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Non-Life Insurance in India: Managing Disaster Risk Exposures – An Opportunity for Better Risk Management and Growth

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Summary

- After opening up in 2001, the non-life insurance market in India has developed into a competitive market with 27 public and private firms. Despite some barriers to growth, available statistics suggest some potential.
- One of the major areas for growth is the disaster insurance, a market in which Indian insurers bear less than 5% of the total economic cost of disaster claims. The industry could play a major role in removing the burden of post-disaster relief from government.
- Clearly there is a need for a shift in disaster risk management from micro-risk, ad hoc, needs-based post-disaster recovery in favour of a long-term integrated approach that emphasises a pre-disaster investment in risk reduction and adaptation. Insurance-linked securities are a means of ceding insurance-related risks to the capital markets.
- Many countries have meaningful mechanisms for disaster risks, with involvement by private insurers a common feature. For the Indian market, potentially prohibitive insurability issues will need a public-private partnership involving Government subsidy to provide coverage to those unable to afford it.
- Overall, creating alternative risk-transfer instruments for the Indian insurance industry would be a more efficient approach to disaster risk management, and also provide an opportunity for better growth in the Indian insurance industry.

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CII Introduction: in May of this year we published Thinkpiece 78 by Vanessa Rossi[1] describing the potential for growth in the insurance markets in India, suggesting total insurance premiums to grow by $1.7trn by 2030. In this article, Dr Vankayalapati Padmavathi of the Institute of Insurance & Risk Management in Hyderabad, India applies her unique knowledge of the non-life market, focussing on issues affecting its growth. In the process, she examines how the insurance industry could play a greater role in creating a sustainable and balanced approach to disaster risk management which, as her research shows, is one of the greatest issues facing the Indian economy going forward.

After opening up in 2001, the non-life insurance market in India has developed into a competitive market with 27 public and private firms, and statistics suggest that the sector has ample potential. The 1990s saw an annual growth trajectory of 15% with a Gross Written Premium reaching Rs.9.5bn (US$170.6m)[2] by 2001. Ten years later in 2011, this had risen still further to Rs.425bn ($7.6bn).

"Mandatory Motor Insurance" (third party and own damage) has always dominated the sector with 43% share followed in 2011 by Health (23%), Fire (11%) and Marine (6%)[3]. In spite of marginally recorded growth, the sector remains very much 'untapped' with abysmally low 2011 premium-GDP ratios at only 0.7%, compared to US, Europe and Asia (4.6%, 3% and 1.6% respectively). Major reasons for meagre growth in the Non-Life sector in India can be identified as:

- non-matching buying capacity compared to increased personal disposable incomes.
- an approach that sees insurance more as a means of saving than for risk coverage.
- myopic and erroneous perceptions on home insurance despite property vulnerability levels.
- delays and costs due to legal procedures hitting liability insurance markets[4].
- the dearth of professionals such as actuaries, underwriters, and loss assessors[5].
- lack of professionalism in existing functionaries.
- lack of alternative risk transfer mechanisms.
- superfluous involvement of the state in risk transfer in disastrous/catastrophic risks such as floods and earthquakes.
- not tapping Disastrous Risks coverage Market prudently.

Box 1: Natural Disasters in India

- Area of Indian territory prone to floods: 40m hectares (12% of total landmass).
- Percentage of net sown area prone to drought: 68%
- Percentage that is earthquake-vulnerable (Seismic Zones III-V): 55%

During period from 1900–2012:

- Disastrous events (flood, drought, earthquake, storm, epidemic, extreme temperature, insect infestation, mass movement and wildfire): 607
- People killed: over 9.1 million
- People affected: over 2 billion
- Damage cost (2012 prices): $53.3bn

Sources: International Disaster Database www.emdat.be; www.preventionweb.net (both accessed Aug 2012); Planning Commission of India, *Tenth Five Year Plan document*; and *Report of Working Group on Flood Management and Region Specific Issues for XII Plan*, New Delhi, Oct 2011.

Disaster Risk in India

According to the *World Disasters Report* 2011, around 85% of natural disaster victims are from Asia, of which 21% are from India. The damage in India is immense (see Box 1). The New India Assurance Company

[1] Thinkpiece 78 and related links can be accessed here: www.cii.co.uk/knowledge/policy-and-public-affairs/articles/cii-thinkpiece-78/19050

[2] All US dollar conversions are in 2012 exchange rates unless indicated.

