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India's insurance sector: challenges and opportunities

Saon Ray

Vasundhara Thakur

Kuntala Bandyopadhyay

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Abstract

India’s insurance sector has been growing dynamically in the last couple of years. Despite the suite of reforms that have been implemented to stoke the sector’s growth, it still has a long way to go, as its share in the global insurance market remains abysmally low. In this paper, we analyse the Indian insurance sector and trace its evolution and growth. We also identify the key challenges facing the sector. As underlined in the paper, low penetration and density rates, less investment in insurance products, the dominant position of public sector insurers and their deteriorating financial health are some of the challenges facing the sector. Since India’s economic growth depends on how shock-absorbent India’s economy is, addressing these challenges assumes importance for developing a sound insurance sector.

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Author’s email: *Sray@icrier.res.in; vthakur@icrier.res.in; callkuntala@gmail.com*

India’s insurance sector: challenges and opportunities[ξ]

Saon Ray, Vasundhara Thakur, and Kuntala Bandyopadhyay

1. Introduction

The relevance of the insurance sector in the macroeconomic development of an economy is well acknowledged. The role of insurance activities in macroeconomic development finds one of its earliest recognitions in the proceedings of the United Nations Conference on Trade and Development (UNCTAD): “[A] sound national insurance and reinsurance market is an essential characteristic of economic growth” (UNCTAD, 1964).

The insurance industry in India has been growing dynamically, with total insurance premiums increasing rapidly compared with its global counterparts. In the past 17 years or so, the insurance sector of India has risen at a compound annual growth rate (CAGR) of 16.5 per cent. Insurance penetration and density stood at 3.69 per cent and USD 73 respectively for FY2017-18 (IRDAI, 2019), which is low even in comparison with other countries. These low penetration and density rates reveal the uninsured nature of large sections of population in India and the presence of an insurance gap. The reasons cited for such minimal levels of penetration rates include tight constraints on the household budget, adverse selection, moral hazard, and affordability issues.

Although India’s insurance penetration and density are low compared to advanced countries in both the life and non-life insurance sectors, in recent years they are showing a slow but steady growing trend. The industry has experienced a sea change in the last couple of years, wherein it has been shaped in large part by the nationalisation of life and non-life sectors, the constitution of Insurance Regulatory and Development Authority (IRDA), opening up of the sector for both private and foreign players, and increase in the foreign investment cap to 49 per cent. The sector has transitioned from being an exclusive state monopoly to a competitive market.

As of now, the insurance sector of India consists of 59 insurance companies, of which 24 are in the life insurance business and 35 are non-life insurers (including re-insurers) (IRDAI, website). The life insurance sector dominates the insurance market in India with a huge share of 74.7 per cent, whereas non-life insurance accounts for the remaining 25.3 per cent (IRDAI, 2018). In the past 17 years or so, the insurance sector of India has grown at a compounded annual growth rate (CAGR) of 16.5 per cent. However, the penetration and density of the Indian insurance market is abysmally low, reflecting the low level of development of the sector. Comprising a mere 2 per cent of the global insurance market in 2017, the Indian insurance sector has a long way to go compared to the insurance sectors in advanced economies, even after implementing a suite of reform measures.

[ξ] The authors’ are grateful to Mr. Tamal Bandyopadhyay, Prof. Alok Pandey and Mr. Subhomoy Bhattacharjee for comments on an earlier draft.

In this paper, we trace the journey of the Indian insurance sector and identify the challenges facing the sector. The organisation of the paper is as follows: Section 2 chalks out the growth path of the insurance sector highlighting the key milestones. Section 3 provides a static view of the sector in terms of its composition and penetration and density. Section 4 briefly discusses the life and non-life sectors. Section 5 presents an overview of the reinsurance sector in India. Section 6 underlines the key challenges and is followed by concluding remarks.

2. Evolution and growth of the insurance sector in the Indian context

The Indian insurance sector is dominated by the public sector insurers, even though the sector has been opened up to private and foreign players and the private sector insurers are gradually increasing their presence. From being an exclusive state monopoly and restricted market to a competitive and open one, the insurance sector in India has experienced a paradigm shift in the last couple of years. The insurance sector in India has been marked by remarkable growth. The total insurance premiums in India during 2017 increased at a rapid rate of 10.1 per cent as compared to a rate of increase of 1.5 per cent of their global counterparts (IRDAI, 2018).

Life insurance continues to dominate with its enormous market share. The product mix of the sector has changed due to the unveiling of innovative products like unit-linked insurance plans in the life insurance sector and new distribution channels such as bancassurance. Online distribution and NBFCs are broadening the reach of the sector (IBEF, 2019). Among the 24 life insurers currently operating in the Indian market, the Life Insurance Corporation (LIC) is the sole public sector company. Motor, health, and crop insurance segments are driving growth in the non-life insurance segment. Among the 35 non-life insurers, there are six public sector insurers. In addition to these, there is the sole national re-insurer, General Insurance Corporation of India (GIC Re). Other stakeholders in the Indian insurance market include individual and corporate agents, brokers, surveyors, and third-party administrators servicing health insurance claims.

2.1 History and evolution of India Insurance Sector

The insurance business in India started in the 19th century. At that time, only a few British insurance companies served the market and were located in the larger cities of India (Gupta, Anand, and Rana, 2016).

In 1928, the Indian Insurance Companies Act enabled the Government to collect statistical information about both life and non-life business transacted in India by Indian and foreign insurers, including provident insurance societies. The Insurance Act, 1938 was the first comprehensive act that brought together and amended earlier legislations with a view to protecting the interests of the insurance public with provisions for effective control over the activities of insurers (Hasan, 2015). Prior to independence, the sector was dominated by foreign insurers. In the period following 1956, the insurance products sold by the state owned LIC were mostly tax saving tools (Gupta, Anand, and Rana, 2016).

2.1.1 *Nationalisation*

The first major landmark in the post-independence period was nationalisation. On 1st September, 1956, with the issuance of an ordinance by the Government of India, 245 units (154 Indian insurers, 16 non-Indian insurers, and 75 provident societies) were merged into a government-owned autonomous entity, namely the Life Insurance Corporation of India (Chandrapal, 2019). This decision was taken against the backdrop of a rising number of insurance companies, high competition, and allegations of unfair trade practices. Thereafter, the general insurance sector was also nationalised in 1972 by the General Insurance Business (Nationalisation) Act, 1972 (GIBNA). Subsequently, the General Insurance Corporation (GIC) was formed as a private company under the Companies Act, 1956 (GIC, 2017).[1] One hundred and seven insurers comprising of 63 domestic insurers and 44 foreign insurers were merged into four companies that were made fully owned subsidiaries of GIC.

2.1.2 *Privatisation and Liberalisation*[2]

In 1993, the government set up a high-powered committee, headed by former RBI Governor, R. N. Malhotra, to evaluate the Indian insurance sector in terms of structure, assessing strengths and weaknesses, and reviewing existing regulatory provisions, in order to suggest reforms. The committee made two crucial recommendations: first, opening up the sector to both domestic and foreign private companies with foreign insurers entering the market by floating Indian companies (preferably a joint venture with Indian partners). Second, it recommended setting up an autonomous body - the Insurance Regulatory and Development Authority (IRDA) to regulate the insurance sector.

Box 1: Malhotra Committee (1993) Recommendations

- Raising the capital base of LIC and GIC up to Rs. 200 crore, half retained by the government and the rest sold to the public at large, with suitable reservations for its employees.
- Government to bring down its stake in insurance companies to 50 per cent.
- Private sector to be allowed to enter insurance industry with a minimum paid up capital of Rs. 100 crore.
- Foreign insurance be allowed to enter by floating an Indian company, preferably a joint venture with Indian partners.
- No single company be allowed to transact business in both life and general insurance.

Source: Jain (2013); Ansari and Rehmani (2016)

1 https://www.gicofindia.com/en/about-us
2 Refer to Annexure 1 for Key Regulatory Milestones

Based on the recommendations of the Malhotra Committee, the IRDA was constituted as an autonomous body in 1999 and as a statutory body in 2000. The monopoly accorded to the Life Insurance Corporation in 1956 and the General Insurance Corporation in 1972 was revoked with the enforcement of the IRDA Act, 1999. In August 2000, the sector was opened up to private and foreign players and foreign companies were allowed ownership of 26 per cent (IRDAI, 2007a). The key objectives of the IRDA include promotion of competition so as to enhance customer satisfaction through increased consumer choice and lower premiums, while ensuring the financial security of the insurance market (Hasan, 2015). IRDA opened up the market in August 2000 with the invitation for applications for registrations.

Box 2: Insurance Regulatory and Development Authority of India (IRDAI)

The IRDAI is the sole national regulator of the insurance sector in India. It is accountable to Parliament via the Department of Financial Services at the Ministry of Finance of the Union Government. Section 14 of the IRDAI Act, 1999 lays down the duties, powers, and functions of the IRDAI (IRDAI, 2007b). The main duty of the IRDAI is to regulate, promote, and ensure orderly growth of the insurance and re-insurance market (IRDAI, 2007b).

IRDAI's mission statement includes protection and fair treatment of policyholders and to set, promote, monitor and enforce high standards of integrity, financial soundness, fair dealing and competence of those it regulates (IRDAI, 2010). Promoting fairness, transparency and orderly conduct is also within the area of IRDAI's responsibilities (IRDAI, 2010).

As part of its responsibilities for the regulation and supervision of intermediaries, the IRDAI regulates third-party administrators, Web aggregators, and insurance repositories, who maintain insurance policies in electronic form. Another major objective of IRDAI has been to dematerialize insurance policies to improve operational efficiency and protect policyholders from the consequences of loss of paper documentation.

Since its inception in 1999, the IRDAI, has endeavoured to globally integrate India's insurance sector by passing bills, signing bilateral and multilateral MoUs with foreign insurers and most notably hiking the FDI limit for the sector from 26 per cent to 49 per cent. It has become a signatory to the IAIS Multilateral Memorandum of Understanding on Cooperation and Information Exchange (MMoU). The IRDAI has also started participating in supervisory colleges, for Reinsurance Group America (USA), QBE Insurance Group (Australia), and Sanlam Group (South Africa) (IMF, 2018).

Source: Compiled by authors from various sources

2.1.3 Further liberalisation initiatives

In the last few decades there was an ongoing global trend of deregulation, intensification of competition accompanied by rapid growth in insurance sales, emergence of new distribution channels, and the convergence of insurance, banking, and other formerly separate segments (mainly insurance, banking, and securities dealing and underwriting industry) of financial services (Nayak and Mishra, 2014). To keep pace with the rest of the world, the Government of India announced a number of initiatives in the last couple of years to globally integrate and boost the insurance sector.

The insurance sector was further liberalised in 2015 with the passing of the Insurance Laws (Amendment) Bill. The passage of the bill paved the way for major reform-related amendments in the Insurance Act, 1938, the General Insurance Business (Nationalisation) Act, 1972, and the Insurance Regulatory and Development Authority (IRDA) Act, 1999.

