianz	476.27	141.54	125.98	15.56	100.50	3277.33	2128.23	1149.10	838.78	4.03	205.26	103.46	685.00	5832.17	11.52%	6.05%	602.32
Previous year	430.98	123.07	114.82	8.25	90.52	2918.38	1971.34	947.04	731.14	2.16	31.57	66.36	835.66	5229.85			
HDFC ERGO	421.7	104.39	95.69	8.70	67.19	1174.30	601.53	572.77	632.89	28.39	143.13	459.99	347.56	3379.55	6.20%	3.51%	197.34
Previous year	374.69	106.69	93.50	13.19	61.75	1051.65	626.91	424.74	554.89	27.22	129.00	387.96	488.35	3182.21			
Cholamandalam MS	204.68	75.71	75.71	0.00	20.28	1667.61	750.68	916.93	207.14	0.00	15.85	109.00	151.71	2451.98	29.70%	2.54%	561.55
Previous year	124.34	64.13	64.13	0.00	24.79	1279.09	592.16	686.92	172.86	0.00	11.77	65.11	148.35	1890.43			
Future Generali	162.00	61.14	61.14	0.00	37.21	927.85	642.03	285.82	153.95	0.24	39.94	50.10	122.83	1555.26	8.14%	1.61%	117.01
Previous year	133.11	57.79	57.79	0.00	37.93	828.09	585.59	242.50	145.09	0.06	16.37	44.21	175.59	1438.25			
Universal Sampo	131.04	16.87	14.16	2.71	19.98	315.77	195.52	120.25	133.88	0.00	6.50	14.58	265.16	903.78	28.91%	0.94%	202.67
Previous year	119.24	16.14	15.77	0.37	18.12	251.30	152.66	98.64	132.73	0.00	1.22	6.19	156.17	701.11			
Shriram General	19.96	1.28	1.28	0.00	10.17	1666.41	540.31	1126.10	0.00	0.00	3.37	6.57	4.75	1712.51	14.43%	1.78%	216.00
Previous year	15.95	0.76	0.76	0.00	6.90	1461.31	509.82	951.49	0.00	0.00	2.29	5.62	3.69	1496.51			
Bharti AXA	62.23	25.80	25.80	0.00	24.94	1012.18	694.54	317.64	82.69	0.00	25.67	16.10	15.81	1265.42	-13.15%	1.31%	-191.64
Previous year	77.93	32.06	32.06	0.00	31.84	1093.52	752.86	340.66	154.55	0.00	14.79	21.68	30.69	1457.06			
Raheja QBE	0.37	0.03	0.03	0.00	0.29	5.42	0.00	5.42	0.02	0.00	21.96	0.14	0.54	28.77	33.07%	0.03%	7.15
Previous year	0.62	0.00	0.00	0.00	0.31	0.42	0.00	0.42	0.01	0.00	19.33	0.30	0.63	21.62			
SBI General	615.35	22.20	22.20	0.00	18.72	707.94	429.99	277.95	215.58	0.03	3.75	301.20	155.07	2039.84	29.36%	2.12%	462.93
Previous year	514.69	17.51	17.51	0.00	23.49	538.65	287.21	251.44	99.40	0.58	3.37	287.55	91.67	1576.91			
L&T General	60.16	14.46	14.46	0.00	19.25	299.97	201.49	98.48	65.74	0.00	6.29	2.81	3.03	471.71	42.20%	0.49%	140.00
Previous year	41.81	9.46	9.46	0.00	18.05	204.86	139.19	65.67	46.62	0.00	5.52	1.94	3.45	331.71			
Magma HDI	29.13	12.39	12.39	0.00	9.28	334.49	175.99	158.50	0.00	0.00	15.04	1.77	1.83	403.93	-14.71%	0.42%	-69.67
Previous year	29.78	10.81	10.81	0.00	9.96	401.19	225.78	175.41	0.00	0.00	1.89	1.34	18.63	473.60			
Liberty Videocon	27.80	7.97	7.97	0.00	14.92	274.46	260.18	14.28	58.97	0.00	5.86	10.89	7.85	408.72	43.99%	0.42%	124.87
Previous year	19.41	3.67	3.67	0.00	7.25	192.15	152.66	39.49	36.95	0.00	3.77	17.11	3.55	283.85			
Kotak Mahindra(\$\$\$)		0.00				3.63	2.46	1.17	0.09					3.72	#DIV/0!	0.00%	3.72
Previous year		0.00				0.00	0.00	0.00						0.00			
Private Sector Sub Total	3854.03	1249.74	1135.95	113.79	775.92	22569.97	13041.51	9528.46	5306.96	92.76	1086.81	1600.56	3155.75	39692.50	13.12%	41.18%	4602.46
Previous Year Sub Total	3277.20	1131.53	1039.44	92.09	739.08	19804.93	11730.21	8074.72	4670.29	86.08	590.11	1391.22	3399.59	35090.04			
% Growth	17.6%	10.4%	9.3%	23.6%	5.0%	14.0%	11.2%	18.0%	13.6%	7.8%	84.2%	15.0%	-7.2%	13.1%			