[3] IRDA Annual Reports. The balance classified as 'Others' include engineering, aviation, liability, home, travel and personal accident

[4] Normally, it takes 5-15 years for a case to be decided in an Indian Court and many victims are denied justice.

[5] By way of comparison: Hong Kong, 1,095 km² population 7 million has about 600 members in the Actuarial Society; compared to India's 3,287,590 km² population 1.2 billion has less than 151 working age resident fellows.

Insurers reports that India bear less than 5% of the total economic cost of disaster claims.

Natural disasters affect the developed, developing and underdeveloped world similarly. However, the developed countries are better equipped in disaster mitigation systems, preparedness and response mechanisms.[6] For example: around 80% of total economic losses in New Zealand[7] and 60% in Australia[8] are covered by private insurers. Hence, there is a potential source for the growth of non-life insurance market especially in developing countries like India.

The Role of Indian Government

In developed countries, the dependency on ex-post funding and consequent disruption of planned activity is less. The institutional and policy mechanism for carrying out response, relief and rehabilitation is well-established in India since its independence. In the country's federal set-up, the States' responsibility being primary, the Central Government provides logistic and supplementary financial support. The national structure for disaster management is underpinned by the recommendations of successive finance commissions. Recommendations from the Disaster Management Act (2005) resulted in the National Disaster Management Authority; the National Institute of Disaster Management; the State Disaster Response Fund (SDRF); the National Disaster Response Fund and the Calamity Relief Fund (later transferred to SDRF in 2010). However, these mechanisms/funding arrangements are to provide immediate post-disaster assistance in the form of subsidy and not for compensation of loss. The relevant policy documents[9] show that the financing of post-disaster relief and rehabilitation expenditures has had the major chunk in the resources allocated by the Government of India. This comes only as temporary relief and at a high cost, amounting to over Rs.32bn ($575.5m) in 2000–2010 , and over Rs.77bn ($1.39bn) for 2010–2015.

Relief with this cost usually is not adequate to restore those most affected to their original economic status. It is evident that the disaster risk management is hitherto seen as a cost rather than an investment by reprioritising planned budgets, increasing tax and borrowings. There is therefore a need for proper utilisation of this government unplanned non-developmental expenditure for a developmental expenditure while finding the new approaches for the *ex-ante* transfer of natural disaster risks in India.

Other countries also have meaningful national mechanisms to disaster risks. New Zealand has the mandatory disaster cover in every residential insurance policy; the United States introduced the Florida Hurricane Catastrophe Fund and National Flood Insurance; Mexico has the 'Multi Cat bond'; Turkey and Taiwan have both introduced earthquake catastrophe coverage schemes; and Thailand has Government sponsored schemes for better access to disaster insurance for homeowners and businesses. A common feature of these solutions is that by buying some additional protection from private insurers and capital markets, the government, as the insurer of the last resort, will have a smaller exposure in case of a major catastrophes. These measures are similarly pertinent to India.

The Need for a More Integrated Approach

These current agricultural disaster risk management processes in India are short-termist for social stability reasons, but clearly a more integrated long-term approach is needed. India has to date focused on farmer-level micro-risk management and the macro-level response is mostly *ad hoc* and needs-based. Over the last 25–30 years, only about 10–15% of farmers are covered by government-subsidised crop and agricultural insurance schemesand most of this is linked to farmers who have bank credit. In the event of a catastrophic claim, this agricultural insurance is not

[6] Though there are some surprising exceptions in the developed countries. See for example, David Crichton, Is it possible to have sustainable flood insurance without sustainable flood risk management? *CII Thinkpiece* 73 (May 2012).

[7] The February 2011 earthquake (Mw 6.3) – the third most expensive in Indian history – triggered insurance claims of $9bn out of $12bn total economic losses.

[8] Bush fires in Australia in February, 2011 killed 173 people, causing total losses of $1.3 billion and insured losses of $770 million.

[9] Documents released by XI Finance Commission and No.32-3/2010-NDM-1, Indian Ministry of Home Affairs, Disaster Management Division.

insurance at all because virtually the entire risk such as seeds, fertiliser, equipment, buying damaged crop output, writing off the existing loans is borne by the government anyway. The share of the central government in claims liability is about Rs.3bn ($53.9m) in 2010–11. By contrast in the European Union, governments are prohibited by law from giving any kind of disaster assistance[10]. This is to compel people to buy insurance or suffer the consequences. The World Bank (2003) suggested the *ex-ante* mechanisms (such as catastrophe reinsurance and contingent credit facilities) for financial liquidity in the aftermath of a natural disaster. The Economic Survey (2009–10) also has suggested introduction of Catastrophic (Cat) bonds in India.