The Act was instrumental in achieving the following:

- Raising the FDI cap
    - Increasing the foreign investment cap in an Indian insurance company from 26 per cent to 49 per cent through the automatic route with the safeguard of Indian ownership and control (PIB, 2015).
- Reinsurance reforms
    - Permitting foreign reinsurers to set up branches in India. The amended law defines "reinsurance" to mean "the insurance of part of one insurer's risk by another insurer who accepts the risk for a mutually acceptable premium", and thereby excludes the possibility of 100 per cent ceding of risk to a reinsurer, which could lead to companies acting as front companies for other insurers.
    - Enabling Lloyd's and its members to operate in India through setting up of branches for the purpose of reinsurance business or as investors in an Indian insurance company within the 49 per cent cap.[3]
- Enabling raising capital resources
    - Allowing the four public sector general insurance companies to raise capital while ensuring that the government equity does not fall below 51 per cent at any point in time (PIB, 2015).
    - Enabling raising of capital through new and innovative instruments under the IRDAI's superintendence (PIB, 2015).
- EPF reforms
    - Providing a choice to the subscribers of the Employees' Provident Fund (EPF) to opt for the New Pension Scheme (NPS) of the Government of India and the workers covered under the Employees' State Insurance the option to choose health insurance products offered by the IRDA (Ansari and Rehmani, 2016).
- Strengthening the regulatory institutions
    - Incorporating provisions that provided the IRDAI with the requisite flexibility for efficiently and effectively carrying out its functions along with doing away with archaic and redundant provisions (PIB, 2015).
    - Strengthening industry councils (both life and general) by making them self-regulating bodies (PIB, 2015).

[3] http://pib.gov.in/newsite/printrelease.aspx?relid=117043 accessed on 19 August 2019

Chakraborty and Sengupta (2016) argue that the liberalisation of the life insurance sector for private participation has raised issues about ensuring sound financial performance and solvency of the life insurance companies, besides safeguarding the interests of the policyholders.

Recently, 100 per cent foreign direct investment has also been notified for insurance intermediaries as proposed in the Union Budget 2019-20.[4] The government is also deliberating increasing the FDI cap from 49 per cent to 74 per cent and removing a control clause introduced in 2015 that mandates Indian promoters to control insurance companies.[5]

2.1.4 Further reforms

Along the way, the insurance sector has been also been shaped by new product regulations that were enforced from 2010 onwards. This has led to a shift in margins and hence in product mix and behaviour and the emergence of an open architecture for bancassurance in 2016 that opened up a new distribution channel (BCG and FICCI, 2017). Furthermore, the proposed merger of the three state-owned general insurers is likely to further alter the dynamics of the sector.

2.1.4.1 Bancassurance

Bancassurance (i.e. banc + assurance), is the amalgamation of services of two different financial institutions: banks and insurance. It is a partnership wherein a bank sells the partner insurance company's product using its network channels.[6] Through this partnership, insurance companies can penetrate a wider customer base using banks' channels, banks earn increased non-interest income, and customers get a wide choice of services under one roof.[7]

In 2002, the IRDAI passed a notification on "Corporate Agency" regulations. According to the guidelines, banks can act as an agent of one life and one non-life insurer and are allowed to sell insurance products to their customers.

With a middle-class population greater than 200 million (Popli and Popli, 2015), and a vast banking network covering urban as well as rural areas with the largest depositor base, bancassurance is particularly expected to be a win-win for India, which is known to be a high-saving society. On the other hand, as discussed in this paper later, even with a huge potential

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4 https://www.outlookindia.com/newsscroll/100-fdi-in-insurance-intermediaries-notified/1606792

5 https://m.economictimes.com/industry/banking/finance/insure/indian-control-clause-for-insurance-may-go/articleshow/73788529.cms

6 Originating in Europe, bancassurance has quickly gained global popularity as a distribution channel for insurance that has allowed insurance companies to expand their geographic reach but also enabled banks to expand their overall product portfolio. Bancassurance is a successfully proven model in Asia and is growing very quickly with expected market growth of CAGR of 8.13 per cent from 2013 to 2018 (Bansal and Kanwal, 2018). The total bancassurance premium income of the top three countries (China, South Korea, and Taiwan) accounts for about 76 per cent of total bancassurance premium income of 17 surveyed selected countries according to FALIA (2016).

7 There have been qualitative and quantitative studies (Artikis et al., 2008, Chen et al. 2009, Genetay and Molyneux, 2016) examining bancassurance and its implications on banks, insurance, and customers: the three parties associated in the bancassurance. Various studies found a positive impact of bancassurance on banks' and insurance companies' financial performance and profitability (Arora and Jain, 2013), stock price increases for both the bank and the insurance company (Chen and Tan, 2011), and increased ability to exploit scale economies for both the institutions (Schneider, 2014).

for growth, insurance penetration and density are still quite low in India. Given this situation, bancassurance can be a viable channel for boosting the insurance sector.[8]

2.1.4.2 Merger of public sector general insurers

The merger of three public sector general insurers, National Insurance Company Limited, United India Assurance Company Limited, and Oriental India Insurance Company Limited, into a single entity that will later be listed, has been proposed in the Union Budget 2018-19 (PIB, 2018). This merger is expected to lead to expenditure rationalisation, optimisation of resources, and unlocking value, along with achieving scale and efficiency. However, no specific timeline has been fixed in this regard as yet (Lok Sabha, Parliament of India, 2019).

3. The Indian Insurance Sector at a Glance

3.1 Composition of the sector: Public vs. private

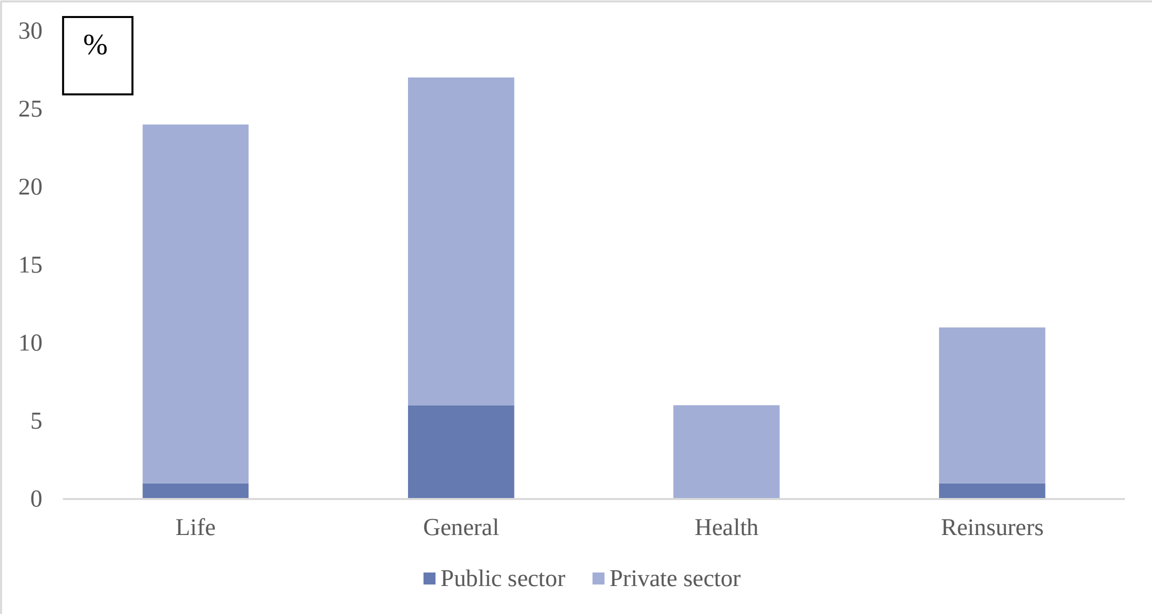
Most of the private sector insurers entered the market in the decade following the opening up of the insurance sector and the new entrants to the sector in recent years have been to the non-life, standalone health, and reinsurance sectors (including FRBs) (IMF, 2018). Though the number of public sector insurers is less, they hold a greater share of the market. The private sector insurers are slowly increasing their market share in both life as well as non-life segments. The share of the private sector in the life insurance segment has grown from 2 per cent in FY03 to 33.8 per cent in FY19 (IBEF, 2019). Similarly, the share of private players increased from 13.12 per cent in FY03 to 55.7 per cent in FY20[9] in the non-life insurance segment (IBEF, 2019).

Figure 1 captures the share of public and private insurers across segments.

[8] Despite the above discussed theoretical reasons pertaining to effectiveness of the bancassurance model for India, experts still doubt how beneficial bancassurance has actually proven for India. There are some demerits to the model as well, including the possibilities of data insecurity of an individual customer, conflicts of interests between the bank and insurance company, etc. Some studies have attempted to analyse the effectiveness of bancassurance in India both qualitatively and quantitatively. Joji Rajan et al. (2013) analysed the level of customer satisfaction with the bancassurance services in India using correlation and ANOVA analysis. Using a questionnaire survey in Agra, Uttar Pradesh consisting of 250 customers, 34 respondents from insurance companies and 30 respondents from banks, Satsangi (2014) reported that bancassurance remains a win-win situation for all three stakeholders. But these studies also point out the success of bancassurance will depend on successful implementation. A study by Singla and Aneja (2019) found that bancassurance had improved the Return on Asset Ratio (RoA) of both public and private sector banks of India. Although various studies have explored the impact bancassurance will have on customer experience and banks' profitability, very few have explored how the model has impacted the insurance sector's performance and expansion. This points to an area of research that needs to be surveyed in greater detail.

[9] Up to April 2019

Figure 1: Insurers at a glance



Source: IRDAI Annual Report, 2017-18

Note: Reinsurers include Foreign Reinsurers Branches/Lloyd's India

3.2 Penetration and density

In the past 17 years, the insurance sector of India has risen at a compounded annual growth rate (CAGR) of 16.5 per cent. The penetration and density of Indian insurance sector is still quite low. The measure of insurance penetration and density reflects the level of development of the insurance sector in a country. While insurance penetration is measured as the percentage of insurance premiums to GDP, insurance density is calculated as the ratio of premiums to population (per capita premium) (IRDAI, 2018). In the past 16 years, insurance penetration in India rose by a mere 1 percentage point from 2.7 per cent in 2001 to 3.7 per cent in 2017, according to IRDAI data. However, insurance density rose by double digits (CAGR of 12.2 per cent) during the same period.[10] The following table (Table 1) documents the insurance penetration and density in India from 2001 to 2017.