Insurers	Fire	Marine Total	Marine Cargo	Marine Hull	Engineering	Motor Total	Motor OD	Motor TP	Health	Aviation	Liability	P.A.	All Other Misc.	Grand Total	Growth %	Market %	Accretion
Public Sector Insurers																	
New India	1699.27	616.74	334.36	282.38	496.21	6182.23	2791.85	3390.38	4857.27	114.54	298.36	210.74	698.70	15174.06	14.87%	15.74%	1964.69
Previous year	1644.89	665.28	328.84	336.44	417.75	5366.01	2588.22	2777.79	3941.79	104.34	264.40	185.60	619.31	13209.37			
National	876.90	254.15	172.05	82.10	257.32	5784.18	2329.03	3455.15	3970.78	66.63	86.70	237.75	476.26	12010.67	6.84%	12.46%	768.77
Previous year	909.05	298.39	186.40	111.99	296.47	5122.36	2167.21	2955.15	3633.70	69.74	91.69	132.79	687.71	11241.90			
United India	1315.91	446.23	261.73	184.50	525.08	4723.27	1731.90	2991.37	4069.68	66.29	171.64	221.15	675.92	12215.17	14.25%	12.67%	1523.44
Previous year	1251.49	526.73	282.14	244.59	541.01	4169.17	1673.64	2495.53	3176.86	56.99	163.90	232.01	573.57	10691.73			
Oriental	982.29	420.38	222.50	197.88	318.05	3150.93	1273.98	1876.95	2595.77	97.26	125.37	144.45	483.15	8317.65	12.28%	8.63%	909.68
Previous year	958.12	397.95	224.84	173.11	342.02	2861.73	1217.76	1643.97	1994.68	100.61	122.06	126.41	504.39	7407.97			
Public Sector sub Total	4874.37	1737.50	990.64	746.86	1596.66	19840.61	8126.76	11713.85	15493.50	344.72	682.07	814.09	2334.03	47717.55	12.14%	49.50%	5166.58
Previous Year Sub Total	4763.55	1888.35	1022.22	866.13	1597.25	17519.27	7646.83	9872.44	12747.03	331.68	642.05	676.81	2384.98	42550.97			
% Growth	2.3%	-8.0%	-3.1%	-13.8%	0.0%	13.3%	6.3%	18.7%	21.5%	3.9%	6.2%	20.3%	-2.1%	12.1%			
Stand-alone Health Insurers																	
Star Health									1956.13			52.21		2008.34	36.70%	2.08%	539.15
Previous year									1436.51			32.68		1469.19			
Apollo Munich									955.00			67.18	0.00	1022.18	27.27%	1.06%	219.04
Previous year									750.16			44.21	8.77	803.14			
Max Bupa									475.65			0.46		476.11	27.78%	0.49%	103.50
Previous year									372.01			0.60		372.61			
Religare									460.97			42.33		503.30	82.49%	0.52%	227.50
Previous year									258.32			15.53	1.95	275.80			
Cigna TTK									135.84			8.00		143.84	559.25%	0.15%	122.02
Previous Year									21.24			0.58		21.82			
Stand-alone Health sub Total	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3983.59	0.00	0.00	170.18	0.00	4153.77	41.16%	4.31%	1211.21
Previous Year Sub Total	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2838.24	0.00	0.00	93.60	10.72	2942.56			
% Growth									40.4%			81.8%	-100.0%	41.2%			
Specialised Insurers																	
ECGC (Export & Credit)													1320.91	1320.91	-3.05%	1.37%	-41.49
Previous year													1362.40	1362.40			
AIC (Crop)													3509.21	3509.21	28.09%	3.64%	769.51
Previous year													2739.70	2739.70			
Specialised sub Total	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4830.12	4830.12	17.75%	5.01%	728.02
Previous Year Sub Total	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4102.10	4102.10			
% Growth													17.7%	17.7%			
Industry Total	8728.40	2987.24	2126.59	860.65	2372.58	42410.58	21168.27	21242.31	24784.05	437.48	1768.88	2584.83	10319.90	96393.94	13.83%	100.00%	11708.28
Previous Year Sub Total	8040.75	3019.88	2061.66	958.22	2336.33	37324.20	19377.04	17947.16	20255.55	417.76	1232.16	2161.63	9897.39	84685.66			
% Growth	8.6%	-1.1%	3.1%	-10.2%	1.6%	13.6%	9.2%	18.4%	22.4%	4.7%	43.6%	19.6%	4.3%	13.8%			
% Market Share	9.1%	3.1%	2.2%	0.9%	2.5%	44.0%	22.0%	22.0%	25.7%	0.5%	1.8%	2.7%	10.7%	100.0%			
Previous Year Market Share	9.5%	3.6%	2.4%	1.1%	2.8%	44.1%	22.9%	21.2%	23.9%	0.5%	1.5%	2.6%	11.7%	100.0%			

Note: Compiled by GI Council on the basis of data submitted by the Insurance companies
Previous year figures are audited segment wise final figures submitted by companies
\$\$\$ Commenced Operations in December 2015

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