Index-Based Risk Transfer (IBRT) products open the way for new approaches. Weather-based insurance, mostly with area yield index is a recent phenomenon in agricultural/crop insurance programmes in India. But the urban market so far is not been considered for IBRT products in India, and consequently there was no coverage for the floods Punjab (1993), Mumbai (2005), and Surat (2006). There are no instruments for such extreme catastrophes of future events to get coverage. The Asian Development Bank, urging more investments in disaster risk management around the region, has said that for every US dollar spent on urban disaster risk management by Asian governments, the economic impact of catastrophes will be reduced by $7 in 2011 prices. With the annual economic cost of disasters averaging $53.8bn in the Asia–Pacific region, the focus must shift from post-disaster reconstruction and recovery to pre-disaster investment in risk reduction, adaptation and innovative disaster financing.

Insurance Linked Securities (ILS) like Industry loss warranties, Cat bonds and Cat Swaps are a means of ceding insurance-related risks to the capital markets. Statistics are showing that the worldwide issued Cat bonds in 2002 was a mere $8m and reached to $4.3bn by 2011; whereas in the same period, the outstanding business rose from $3.1bn to $13.3bn[11].

Box 2: On-Risk Capacity by Peril (31 Mar 2012)

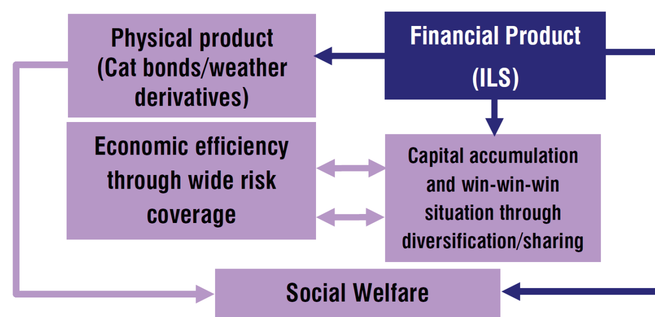
Peril	%
US (total wind & quake)	67
Europe (wind)	13
Other perils and combinations	12
Japanese (all perils)	6
Worldwide perils (coverage in 2+ continents)	2
TOTAL CAPACITY	$13.3bn

Source: Willis ILS Market Update, April 2012

India has hitherto not had any share in this market and is not enjoying any benefit from ILS products. Even though the first catastrophe bond was issued in 1994, it is barely known in Asia, and even less so in India.

In fact, capital accumulation, economic efficiency and ultimately social welfare (see illustration below) can be achieved with these financial products.

Figure 1: Importance of ILS for Indian Market



Author's own diagram

ILS can have a direct positive impact on the cat bond product market. With its role in facilitating capital accumulation and distributing risks, these securities have an important role to play in boosting economic growth and ultimately increasing social welfare, which is complementary to cat bond market.

Catastrophe risks, though highly improbable, can be costly and burdensome for individuals and society. Even Government interventions through disaster

[10] J. Harinarayan, Chairman, IRDA excerpts from the chairperson's opening remarks "Weather Insurance: Risk Mitigation for Weather – Sensitive Industries in India." National Seminar, 28-29 Jan 2011, Administrative Staff College of India, Hyderabad

[11] ILS Market Update, Willis Capital Markets & Advisory, Apr 2012

response funds are highly unproductive. Moreover, without this coverage, society may be deprived of goods or services that were not produced because the risks were too great. Hence these products can potentially enhance financial intermediation, boost capital accumulation, diversify risks and ultimately increase economic efficiency.

Cat bonds increase natural catastrophes' insurability. They require international diversification and a strong capital base, where global insurers and reinsurers have a role to play. The growth potential for this market is huge because catastrophe risks in India are not insured. Traditional insurance and reinsurance cannot absorb the bulk of the risk. Securitisation of catastrophe insurance might be the answer.

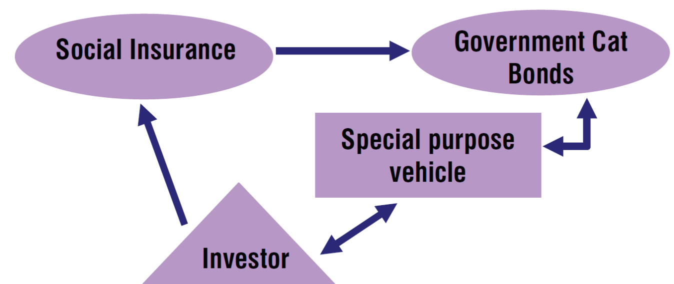
There is a need for proactive domestic risk management solutions in India that uses a collaborative approach between government and the insurance industry. Low to medium private risk level coverage could be covered by domestic insurance. Low and medium end public risk should be borne by the government; whereas peak public and private risk could be transferred to the capital markets. The criteria for insurable risks are:

1. Risks must be quantifiable and random.
2. Risks must not be too big compared to the capital available in the insurance industry and insurance has to be economically viable.