[10] https://www.firstpost.com/business/insurance-penetration-in-india-grows-just-1-in-last-one-and-half-decade-these-six-charts-explain-why-5953351.html accessed 23 August 2019

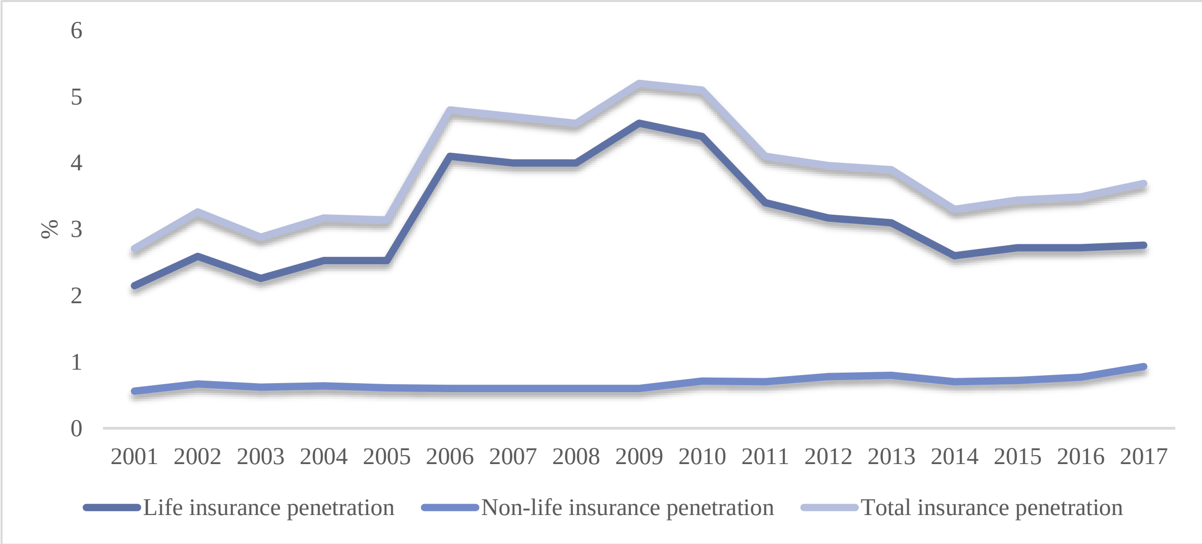
Table 1: Insurance Penetration and Density in India

Year	Life		Non-life		Industry	
	Density (USD)	**Penetration (%)**	**Density (USD)**	**Penetration (%)**	**Density (USD)**	**Penetration (%)**
2001	9.1	2.15	2.4	0.56	11.5	2.71
2002	11.7	2.59	3.0	0.67	14.7	3.26
2003	12.9	2.26	3.5	0.62	16.4	2.88
2004	15.7	2.53	4.0	0.64	19.7	3.17
2005	18.3	2.53	4.4	0.61	22.7	3.14
2006	33.2	4.10	5.2	0.60	38.4	4.80
2007	40.4	4.00	6.2	0.60	46.6	4.7
2008	41.2	4.00	6.2	0.60	47.4	4.60
2009	47.7	4.60	6.7	0.60	54.3	5.20
2010	55.7	4.40	8.7	0.71	64.4	5.10
2011	49.0	3.40	10.0	0.70	59.0	4.10
2012	42.7	3.17	10.5	0.78	53.2	3.96
2013	41.0	3.10	11.0	0.80	52.0	3.90
2014	44.0	2.60	11.0	0.70	55.0	3.30
2015	43.2	2.72	11.5	0.72	54.7	3.44
2016	46.5	2.72	13.2	0.77	59.7	3.49
2017	55.0	2.76	18.0	0.93	73.0	3.69

Source: IRDAI Annual Report, 2017-18.

As shown in Figure 2 below, the insurance penetration and density for India are particularly low in the non-life insurance segment. In the first decade after the liberalisation of the insurance sector, penetration rates registered a consistent rise from 2.71 per cent in 2001 to 5.20 per cent in 2009 (IRDAI, 2018). Insurance penetration followed a downward trend thereafter and started declining. The penetration rates dropped to 3.30 per cent in 2014 (IRDAI, 2018). In 2015, the rates turned around and started increasing and reached 3.69 per cent in 2017 (IRDAI, 2018).

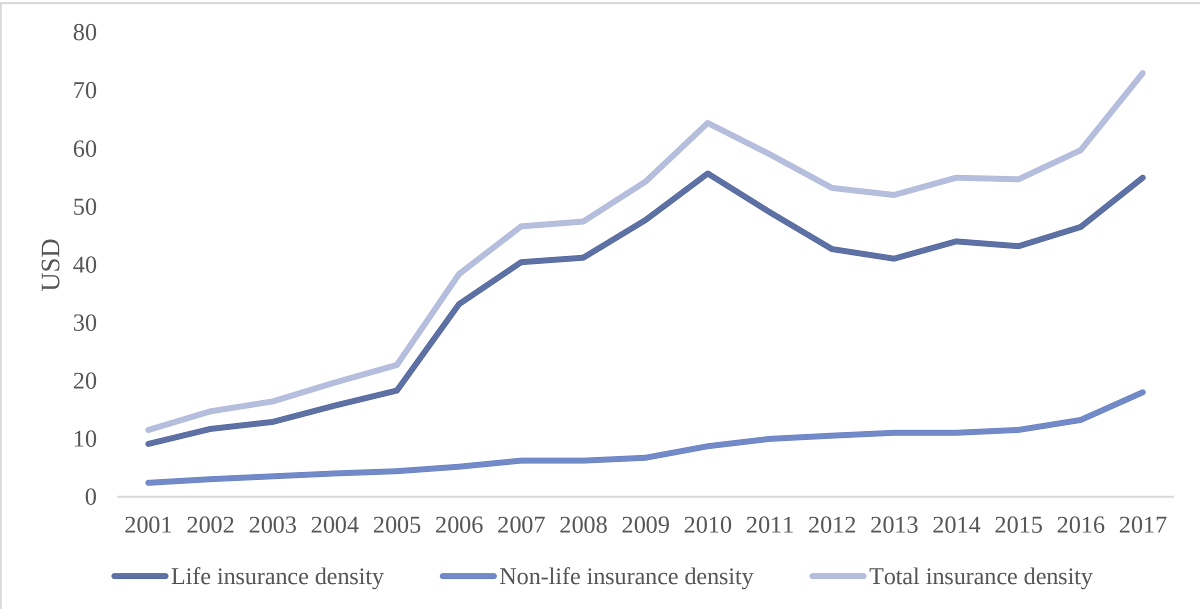
Figure 2: Insurance penetration rates in India (2001-2017)



Source: IRDAI Annual Report, 2017-18.

Figure 3 illustrates the trend of density of insurance in India. From USD 11.5 in 2001, the insurance density touched a high of USD 64.4 in 2010, after which it floated in the range of USD 50 to USD 60 from 2011 to 2016 before increasing to USD 73 in 2017 (IRDAI, 2018). Since life insurance rules the sector due to its sheer market share vis-á-vis non-life insurance, the total penetration and density mimics the pattern followed by life insurance penetration and density.

Figure 3: Insurance density in India (2001-2017)



Source: IRDAI Annual Report, 2017-18

India’s insurance penetration is lower in both life and non-life insurance sectors compared to advanced countries. In 2017, insurance penetration was 11.6 per cent in South Korea, 9.6 per cent in the United States, 8.2 per cent in Singapore, 7.1 per cent in the UK, and only 3.7 per cent in India. India’s insurance density is very low compared to the advanced economies even after the reforms. India’s insurance density in 2017 is USD 73, whereas Singapore’s density is USD 4749, and United States’ insurance density is USD 4216. A similar situation prevails in the case of life and non-life insurance penetration and density.

Life insurance dominates the sector with a huge share of 74.7 per cent, with non-life insurance accounting for 25.3 per cent market share (IRDAI, 2018). According to data published by Swiss Re, India’s share in global life insurance market was 2.7 per cent during 2017. However, during 2017, the life insurance premium in India increased by 8.0 per cent (inflation adjusted) when global life insurance premiums increased by 0.5 per cent. However, a comparison with advanced countries (shown in Figures 4 and 5) reveals that India’s insurance penetration and density is lower in life insurance sectors. India’s life insurance penetration is 2.8 per cent in 2017, while for countries like the UK it is as high as 7.2 per cent and for Singapore and South Korea it is 6.6 per cent and 6.6 per cent respectively (IRDAI, 2019a).

Figure 4: India Life insurance penetration: Comparison with advanced countries (in %)

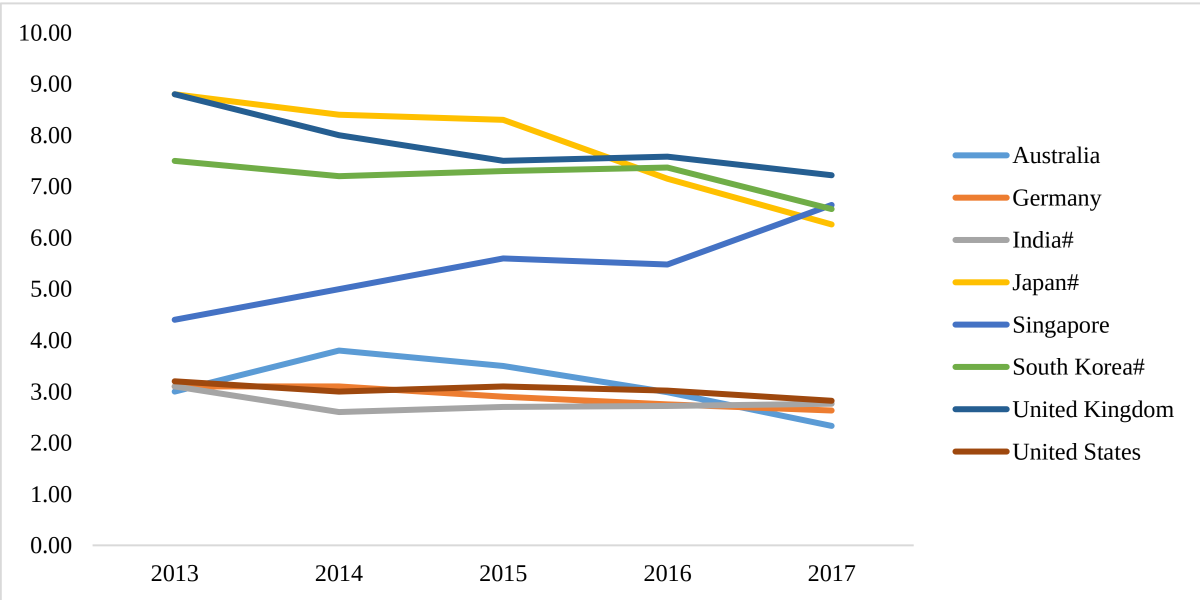
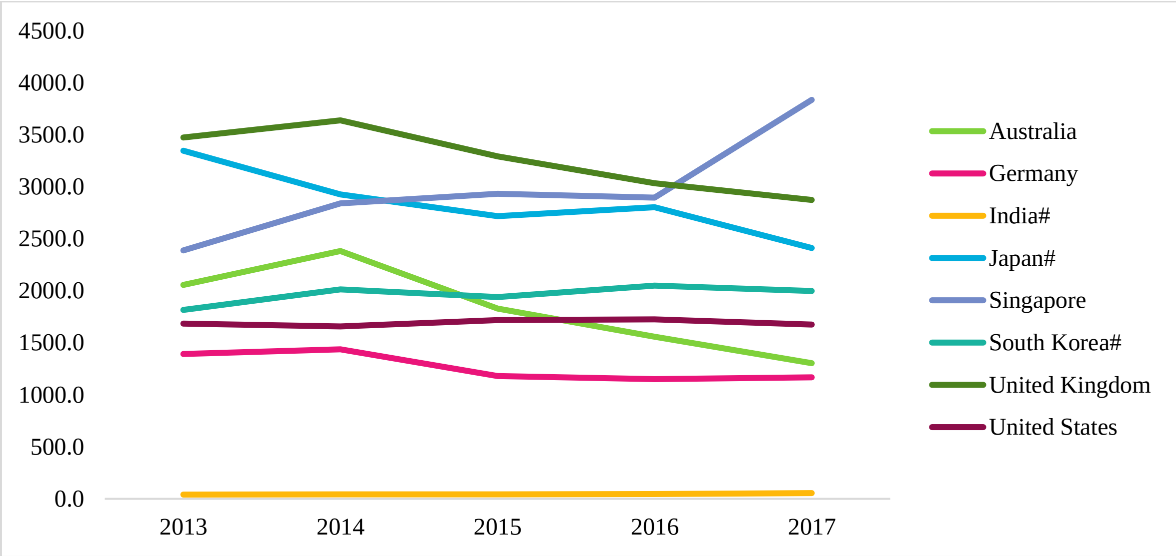


Figure 5: India life insurance density: Comparison with advanced countries (in US $)

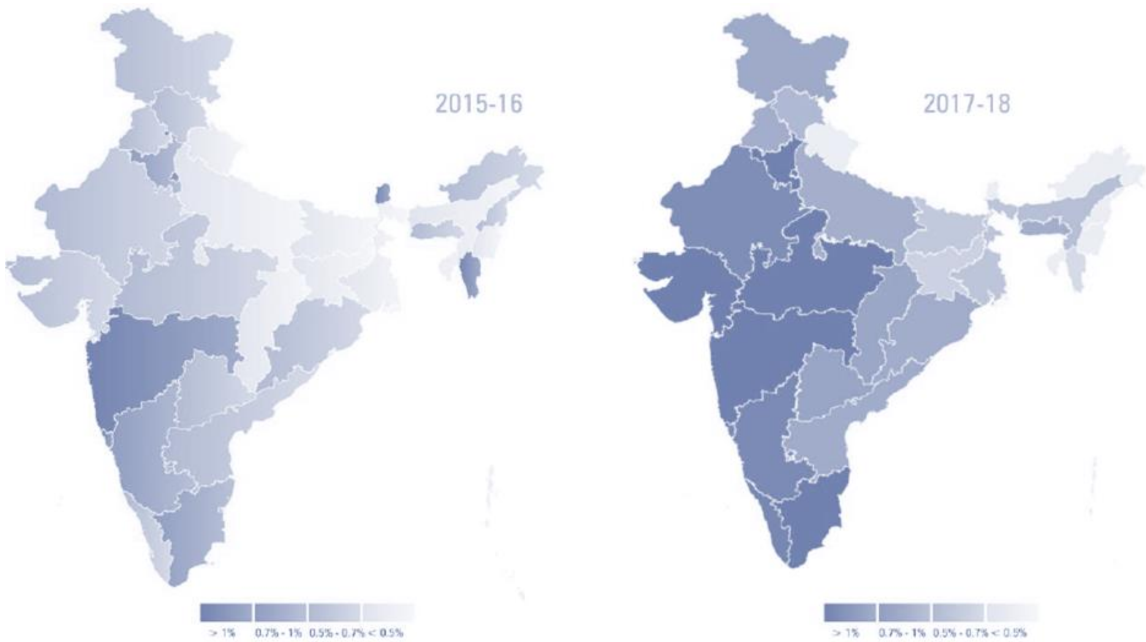


The report of the Household Finance Committee (2017) cites the reasons for such low levels of insurance penetration rates in India as tight constraints on the household budget, adverse selection, moral hazard, and affordability issues. Where low penetration rates are concerned, behavioural factors also come into play (Household Finance Committee, 2017). For life insurance, the report relates the lack of participation in the life insurance market to the self-perceived financial management skills of the household head.

After opening up, the Indian life insurance sector has been forced to face a lot of competition from many national as well as international private insurance players, which had a positive influence on the performance of LIC (Rajendran and Natarajan, 2010). The share of the private sector has grown in the life insurance segment from 2 per cent in FY03 to 33.8 per cent in FY19 (IBEF, 2019). The overall business of life insurance has significantly increased after privatisation, but a large part of the Indian population still remains uninsured (Rajendran and Natarajan, 2010).

Stark disparities are observed in life insurance participation rates across Indian states. For instance, Maharashtra, Karnataka, and Tamil Nadu have high levels of life insurance participation rates, while Madhya Pradesh and Chhattisgarh have low participation rates (Household Finance Committee, 2017). State-wise non-life insurance penetration rates are also highly non-uniform, as revealed by Figure 6.

Figure 6: Non-life insurance penetration heatmap



Source: Indian Non-Life Insurance Industry Yearbook 2017-18, General Insurance Council

4. Reinsurance sector in India

Reinsurance, insurance of insurance companies, involves transferring some portion of risk by insurers to the reinsurers, enabling them to concentrate their synergies on their core business. For the insurers, this works as a capacity enhancer, as reinsurers offer risk coverage and technical services. The presence of reinsurers also decreases volatility for insurers.

The Indian experience with reinsurance can be assessed with respect to the nationalisation of the general insurance sector, as well as the liberalisation of the insurance sector. With the General Insurance Business (Nationalisation) Act, 1972 (GIBNA), the general insurance sector was nationalised. Subsequently, the General Insurance Corporation (GIC) was incorporated and it continued to receive 20 per cent obligatory cessions (IRDAI, 2019b). With the merger of the former general insurance companies, GIC assumed the role of a parent body supervising the general insurers and arranged reinsurance for insurers with a common integrated reinsurance programme.

These changes have been instrumental in shaping the reinsurance market in India to its current form. Under section 101A of the Insurance Act 1938, every insurer is obliged to reinsure with Indian reinsurer(s), a certain percentage of the sum insured on each general insurance policy as specified by the authority (IRDAI, 2018). Ahead of nationalisation, there was minimal presence of reinsurance, which was attributable to the small and medium risks in the portfolios of domestic companies. The existence of the Indian Insurance Pool with local companies as members did little to help expand the reach of reinsurance in the country. During this time, reinsurance arrangements were made from foreign markets, primarily British and continental.

In 1956, the Indian Reinsurance Corporation was incorporated, which consisted of general insurers and received premium cessions from the member companies (IRDAI, 2019b). In 1961, statutory cessions were introduced that stipulated the amount that every insurer was required to cede under different categories of insurance (IRDAI, 2019b). The purpose behind introducing mandatory cessions was to retain premiums domestically as much as possible. The cessions were to be apportioned between two reinsurers, Indian Reinsurance Corporation and Indian Guarantee and General Company. The binding cessions from direct insurers to GIC remained at 20 per cent until 2006-07. Later, this limit was lowered to 15 per cent in 2007-08 and then to 10 per cent in 2008-13. The obligatory cessions at present are at 5 per cent.

In the post-liberalisation era, the Insurance Regulatory and Development Authority Act, 1999 came into effect. Under the Act, an amendment to GIBNA was introduced which ended the exclusive privilege enjoyed by GIC and its subsidiaries. The supervisory role of GIC on its subsidiaries was removed, with renotification of GIC as a national reinsurer. With the General Insurance Business (Nationalisation) Amendment Act 2002 that came into force from March 21, 2003, GIC ceased to be a holding company of its subsidiaries (GIC). The Government of India took over the ownership of the four subsidiaries and GIC, which left the insurance industry in charge of arranging its own reinsurance cover (IRDAI, 2019b).

GIC Re, the sole national reinsurer, provides reinsurance to insurers in India as well as abroad. It is the recipient of statutory cessions on every issued policy issued by domestic general insurers subject to certain limits and leads almost all treaty and facultative programs of these companies. A second Indian reinsurer, ITI Reinsurance Limited (ITI Re), was granted certificate of registration by IRDAI in 2016-17 and is yet to start business (IRDAI, 2018).

From the earlier confinement of the reinsurance market to only the public sector reinsurer GIC Re, the market has in due course been opened up to private reinsurers as well as branches of foreign reinsurers. At present, the reinsurance market comprises one national reinsurer and ten reinsurers, including Foreign Reinsurers' Branches (FRBs) and Lloyd's India. This transition from the monopoly of GIC Re to 11 reinsurers has rendered the market relatively more competitive. Additionally, there are several cross-border reinsurers in the market (IRDAI, 2018).[11]

The Indian reinsurance market has been estimated at around Rs. 388 billion for FY17 according to CRISIL Research (ICICI Securities Limited, 2017). Around 95 per cent of the total premium ceded in FY17 was accounted for by the non-life insurance business (ICICI Securities Limited, 2017). Gauging by the total premiums ceded as shown in Table 2, the life reinsurance market is relatively small vis-à-vis non-life insurance in India.

[11] Annexure 2: GIFT and Reinsurance

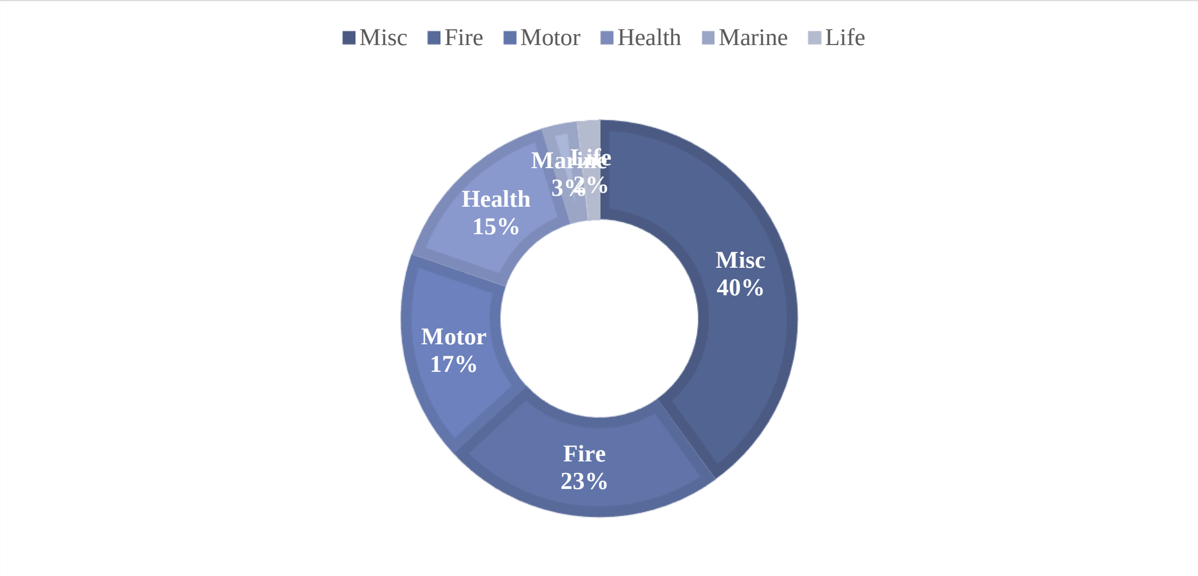
Table 2: Gross Premium of Reinsurers

Reinsurer	Gross RI Premium Income-Indian Business (in Rs. crore)	Gross RI Premium Income-Foreign Business (in Rs. crore)	Total RI Premium Income-Indian and Foreign Businesses (in Rs. crore)
GIC Re	29812.91	11986.46	41799.37
FRB/Lloyd's	5996.40	22.45	6018.85
Total	**35809.31**	**12008.91**	**47818.22**

Source: IRDAI Annual Report 2017-18

Figure 7 illustrates that 'Fire' accounts for the maximum share in the premium on reinsurance accepted for 2017-18. The segment that has the lowest share is 'Life.' CRISIL Research also points out that the crop insurance premiums ceded to reinsurers increased fourfold in FY17 (ICICI Securities Limited, 2017).