Policyholders must be able to afford a premium that reflects the risks transferred to the insurer. Affordability is an issue in the Indian market as many people are too poor to afford insurance against the catastrophic risks to which they are most exposed. Public-Private Partnership (PPP) may provide an answer whereby Government subsidies and international organisations can be used to provide coverage to people who otherwise could not afford it. Private market insurance initiatives include micro insurance systems to organise distribution and claim management as well as reinsurance solutions or capital market solutions to absorb catastrophe risks. It is important that PPP is confined to situations where the insurability of otherwise uninsurable risk is supported. Otherwise, the important economic feature of insurance which assigns a price to each risk is lost. It sometimes happens for political reasons that government-run insurance or reinsurance schemes do not charge enough for risk. Premiums may be too low and there is not enough rate differentiation. The result is that individuals and corporations assume too much risk and neglect prevention. This increases the total economic loss and is bad news for tax payers who usually have to pay for excess losses.

The Indian government is already spending billions of rupees in disaster management and social insurance, much of which could relieved by issuing Cat bonds. This would create multi-dimensional benefit to all the parties concerned. In this procedure, the risk is transferred to the capital markets which are envisaged to have the risk bearing capacity instead of the government getting affected with contingencies of diverting funds from developmental expenditures. At this juncture, it is to be noted that the Indian capital markets do have the luxury of attracting direct investment from foreign institutional investors thereby supplementing the overall effort for this purpose. Figure 2 below explains how this concept is put to work as envisaged.

Figure 2: Government Cat Bond Structure



Author's own diagram

Challenges

The most important challenges in this regard are:

- Non-availability of Database of National Disasters and Residential and commercial properties for enabling to develop catastrophe models.
- Technical challenge to implement products i.e. basis risk. These base risk in index and parametric triggers, and measure the difference between actual losses and those implied by these triggers.

Conclusion

Non-life insurance penetration stagnated under the nationalised model of the Indian insurance industry. Though competition after liberalisation has seen some growth, it is negligible. It is not easy for governments in developing countries to cope up with challenges of disaster management, so "sharing and bearing of risks" by prudent methods of insurance is a viable result. The continued growth of ILS is a testament to the broadening role of insurance and growth of non-life industry sector, and there is clearly an appetite for this in India. Governments can invest in these securities or can sell them too, depending on the demands of a situation. One approach would be to choose "buying" in case of social insurance and "selling" in case of disaster/catastrophic risks as effective insulations. It is prudent to use this opportunity for better growth of the insurance industry and also the Indian economy, therefore creating a "win-win" situation for the public, government, the economy, and the growth of the insurance industry.

If you have any questions or comments about this Thinkpiece, and/or would like to be added to a mailing list to receive new articles by email, please contact us: thinkpiece@cii.co.uk or by telephone: +44 (0)20 7417 4783.

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No.87: **Social investment: All together now?** by Gavin Francis (11 September 2012).

Social investment is a new buzzword in investment circles but what exactly does it mean? Is it just a current fancy or – is it, as its proponents argue – a genuinely emerging and sustainable investment class in its own right? The author argues the latter and explains why social investment differs from ethical investment or charitable giving, and why financial planning firms need to understand social investment's role as a worthwile solution for their client.

No.86: **The Power of Networking in the New Economy**, by Sue Carette (10 August).

Getting a march on the competition is difficult during the best of times, let alone when conditions are as testing as they are now. Access to the right network of support and contacts can be the difference between success and failure. The author examines how networking is changing with the advent of new technologies and how it can be of value to you professionally and personally.

No.85: **Road to the White House: what's at stake in the US election**, by Ana Catalano Weeks (29 July).

The world will be watching as Americans go to the polls on 6 November, in which incumbent Barack Obama and challenger Mitt Romney promises to a battle to be close to call. Whatever the result, the consequences will be felt all over the world. The author (Harvard University) considers some of the policy topics that will play an important role in deciding the winner and that will be of global significance to those in insurance and financial services.