Figure 7: Segment-wise premium on reinsurance accepted (2017-18)



Source: Handbook on Indian Insurance Statistics (2017-18), IRDAI

5. Empirical analysis

5.1 Life insurance

The crucial place occupied by insurance in the macroeconomic development of an economy is acknowledged. The insurance sector can influence the macroeconomic development of an economy via a range of channels due to the presence of a myriad of linkages between them.

Many studies have discerned a positive or long-run relationship between insurance and economic growth.[12] [13] However, some empirical studies such as Ward and Zurbruegg (2000) and Olayungbo and Akinlo (2016) point to mixed evidence regarding the relationship between these two variables.

The differential impact of life and non-life components of insurance on economic growth has also been brought out by Alhassan and Fiador (2014) *inter alia* other empirical works.[14] [15]

The association between the insurance sector, the banking sector, and the stock market has been empirically tested. Stock market development is postulated to strengthen the development of the insurance industry, as liquid capital markets provide an investment platform for insurance companies to invest funds gathered via premium payments (Arena, 2008). Since life insurance companies are looking to matching their long-term assets to long-term liabilities, this becomes all the more important, particularly for them (Arena, 2008).

Adams et al. (2009) find empirical evidence for causality running from the insurance sector to the banking sector for Sweden for the study period 1830-1998. Webb et al. (2002) also point to the conjoint effect that insurance and banking have on economic growth, which is relatively greater than their contributions taken together for 55 countries during the period 1980-1996.

The findings of Arena (2008) have lent empirical support to the complementarity between life insurance and financial development for initial and intermediate levels of financial development and for non-life insurance at initial and high levels of financial development. The author's analysis also suggests that the deeper the stock market development, the larger will be the effect of life insurance on economic growth, especially for intermediate and high levels of stock market development. Arena (2008) also points out the complementarity between non-life insurance and stock market development results for initial and intermediate levels of stock market development.

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[12] Outreville (2013) reviews 85 empirical papers that examine the relationship between insurance and economic growth. Most papers, according to him, have looked at the demand side, whereby the level of economic development is an explanatory variable affecting the demand for insurance.

[13] These include Kugler and Ofoghi (2005), Arena (2008), Haiss and Sümegi (2008), Ching et al. (2010), Han et al. (2010), Njegomir and Stojić (2010), Zhou et al. (2012), Oke (2012), Lee at al. (2013), Ghosh (2013), Verma and Bala (2013), Alhassan and Fiador (2014), Kaushal and Ghosh (2016), and Sawadogo et al. (2018). Others have been able to establish causality between the two variables; these include Adams et al. (2009), Ching et al. (2010), Lee et al. (2013), Ghosh (2013), Alhassan and Fiador (2014), Pradhan et al. (2016), Kaushal and Ghosh (2016), and Dash et al. (2018).

[14] The authors state that the share of non-life insurance business in Ghana was at 57.01 per cent as against the life insurance business at 42.99 per cent at the end of 2011. But, according to them, the life insurance sector is also gaining significance in Ghana, which is clear from the increasing share of life insurance to 42.99 per cent by the end of 2011, from 19.88 per cent in 2003.Their findings reveal that non-life insurance had a greater impact on economic growth as compared to life insurance in the long run for the Ghanaian economy during the study period of 1990-2010. This study also makes use of three control variables, namely gross capital formation, inflation, and trade volume, while determining the influence of the insurance sector on economic growth.

[15] Other studies that have used control variables are Arena (2008), Haiss and Sümegi (2008), Han et al. (2010), Njegomir and Stojić (2010), Oke (2012), and Sawadogo, Guerineau, and Ouedraogo (2018).

In the Indian case, the existence and extent of correspondence between the insurance sector and economic development have been relatively less explored. Only a handful of studies (Verma and Bala, 2013; Ghosh, 2013; and Kaushal and Ghosh, 2016) have attempted to examine the links at work between the two variables.[16]

A simple regression exercise shows the relationship between insurance and economic growth in the Indian case from 1990-91 to 2017-18.[17] Three equations have been estimated for life, non-life, and total insurance penetration. Results of the regression show a positive and significant relationship between insurance penetration rates (life, non-life, and total) and economic growth in India. Further, the influence of liberalisation (increasing of the FDI cap to 49 per cent) has been tested by introducing a year dummy. Results indicate that liberalisation positively influenced the life and total insurance penetration rates. The effect on non-life insurance penetration rates is negative and insignificant. The effect of demonetisation has also been tested by adopting a similar dummy variable approach, as demonetisation led to a sudden and transient surge in premium growth. Results reveal a positive and significant impact of demonetisation on the insurance (life and total) penetration rates, whereas the impact on non-life insurance is positive but insignificant.

5.2 Non-life insurance[18]

The non-life insurance industry constitutes approximately 30 per cent of the total insurance industry premiums and recorded total premiums of Rs 172,483 crore in FY19 from Rs 25,930 crore in FY07 at a compound annual growth rate (CAGR) of 17.1 per cent during FY07-19 (Moneycontrol News, 2019). Although the size and premiums of non-life insurance have increased multi fold, the penetration (annual premium as a percentage of GDP) is below 1 per cent, which, in comparison with global penetration levels of developed and emerging economies, is extremely low.

Motor, health, and crop insurance segments are driving the growth of non-life insurance in India. Motor insurance accounted for 36.5 per cent of non-life insurance premiums earned in India in Apr-Sep 2018 (IBEF, 2018). The health segment expanded its market share from 26.965 per cent in 2016-17 to 27.86 per cent in 2017-18 (IRDAI, 2018). Crop insurance contributed 7.5 per cent to gross direct premiums of non-life insurance companies in FY20 (up

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16 Verma and Bala (2013) find that the life insurance sector in India had a positive and statistically significant impact on Gross Domestic Product (GDP) of the country in the period from 1990-91 to 2010-11. A long-run relationship between the life insurance industry and economic growth has been observed by Ghosh (2013) in the case of the Indian economy. Ghosh (2013) also notes in his study one-directional causality between these two variables, implying that the life insurance sector in India improves economic growth. Kaushal and Ghosh (2016) include variables representing the entire Indian insurance sector (life as well as general) and the Indian banking sector. They find evidence suggesting that insurance sector development promotes banking sector development in the short run. Their empirical analysis provides support to a bi-directional short-run causal relationship between insurance and economic growth for the period from July 2004 to June 2013.

17 For details of the regression, refer to Annexure 3.

18 For a detailed discussion on the non-life sectors of Indian insurance industry, see ICRIER report on Liberalizing India’s Insurance Sector: Challenges and Opportunities.

to April 2019) (IBEF, 2019). Insurance products catering to speciality risks such as catastrophes and cyber security are at a nascent stage of development in India.

6. Key Challenges and Outlook

6.1 Low penetration and density rates

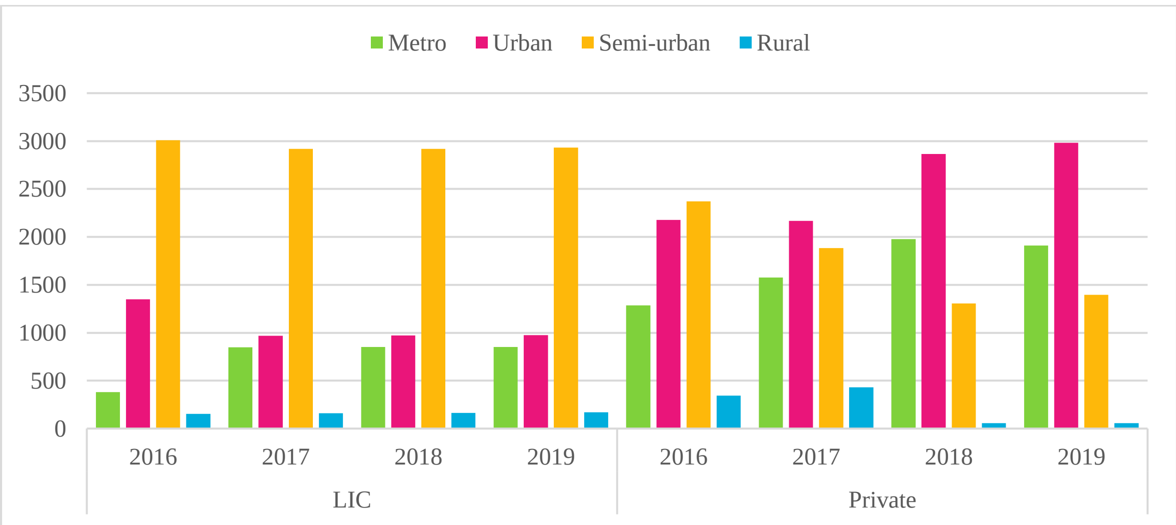
Low levels of penetration and density of insurance in India clearly imply that a large section of the population is still uninsured. A report by Lloyd's (2018) points to an enormous insurance gap of USD 27 billion in absolute terms in India. To harness the potential of the insurance sector as a driving force of economic growth in India, these low penetration rates will have to be dealt with.

6.2 Deficient rural participation and life insurers' skewed focus on urban areas

In terms of rural penetration, the share of rural business in total volume of insurance business is still low in India (Kumari, 2013; Jain, 2013). Although it was expected that along with the growth in insurance penetration and density, liberalisation will spread insurance to rural areas and social sectors via micro insurance (Prabhakara, 2010), this has not happened. Kumar (2016) pointed out that even after liberalisation, insurance companies in India have been ignoring rural markets.

Using the number of offices to gauge the presence of life insurers in a particular geographical area, it can be discerned that private life insurers are withdrawing from the rural areas, as the number of their offices in that region has been falling in recent years. On the other hand, their presence in urban areas is increasing. The state-owned life insurer, LIC, has decreased the number of offices in urban areas slightly from 2016 to 2019, while its presence in rural areas has stayed constant. In metro areas, the presence of LIC as well as private insurers has increased from 2016 to 2019. This trend of life insurers is shown in Figure 8.

Figure 8: Number of offices of life insurers by different geographical areas (2016-19)



Source: Handbook on Indian Insurance Statistics F.Y. 2018-19, IRDAI

Note: The metro areas have a population of 10,00,000 and above, urban areas from 1,00,000 to 9,99,999, semi-urban areas from 10,000 to 99,999, and rural areas population of up to 9999.

There is huge potential for the development of the life insurance market in rural areas, as it is still underdeveloped (Devi, 2011). Insurance companies in India will have to show long-term commitment to the rural sector as well, and will have to design products which are suitable for rural people. Insurance companies need to think about their distribution mechanism to work effectively in rural markets.

6.3 Less investment by households in insurance products

An average Indian household holds 77 per cent of its total assets in real estate[19], 7 per cent in other durable goods[20], 11 per cent in gold, and the residual 5 per cent in financial assets (such as deposits and savings accounts, publicly traded shares, mutual funds, life insurance, and retirement accounts) (Household Finance Committee, 2017). Counterparts in the advanced economies hold relatively more financial assets. This meagre investment by households in insurance is substituted by non-institutional debt, as it serves "as a high-cost, imperfect form of insurance" (Household Finance Committee, 2017).

A striking finding in the Indian case is that there exists a strong negative correlation between insurance activities and incidence of non-institutional source of debt, which is indicative of the fact that households are mitigating risks via ex-post high-cost borrowing as opposed to ex-ante insurance against those risks (Household Finance Committee, 2017). This feeds into keeping the penetration rates subdued and is itself driven by the low uptake of insurance.

6.4 Inadequate access to insurance products

In order to increase the penetration rates and density, uninsured rural areas and the urban poor must be brought under the ambit of insurance coverage. Improving accessibility of insurance products will be of prime importance in this regard. Accessibility of insurance products is related to affordability and comprehension of the product. The focus of the insurance sector is steadily shifting towards making accessible low-cost simple insurance products, including those that can be sold through online channels (IMF, 2018). Simultaneously, a complementary thrust will have to be put in by the authorities to build trust and spread awareness and improve financial literacy. In this context, government insurance schemes such as Pradhan Mantri Jan Arogya Yojana, Pradhan Mantri Fasal Bima Yojana, Pradhan Mantri Suraksha Bima Yojana, and Pradhan Mantri Jeevan Jyoti Bima Yojana are notable contributors in pushing the insurance coverage to better levels.

[19] Including residential buildings, buildings used for farm and non-farm activities, constructions such as recreational facilities, and rural and urban land (Household Finance Committee, 2017).

[20] Including transportation vehicles, livestock and poultry, agricultural machinery, and non-farm business equipment (Household Finance Committee, 2017).

Pradhan Mantri Jeevan Jyoti Bima Yojana saw 5.67 crore enrolments and disbursement of Rs 2488.44 crore up to 31st December 2018 (PIB, 2019). In 2017-18, more than 47.9 million farmers have benefitted under Pradhan Mantri Fasal Bima Yojana (IBEF, 2019). The risk coverage of the scheme was increased to include protection against hailstorms, crop fires, damage from animals, landslides, and rainstorms (IBEF, 2019). These schemes also prove to be a helping hand in spreading awareness of insurance products to otherwise isolated segments of the population. The central government's move to extend the Ayushman Bharat Pradhan Mantri Jan Arogya Yojana (PMJAY) to migrant workers amidst India's battle with the COVID-19 pandemic (Sharma, 2020) is likely to enhance the non-life insurance penetration in India and also improve awareness and perception of insurance products among the uninsured and isolated segments of the population.

6.5 Deteriorating financial health of insurers

The life insurance industry has reported a marginal fall in profits from last fiscal, as the profits fell to Rs 8,435.81 crore in 2018-19 from Rs 8,511.99 crore in 2017-18 (IRDAI, 2019c). While LIC garnered a slight increase in profit, private sector insurers' profits marginally fell.

However, exposure to downgraded debt instruments, swelling non-performing assets (NPAs), and falling investment yield are some of the factors stalking LIC's financial picture. The NPAs of LIC stood at 6.10 per cent for the period April-September 2019 according to its public disclosure. LIC has also recently increased the provisions for doubtful assets by 30 per cent.[21] Further, LIC has exposure to the debt instruments that have been downgraded to default category by credit across platforms such as life funds, pension funds, and unit-linked funds. Adding to the worrisome financial landscape is LIC's falling investment yield, which plunged to 7.59 per cent in 2018-19 from 7.71 per cent in the previous year as per LIC's public disclosure. Given that LIC commands a large share of the life insurance market, the wobbly finances of the state insurer can cast a pall over the financial soundness of the entire sector.

The general insurance industry recorded a decrease in profits, with public sector general insurers posting losses and their private sector counterparts recording a slight fall in profits in 2018-19 as compared to 2017-18. While the premiums are still growing, the general insurance industry is experiencing underwriting losses. The underwriting losses of general insurers increased by 45.49 per cent in FY19 as compared to the previous year (IRDAI, 2019c).

Among the public sector general insurers, the financial situation of the ailing National Insurance Company is cause for concern. The insurer has failed to meet the solvency requirement of a surplus of 1.5 times the liabilities at all times. As noted by the IMF's technical note on India's insurance sector regulation and supervision, the weakest insurers that are not meeting minimum solvency requirements are the ones that are state-owned. This requires IRDAI to concentrate resources on ensuring that these companies maintain adequate solvency levels (IMF, 2018). Even though the Government of India has already infused Rs 2,500 crore in the three insurers, National Insurance, Oriental Insurance, and United India Insurance,

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[21] https://economictimes.indiatimes.com/industry/banking/finance/life-insurance-corp-of-india-raises-2018-19-provisioning-by-30/articleshow/73023529.cms

through first supplementary demands for grants for 2019-20, these insurers require an additional Rs 10,000-12,000 crore in order to meet the stipulated solvency margin.[22] This injection will aid their faltering finances, along with facilitating the announced merger.

These signs might very well be early warning signals of the insurance sector succumbing to the same malaise that surrounds banks and NBFCs in India. A move towards economic valuation for financial statements will aid in the implementation of International Financial Reporting Standards (IFRS) from the financial year 2020-21, where India is an outlier, having not moved in this direction (IMF, 2018). IMF has recommended the formulation of a strategy, plan, and timetable as soon as possible for modernising the solvency framework (IMF, 2018). Poor underwriting discipline in non-life insurance is also to be taken care of, as insurers in many lines are dependent on investment income to offset poor underwriting results (IMF, 2018). Further, liberalisation can be of assistance in this scenario, as it will prompt the insurers, both public as well as private, to enhance their competitiveness and strengthen their finances.

6.6 Public sector dominance and depressed private participation

The dominant position of state owned insurers in the insurance sector is proving to be a cause for concern for private sector insurers as well as foreign insurers. Private sector insurers are stepping up their performance and with the right amount of push (in terms of easing the regulatory issues in the insurance industry), they can do better. To reduce the dominance of the public sector entities, a host of measures can be introduced to diminish the advantages offered to the public sector insurers. A recommendation by the Financial Sector Legislative Reforms Committee in this regard is to eliminate the government guarantee of LIC liabilities and transform it into a Companies Act company (IMF, 2018). The implications of the proposed merger of the three public sector general insurers are also uncertain. It can possibly have a reverse impact of concentrating power into the hands of a few public insurers, even though it might synergise the system to some extent. The actual implementation and improvement in efficiency thereof will govern the future of general insurance in India after the merger.

6.7 Lack of capital

By its very nature, insurance is a capital consuming financial service and growing insurance companies require on-tap capital. Insurers in India are capital starved. Some insurers are situated at the extreme end[23] and are struggling to meet even their solvency requirement, as discussed above. Adding to this, the RBI's move to place a ceiling on banks' holdings in insurance companies at 30 per cent for bolstering credit growth and shield banks from non-bank risks is going to deprive insurers of crucial banks' capital and will also affect its distribution via banks (Laskar and Gopakumar, 2019). A possible additional effect of this low

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[22] https://www.firstpost.com/business/union-budget-2020-21-nirmala-sitharaman-may-announce-second-round-of-capital-infusion-for-non-life-insurers-7898411.html

[23] National Insurance Company, Oriental Insurance Company, and United India Insurance Company are unable to meet their solvency margin due to inadequate capital.

level of capital is incipient new risks, and meagre capital makes it difficult for insurers to rise to the challenge of new risks.[24]

Besides the demand side issue of low take-up of insurance products, slow moving insurance penetration and density in the Indian case can in part be attributed to the insufficient capital with the insurers that makes it difficult for them to progress further. A preliminary empirical assessment of this claim by means of a regression exercise[25] shows a positive and significant relationship between the insurance penetration and insurers' equity capital in the case of life and non-life insurance for India with the period under consideration being 2001-02 to 2018-19. For total insurance, the relationship is positive but insignificant. Additionally, the hypothesis of whether liberalisation (increase in FDI cap in 2015) of the insurance sector influences the relationship between equity share capital and insurance penetration has been analysed by introducing an interaction term of the liberalisation year dummy and the equity share capital. In the case of total and non-life insurance, results reveal a positive and significant coefficient of the interaction term, implying that the positive relationship between penetration and equity share capital for these two segments is stronger in the years after the hike in the FDI cap as compared to earlier years. The life insurance equation's interaction term coefficient is positive, though insignificant. The above analysis also makes a case for liberalising the FDI cap for the insurance sector, as it provides capital to the insurers that positively impacts the insurance penetration rate and the liberalisation of the sector itself reinforces the positive relationship between the two variables.

6.8 Non-life insurers' product pricing and overcrowding in some segments

According to the IRDAI's Annual Report 2019, India's general insurance industry experienced a reduction in profit by more than 90 per cent to Rs 683 crore during 2018-19, compared to a profit after tax of Rs 6,909 crore in FY18. The public sector general insurance firms experienced a loss of Rs 3,228 crore in FY19 after a profit of Rs 2,543 crore in the same period in 2018, the bulk of which was induced by increased claims due to natural calamities and disasters. Although faring better than their public counterparts, private general insurers reported a marginal decline in profits in FY19 to Rs 3,584 crore compared to Rs 3,798 crore in FY18 (ET Bureau, 2019).

The IRDAI reports that underwriting losses of general insurance companies rose 45.5 per cent year-on-year (YoY) to Rs 22,320 crore in the financial year 2018-19, largely due to an increase in the claims ratio. The following table summarises the increase in the claims ratio and rising underwriting losses for non-life and health insurers.

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[24] New risks associated with the COVID-19 pandemic have surfaced, creating challenges for insurers. Presently, health insurers have sufficient capital, and together with reinsurance this would provide an adequate cushion for disbursing COVID-19 claims (PwC, 2020). Altogether, the impact on health insurers rests on the insurer's risk mitigation arrangement. However, continued onslaught of the pandemic can spell trouble for the sector, as in that case the pandemic will fall under the category of severe natural catastrophes, and without proper risk transfer strategies along with equitable reinsurance plans, claim management will become hard for health insurers with limited capital (PwC, 2020).

[25] Annexure 4 gives the details of the regression exercise.