No.84: **Perceived and Actual Risk in Financial Markets: Insights from Emotional Finance**, Nick Bullman BBA and Dr Richard Fairchild Ph.D (13 July).

Traditional approaches explaining human choices in financial services have done little other than reveal our limited understanding of this subject. More recently, researchers have come to realise that emotions have a more powerful part to play in the decisions of casual consumers and professional investors alike. This article explores some of these new theories and their implications to understanding financial markets.

No.82: **Plugging the "Financial Advice Gap": Bringing Good Advice to the Mass Market**, by Nick Hurman FCII, MBA, Chartered Insurer (28 June).

A long-standing review led by the FSA of how investment advice is given to consumers in the UK is reaching its conclusion with a number of major reforms around adviser professionalism, how their services are labelled and how advisers are remunerated coming into force at the end of this year. There has been much debate over whether these reforms would restrict access to all but the wealthiest consumers, and the very people who will most need assistance with how to best save will only be able to afford non-advised solutions.

No.77: **The Money Myth?**, by Alex Davidson (18 May).

With technological advances and ever more complicated investment vehicles, it is easy to forget that financial markets are driven by humans and human nature. The author offers up examples from classical mythology that show human nature has changed little in 2,500 years and provides five rules to help would be investors bear this in mind.

No.75: **Converging Ideas: Building a European-Wide Supervisory Culture in Insurance and Pensions**, by Gabriel Bernardino (4 May).

The European Insurance & Occupational Pensions Authority (EIOPA) was formed in January 2011, at a time when many in the industry were still wondering how a pan-European insurance "supervisor-of-supervisors" could operate in practice without compromising the work of the national authorities. In this article, Gabriel Bernadino, Chair of EIOPA provides a perspective on the Authority's first year of operation.

No.74: **From Brussels with Love: A Perspective on Developing Insurance Regulation at the EU Level**, by Dr Karel van Hulle (4 May).

With EU insurance regulation landscape more relevant to individual firms than ever before, Karel van Hulle, the European Commission's lead official on insurance & occupational pensions, and author of many of the proposals under discussion in these areas, offers his own strictly personal view of insurance regulation in the post-financial crisis world.

No.71: **The Challenge of Age: Global Longevity Trends and Economic and Social Implications**, by George Magnus (23 March).

George Magnus ("the man who predicted the financial crisis") argues that the current economic turmoil is colluding with rising longevity to severely depress returns for the elderly. Governments, societies and industries must take robust action now in order to ensure that rising longevity is celebrated rather than feared over the decades to come.

CPD Reflective Questions

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Learning Outcomes

- To understand the issues affecting growth of the non-life insurance market in India in recent years, paying particular attention to the role of insurance in disaster risk management.
- To understand the importance and approaches of risk management and response to natural disasters in India, including recent policies by the Indian government following some major incidents, and how this compares to other economies.
- To appreciate how the insurance industry could play a key role in mitigating the costs of disaster management, by tapping the Insurance-Linked Securities (ILS) market and making it more efficient through pre-disaster risk reduction.

1. The author opens the article by listing some of the major reasons for meagre growth in the Indian non-life sector. Looking at these contributing factors, in what way could enhancing professional standards in the industry (such as improving qualifications, ethical codes and guidance, and CPD requirements) address these problems? Can you think of lessons learned in other economies, both regionally and globally? Can you think of lessons from India that could be applied elsewhere?

2. This article provides an in-depth look at the Indian non-life insurance market and should be read in conjunction with Thinkpiece 78 by Vanessa Rossi[12]. Re-reading that earlier Thinkpiece, what do you think are the key observations that could be drawn between the two articles?

3. How would you summarise the existing approach to disaster risk management in India? Can you list some of the similarities and differences with other economies both regionally and globally? What experiences can be drawn from India to the rest of the world? Can you think of other economies that have comparable scales of natural disasters that have similar approaches?

4. The author describes how tapping the ILS market in India could help to incentivise a more efficient disaster risk management approach in the economy. Do you agree with the author that such an approach is viable? What are your views on the benefits, costs and challenges of this approach? What lessons can be drawn from the application of this market in other economies?

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[12] Vanessa Rossi, "Southern Surge Revisited: Robust Trends in South Asian Insurance," *CII Thinkpiece* 78, May 2012: www.cii.co.uk/knowledge/policy-and-public-affairs/articles/cii-thinkpiece-78/19050 On that web resource, see also the link to the CII report *The Southern Surge: Prospects for Insurance and Financial Services in India and South East Asia*, July 2010.