Table 3: Increase in claims and Underwriting losses for Non-life and Health Insurers

	Underwriting experience		Increase in net incurred claims ratio
Insurer	2017-18	2018-19	2017-18 to 2018-19
Public sector	-12602.57	-18532.95	
	-23.56%	-33.34%	+14.8%
Private sector	-2085.43	-2889.87	
	-5.39%	-6.10%	+23.8%
Standalone health insurers	-435.73	-568.22	
	-7.67%	-7.26%	+40.4%
Specialised insurers	-217.69	-328.45	
	-8.31%	-38.44%	
Total	-15341.42	-22319.50	
	-15.27%	-19.98%	

Source: (Moneycontrol News, 2019)

To maintain profitability, insurance companies are becoming increasingly dependent on their investment portfolio, which is a short-sighted measure and does not conform to global norms (The Hindu, 2020). To cope with the losses, to maintain the market share, as well as to keep the premiums competitive, has led to a "race to the bottom". Insurance companies have resorted to harmful practices such as undercutting premiums. Since 2007, except for motor third-party insurance, non-life general insurance companies have had a free market approach to pricing. Insurers were allowed to price their policy products based on their own assessment of risks. In order to remain competitive, the companies started offering property and group health insurance to corporate clients at unsustainably reduced rates, which are ultimately subsidised by the buyers of retail products (Verma, 2015). For example, the primary insurers were offering fire insurance policies at a discounted rate as high as 97 per cent of the Burning Cost rate estimated by the Insurance Information Bureau of India (IIB) (Outlook, 2019). Burning Cost (also known as Pure Loss Cost) is "the ratio of the reinsurance losses incurred to the ceding company's subject premium based upon historical experience for a proposed reinsurance agreement" (GIC Re, 2017). IRDAI has prescribed that for pricing fire, property, and group health insurance risk and premium, Burning Cost should be the starting point. They have also advised that industry-wide losses and the insurer's level of experience of acquisition and management expenses should be considered in pricing the product.

Another negative offshoot of the competition for profitability is concentration of insurers in a few selected sectors, populations, and geographic locations, which defeats the initial motivation behind the denationalisation of the insurance sector. In a country like India, most of the non-life insurance premiums come from sectors which are under legal directives of insuring risks, such as crop, motor, workmen compensation, fire, marine, third-party liability, etc. (Bajpai, 2019). Rather than exploring other sectors such as home insurance, or home appliances insurance, major private insurers are overcrowding in the non-discretionary insurance sectors, resulting in congestion rather than expansion. Finally, most of these negative impacts are direct or indirect results of low capital issues in India's insurance sector, particularly the non-life insurance sector. Devising a capital infusion plan is crucial at this point. Increasing the FDI limit for the insurance sector from 49 per cent to 100 per cent can assuage the capital shortage problem of the non-life insurance companies.

6.9 Regulation and supervision

Ensuring that the Indian insurance industry is well-capitalised and synchronised with the prevailing global standards of capital forms an important aspect of regulating the sector. While the issue of low capital levels throughout the insurance sector in India needs to be addressed, a related aspect is that of a risk-based capital framework. The risk-based capital (RBC) framework is harmonised with global standards of insurance capital and is more responsive to risks (Chen and Fishbaum, 2019). Chen and Fishbaum (2019) state that while a majority of the Asian countries have moved to a risk-based capital regime for insurance, the capital regime in India is still a laggard in this process. To upgrade its solvency structure, the IRDAI in 2017 launched a report on the RBC approach and market consistent valuation of liabilities (Chen and Fishbaum, 2019).

However, before such a shift is implemented, there are a few considerations to be taken into account. Prior to the implementation of the said capital standard, the precarious state of public sector general insurers' finances should be tackled (Chen and Fishbaum, 2019). Moreover, since India is moving in the direction of enforcing IFRS 17 and the migration to a new capital regime will require considerable resources, the best way to move ahead needs to be thought through (Chen and Fishbaum, 2019). Furthermore, Chen and Fishbaum (2019) indicate that the new regime should find the right mix between the growth of the insurance industry and safeguarding the policyholders' interests.

Another area that necessitates regulatory scrutiny is that of application of technology in insurance. According to the OECD (2017), "The insurance sector is no exception to such developments, with possibilities of new methods of service provision as well as greater opportunities for data collection and fraud detection that can lead to better risk identification and mitigation measures, which are being referred to as "InsurTech"." The benefits of these technological advancements are numerous. By making the claim process simpler and more comprehensible, and tailor-making insurance products, the safety net of insurance can be widened (OECD, 2017). These innovations are creatively disrupting the traditional insurance industry. However, it is imperative to supervise such innovations.

For bolstering innovation in the insurance sector in India, the IRDAI put out a regulatory sandbox.[26] [27] In the context of a regulatory sandbox, OECD (2017) points out that it is important to identify and comprehend when the technology will be considered lucrative and eligible for progressing to a scalable level, and how to advance from the special regulatory environment to the standard one (OECD, 2017). Due to the feeble distribution network of insurance in emerging markets, technology and innovation are anticipated to have the maximum impact

[26] Under the regulatory sandbox approach, an area where insurance technology can be assessed and tested in a regulatory environment different from the standard environment is constructed (OECD, 2017).

[27] https://www.irdai.gov.in/ADMINCMS/cms/frmGeneral_Layout.aspx?page=PageNo3880

(OECD, 2017). In this context, the Indian insurance market can gain massively from the right use of technology and innovation, given the predominance of traditional distributional channels. However, a comprehensive framework will have to be created for the Indian insurance sector in keeping with the upcoming challenges.

6.10 Issues pertaining to crop insurance

Although declining in importance, agriculture is still the primary sector of the Indian economy and agricultural production is heavily dependent on external factors such as climate. Given the global deterioration of climate, the variation in agriculture performance will only increase in future. Unfortunately, climatic disasters are on the rise in India. India ranks very high in the vulnerability index. Based on weather-related loss events in 2017 and 1998 to 2017, India's rank is 14 among 181 countries (Eckstein et al., 2018). All these factors warrant that the success of the insurance sector will be a key factor if India wants to fulfil its vision of growth.

Given the special nature of the sector, any kind of agriculture insurance does not just support the farming community against weather and climate related risks; it also protects the national economy through forward and backward linkages. Indian agriculture is subject to weather conditions and natural disasters. In India, the government supports public sector insurance companies by: a) bearing fully or partly the cost of administration; b) sharing a part of the indemnity, or paying a part of the premium to enable the farmers to buy insurance (Raju and Chand, 2008). There are doubts among experts regarding the co-existence of state-supported public insurers and private agriculture insurance. Given the high level of subsidies and the state-monopolised administrative machinery, some fear that the private sector will be unable to compete with government insurance. Another view is that private insurance companies will be more effective than their public counterparts, with better and updated design, superior services, and a market-linked pricing framework, which will bring down the huge burden of subsidy in Indian agriculture. For a well-regulated and efficiently run insurance sector, co-existence of public and private agencies is necessary. The Planning Commission (2007) suggested following the US model of agriculture insurance model for such a framework, whereby premium rates are worked out through an exclusive technical agency. Private insurers can implement the product, supported by the same level of subsidy from the government. The government will regulate the allocation of specific crops and areas among the competing private insurers.

6.11 Other challenges

6.11.1 Low investment by insurers in bonds and mortgage-backed securities

One of the channels via which insurers stimulate growth is investments. They invest in government and corporate bonds through which they become an important source of finance to both these entities. The investment in corporate bonds by insurance companies and mutual funds in India is constrained by the prudential norms of investment, which stipulate that a maximum of 25 per cent of their portfolio is to be invested in bonds that are rated less than

'AA' (Ganguly, 2019). A large part of the investments of life insurers, general insurers, health insurers, and reinsurers in India is directed towards central and state government securities.

Another investment avenue for the insurers is mortgage-backed securities. This avenue allows these institutional investors with longer maturity liabilities to invest in mortgage loans. Partaking of other capital pools, such as mutual funds, insurance, pension funds, and individuals, is very insignificant in securitisation, especially mortgage-backed securitisation, wherein there is effectively no participation from the non-bank capital pools (RBI, 2019).

Mortgage-backed securities are a component of secondary mortgage markets in particular and mortgage markets in general. Mortgage loans account for a low share[28] of Indian households' total liabilities, whereas they are the largest liability of households in China, the US, the UK, and Australia (Household Finance Committee, 2017).[29] Moreover, mortgage penetration in Indian households is found to increase in tandem with the households' age, being very low in initial life even with high real estate holdings (Household Finance Committee, 2017).

6.11.2 Prevalence of traditional distribution channels

Diversity in distribution is seen of late, but the traditional distribution channels continue to prevail. New channels, including online and point of sales, are being developed with the support of regulations and guidelines introduced by the IRDAI; their market share is, however, insignificant (IMF, 2018). Enhancing distribution channels holds the key to unlocking growth in penetration and density rates in the Indian insurance sector.

India's insurance sector has the potential to grow further due to the underpenetrated nature of the market and low density. Demographic factors, coupled with increasing awareness and financial literacy, are likely to catalyse the growth of the sector. An enhanced regulatory regime that focuses on increasing insurance coverage will also help. In order to assist the development of the insurance sector in a more sustainable manner, an increasingly market-based environment will help in the medium term (IMF, 2017). The IRDAI should also review parts of its cross-border supervision, including its approach to Indian insurers with significant foreign operations (IMF, 2018).

The market for speciality risks such as natural catastrophes and cyber-related risks is largely underdeveloped. Though there is interest in underwriting cyber-related risks, the business is narrow as of now (IMF, 2018). Flood risk in India is quite pronounced and the frequency of weather events is increasing (IMF, 2018). The issue of poor drainage, among other things, is aggravating the situation (IMF, 2018). Insurance against catastrophes is very shallow in India. Insurance companies bore less than 10 per cent of the actual losses during the Kerala floods which were among the major global disaster events of 2018 (Ray et al., 2019). This necessitates an increasing role to be played by Indian insurance companies in adoption of alternate capital

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[28] Only 23 per cent of total liabilities are accounted for by mortgage loans in spite of the notable role of non-financial assets in the balance sheet of an Indian household (Household Finance Committee, 2017).

[29] Nearly 60 per cent of the total debt exposure is accounted for by mortgage holdings for the average household in these countries (Household Finance Committee, 2017).

and insurance-linked securities such as catastrophe bonds. An area of concern that arises here is the ability of insurers to efficiently price these risks. With the onset of new risks, new risk assessment models will also be need to be thought through, so as to best capitalise upon these opportunities.

7. Conclusion

This paper has assessed the evolution and growth of India's insurance sector and identified the challenges that have stymied its development. Having grown and evolved to a great degree, it has emerged from a public monopoly and restricted market to a competitive and open one. Even after implementing a gamut of reform measures, the Indian insurance sector still has a long way to go in order to be comparable to other advanced economies' insurance sectors. India's share in the global insurance market is abysmally low. For increasing its share globally, the underlying challenges will have to be addressed.

India's economic growth depends on how shock-absorbent India's economy is. Both financial and climatic shocks (which are on the rise, given climate change) are important for India and having an efficient and stable insurance market in place will determine India's growth performance in both the short and long terms.

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Annexure

Annexure 1: Table 1A: Significant milestones in the regulatory evolution of India's insurance sector Pre-nationalisation

1818	*Establishment of Oriental Life Insurance Co. in Calcutta, an Indian enterprise by Mr. Bipin Behari Dasgupta, catered exclusively to the European community*
1870	British Insurance Act, Bombay Mutual Life Assurance Society
1907	Indian Mercantile Insurance Ltd, first company to transact all classes of general insurance business
1912	The Indian Life Insurance Companies Act and the Provident Fund Act
1928	Indian Insurance Companies Act
1938	Insurance Act, department of insurance under the authority of the Superintendent of Insurance was established for the administration of the Insurance Act.
Nationalisation	
1950	Insurance Amendment Act; abolishment of Principal Agencies
1956	LIC of India; nationalisation of life insurance
1957	General Insurance Council; code of conduct for ensuring fair conduct and sound business practices
1968	Amendment of Insurance Act; regulate investments and set minimum solvency margins; Tariff Advisory Committee
1972	Nationalisation of non-life insurance; General Insurance Business (Nationalisation) Act; general insurance business was nationalised
Privatisation	
1993	Malhotra committee; recommendations for reforms
1996	Interim Insurance Regulatory Authority (IRA)
1999	The Insurance Regulatory and Development Authority (IRDA) was constituted as an autonomous body to regulate and develop the insurance industry
2000	IRDA bill; Entry opened for private players; Foreign companies were allowed ownership of up to 26 per cent; subsidiaries of the General Insurance Corporation of India were restructured as independent companies
2015	Insurance Laws (Amendment) Act; foreign investment cap in the insurance sector to 49 per cent though investments exceeding 26 per cent would have to follow the approval route; permitting overseas reinsurers to open branch offices
2016	Foreign investment allowed in the insurance and pension sectors through the automatic route up to 49 per cent

Source: https://www.irdai.gov.in/ADMINCMS/cms/NormalData_Layout.aspx?page=PageNo4&mid=2; https://www.insurancefunda.in/history-of-insurance-in-india/; (Rao and Dhar, 2018)

Annexure 2: GIFT and Reinsurance

Gujarat International Finance Tec-City (GIFT City) is India's first operational smart city and international financial services centre. The development of IFSC GIFT City in Gujarat is also a step towards the creation of a reinsurance hub. Many insurance and reinsurance firms have shown interest in setting up operations in the GIFT City, which demonstrates its potential to compete with and match the global financial centres in Singapore, London, Tokyo and other cities. The IRDAI has issued regulations for undertaking offshore insurance business from GIFT IFSC. Foreign insurers have been permitted to open IFSC insurance offices at GIFT IFSC, which has been notified as a foreign territory by the Government of India. Foreign direct insurers (life, non-life, and general) and foreign reinsurers are permitted to open office to undertake dollar-denominated business from within the IFSC in GIFT SEZ, all other SEZs in India, and foreign countries (including foreign to foreign, India to foreign, and foreign to India). It would also be allowed to undertake domestic insurance and reinsurance business in line with the provisions of IRDA regulations.

Source: IRDAI Annual Report 2017-18, (2018 Insurance industry report).

Annexure 3: Regression exercise 1

The following equations[30] have been fitted for determining the relationship between insurance and economic growth using insurance penetration (total, life, and non-life) as a proxy for insurance and per capita Gross Domestic Product (GDP) at constant local currency unit (LCU) as a proxy for economic growth.

Equations estimated with liberalisation dummy:

$$TIP_t = \beta_0 + \beta_1 PCGDP_t + \beta_2 PCGDP_t^2 + \beta_3 LD_t + \beta_4 Z_t + \varepsilon_t$$

$$LIP_t = \gamma_0 + \gamma_1 PCGDP_t + \gamma_2 PCGDP_t^2 + \gamma_3 LD_t + \gamma_4 Z_t + \epsilon_t$$

$$NLIP_t = \delta_0 + \delta_1 PCGDP_t + \delta_2 LD_t + \delta_3 Z_t + \mu_t$$

Equations estimated with demonetisation dummy:

$$TIP_t = \alpha_0 + \alpha_1 PCGDP_t + \alpha_2 PCGDP_t^2 + \alpha_3 DD_t + \alpha_4 \varphi_t + \rho_t$$

$$LIP_t = \omega_0 + \omega_1 PCGDP_t + \omega_2 PCGDP_t^2 + \omega_3 DD_t + \omega_4 \varphi_t + \lambda_t$$

$$NLIP_t = \tau_0 + \tau_1 PCGDP_t + \tau_2 DD_t + \tau_3 \varphi_t + \eta_t$$

30 The square of per capita GDP has not been introduced in the equations with non-life penetration as a dependent variable, as the scatter between the two variables displayed a linear relationship, whereas the motivation for putting it as an independent variable in other equations is a result of the scatter plots displaying a quadratic relationship between total insurance penetration and per capita GDP and life insurance penetration and per capita GDP.

Table 3A: Variables of the regression exercise

Notation	Variable
TIP_t	Total insurance penetration
LIP_t	Life insurance penetration
$NLIP_t$	Non-life insurance penetration
$PCGDP_t$	Per capita GDP (constant LCU)
$PCGDP_t^2$	Square of per capita GDP (constant LCU)
LD_t	Liberalisation year dummy (1 = 2015 and onwards, 0 = otherwise)[31]
Z_t	Set of control variables (Lending rates, savings, inflation and growth rate of money supply as a percentage of GDP)
DD_t	Demonetisation dummy (1 = 2016 and onwards, 0 = otherwise)[32]
φ_t	Set of control variables (Lending rates and inflation)
$\varepsilon_t, \epsilon_t, \mu_t, \rho_t, \lambda_t, \eta_t$	Error terms

Table 3B: Results of the regression with the liberalisation dummy

Independent variables	**Equation 1 Dependent variable: TIP**	**Equation 2 Dependent variable: LIP**	**Equation 3 Dependent variable: NLIP**
Constant	-11.16 (-4.42)***	-11.62 (-4.72)***	0.52 (3.27)***
Per capita GDP (constant LCU)	0.00 (3.73)***	0.00 (3.86)***	0.00 (3.26)***
Square of per capita GDP (constant LCU)	-0.00 (-3.71)***	-0.00 (-3.89)***	-
Liberalisation dummy	1.38 (1.97)*	1.45 (2.13)**	-0.05 (-0.83)
Lending rates	0.06 (0.79)	0.07 (0.91)	-0.01 (-1.42)
Savings	0.07 (1.16)	0.06 (1.06)	-0.00 (-0.58)
Inflation	0.09 (2.01)*	0.09 (2.07)*	0.00 (1.08)
Growth rate of money supply as a percentage of GDP	0.04 (1.98)*	0.04 (1.89)*	0.00 (2.19)**
Adjusted R^2	0.89	0.88	0.78
Number of observations	27	27	27

Note: * significance at 10%, **significance at 5%, *** significance at 1%

31 FDI cap was raised from 26 per cent to 49 per cent in 2015.
32 Demonetisation of high-denomination currency notes took place in 2016.

Table 3C: Results of the regression with the demonetisation dummy

Independent variables	Equation 1 Dependent variable: TIP	Equation 2 Dependent variable: LIP	Equation 3 Dependent variable: NLIP
Constant	-10.51 (-4.18)***	-10.87 (-4.54)***	0.45 (3.32)***
Per capita GDP (constant LCU)	0.00 (6.81)***	0.00 (7.04)***	0.00 (3.79)***
Square of per capita GDP (constant LCU)	-0.00 (-6.24)***	-0.00 (-6.53)***	-
Demonetisation dummy	1.64 (2.26)**	1.61 (2.34)**	0.05 (0.83)
Lending rates	0.14 (1.60)	0.14 (1.68)	-0.00 (-0.59)
Inflation	0.03 (0.83)	0.03 (0.95)	-0.00 (-0.12)
Adjusted R^2	0.84	0.84	0.79
Number of observations	28	28	28

Note: * significance at 10%, **significance at 5%, *** significance at 1%

Data for total, life, and non-life penetration rates has been sourced from the IRDAI Annual report 2017-18 and an RBI document.[33] Money supply data has been gathered from various RBI bulletins and the data for the remaining variables has been taken from World Bank Development Indicators.

Annexure 4: Regression exercise 2

The following equations[34] have been estimated for determining the relationship between insurance penetration and equity share capital.

$$TIP_t = a_0 + a_1 TIESC_t + a_2 TIESC_t^2 + a_3 LD_t + a_4 TIESC * LD_t + a_5 W_t + \zeta_t$$

$$LIP_t = b_0 + b_1 LIESC_t + b_2 LIESC_t^2 + b_3 LD_t + b_4 LIESC * LD_t + b_5 W_t + \upsilon_t$$

$$NLIP_t = c_0 + c_1 NLIESC_t + c_2 LD_t + c_3 TIESC * LD_t + c_4 W_t + \xi_t$$

33 http://rbidocs.rbi.org.in/rdocs/Publications/Docs/33958.doc

34 The square of non-life equity share capital has not been introduced in the equation with non-life penetration as a dependent variable, since the scatter plot between the two variables displayed a linear relationship, whereas the motivation for putting it as an independent variable in other equations is a result of the scatter plots displaying a quadratic relationship between total insurance penetration and total equity share capital and life insurance penetration and life insurance capital.

Table 4A: Variables of the regression exercise

Notation	Variable
TIP_t	Total insurance penetration
LIP_t	Life insurance penetration
$NLIP_t$	Non-life insurance penetration
$TIESC_t$	Equity share capital (Total insurance)
$TIESC_t^2$	Square of equity share capital (Total insurance)
$LIESC_t$	Equity share capital (Life insurance)
$LIESC_t^2$	Square of equity share capital (Life insurance)
$NLIESC_t$	Equity share capital (Non-life insurance)
LD_t	Liberalisation year dummy (1 = 2015 and onwards, 0 = otherwise)[35]
W_t	Set of control variables (Lending rates, savings, and inflation)
$\zeta_t, \upsilon_t, \xi_t$	Error terms

Table 4B: Results of the regression

Independent variables	**Equation 1 Dependent variable: TIP**	**Equation 2 Dependent variable: LIP**	**Equation 3 Dependent variable: NLIP**
Constant	1.34 (0.42)	5.88 (1.35)	0.91 (4.51)***
Equity share capital (Total insurance)	0.00 (1.61)	-	-
Square of equity share capital (Total insurance)	-0.00 (-1.83)*	-	-
Equity share capital (Life insurance)	-	0.00 (2.37)**	-
Square of equity share capital (Life insurance)	-	-0.00 (-2.57)**	-
Equity share capital (Non-life insurance)	-	-	0.00 (2.64)**
Liberalisation dummy	-10.85 (-2.45)**	-11.76 (-0.90)	-0.44 (-2.46)**
Interaction term of equity share capital (Total insurance) and Liberalisation dummy	0.00 (2.70)**	-	-
Interaction term of equity share capital (Life insurance) and Liberalisation dummy	-	0.00 (0.93)	-
Interaction term of equity share capital (Non-life insurance) and Liberalisation dummy	-	-	0.00 (2.32)**
Lending rates	-0.01 (-0.09)	-0.18 (-1.14)	-0.02 (-1.72)
Savings	0.01 (0.14)	-0.12 (-1.07)	-0.00 (-0.69)
Inflation	0.14 (1.80)	0.15 (2.25)**	-0.00 (-0.05)
Adjusted R^2	0.79	0.83	0.83
Number of observations	18	18	18

Note: * significance at 10%, **significance at 5%, *** significance at 1%

[35] FDI cap was raised from 26 per cent to 49 per cent in 2015.

Data for total, life, and non-life penetration rates has been sourced from IRDAI Annual report 2018-19. Equity share capital (total, life, and non-life) has been gathered from various issues of IRDAI Handbook on Indian Insurance Statistics and the data for the remaining variables has been taken from World Bank Development Indicators.

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