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# ANALYSIS OF GROWTH OF LIFE INSURANCE INDUSTRY IN INDIA – A COMPARATIVE STUDY OF PUBLIC AND PRIVATE SECTOR

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## ABSTRACT

*The paradigm shift has been witnessed in the Indian Insurance Industry over the last decade. In this study an attempt has been made to analyze the growth of life insurance industry in India in terms of some important components. Comprehensive data available through annual reports of IRDA has been used for this purpose. The estimated values of first year premium and total premium of public and private companies for the year 2020 have been obtained by using the method of least squares and linear trend analysis. The study indicates that liberalization has had a positive influence on the insurance market of India and the First Year and Total Premiums of life insurers are expected to steadily rise and the LIC will continue to be the market leader.*

**Key words:** Indian Life Insurance Industry, Trend, Least Square Regression Model (LSRM), Public and Private Insurance Companies, Total Premium, First Year Premium (FYP).

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## 1. INTRODUCTION

The Indian insurance industry has completed a full circle now. Beginning with a competitive industry full of foreign insurers, the Indian insurance industry led to nationalization of the industry in 1956, wiping out the foreign insurers. Once again it is back to the stage of open competition after liberalization of the industry through the enactment of IRDA Act 1999 and formation of the Insurance Regulatory and Development Authority (IRDA). The Insurance

Laws (Amendment) Bill, which seeks to increase foreign direct investment (FDI) in the sector from 26 percent to 49 percent, has received clearance from the government, with the Cabinet approving an ordinance to this effect.

As of March 2018, there are 68 insurance companies operating in India; of these, 24 are life insurance companies, 27 are general insurance companies, 6 are independent health insurance companies specializing in health insurance business, and 11 are reinsurance companies. Including foreign reinsurance companies and Lloyds India.

Of the 68 insurance companies currently operating, 8 are in the public sector and the remaining 60 are in the private sector. There are two professional insurance companies in the public sector, namely ECGC and AIC, one life insurance company (ie LIC of India), four general insurance companies and another reinsurance company (GIC Re). The private sector includes 23 life insurance companies, 21 general insurance companies, 6 independent health insurance companies and 10 reinsurance companies, including foreign reinsurance companies and Lloyds India.

## 2. REVIEW OF LITERATURE

Several studies have been conducted in India to examine the relationship between the performance of insurance industry and economic development.

Kaushal and Ghosh (2018), findings clearly indicate long run relationship between economic growth and the development of banking and insurance sector while the causality results show demand following relationship in the complete period where as there is bi-directional causality in the post liberalized period from insurance to economic growth.

Parida, Tapas Kumar and Acharya, Debashis (2016) in their book tracks the development of the Indian life insurance industry since its establishment and analyzes their performance, using different business indicators over the years. The evolution and change characteristics of the Indian insurance industry are analyzed in three stages: the first stage is from 1818 to 1956, the second stage is from 1956 to 2000 (known as the period of nationalization), and the second stage is from 2000 onwards (post liberalization reform). The book also uses data envelopment analysis (DEA) to measure the relative efficiency and productivity of the Indian life insurance industry in the post-reform period. Although the total premiums compound annual growth rate (CAGR) of the life insurance industry during the post-reform period was 17% and the compound growth rate of new business premium income was 21%, insurance companies continued to work hard to solve the profitability problem.

Nagaraja (2015) in his study tried to vindicate the relationship between the performance of insurance industry and economic development. The study showed a negative trend in the growth rate in terms of number of new policies issued and the insurance premium. Reasons and contributing factors for this state of affairs is highly essential. The document mainly deals with these aspects of the insurance industry, and compares the public and private sectors of the life and non-life insurance industries.

Arif (2015) studied the trends and pattern of life insurance industry in India. The study pertained to a decade from 2003-04 to 2012-13. The study found that after privatization the life insurance industry showed an increasing trend in terms of total premium, number of new policies issued and number of offices opened. but in the life insurance industry showed the decreasing trends.

Anju Verma and Renu Bala (2013) in their article “The relationship between Life Insurance and Economic growth: Evidence from India” examines the relationship between the life insurance and economic growth in India. The total life insurance premium (TLIP), and total life insurance investment (TLII), are used as proxy for life insurance and Gross Domestic Product

(GDP) is used for the economic growth. The findings of the study are that life insurance significantly influences the economic growth in India.

Venkatesh M (2013) analyzed the history of insurance and analyzed the life insurance industry in India in his article "Analysis of Indian Insurance Industry Trends". The study shows that the Indian insurance industry has grown rapidly during the year, and the trend percentage is also increasing. The author also pays attention to insurance density and points out that although insurance growth rates are relatively high, insurance density in India is lower than global density.

Negi and Singh (2012) found five important factors that influence the purchase of life insurance products in their research, namely: product quality, brand image, service quality, customer friendliness, brand loyalty and commitment. Product quality and brand image are the most important ranking factors, while brand loyalty is the least important factor affecting the purchase of life insurance products. The study observed that these factors vary significantly across various demographic characteristics of the respondents.

Singh and Negi (2011) analyzed the growth of the life insurance industry in Uttarakhand during the post-liberalization period in their research paper "Insurance Service Growth in the Himalayas of India". It analyzed the growth of premium income, the issuance of new policies, the number of offices and the profitability of insurance companies in the state. The expected value of the first-year premium for LIC and private insurance companies is obtained using 2016 linear trend analysis.

Shendey BK and Neelkant Rao (2010) pointed out in an article titled "Trends in India's Insurance Industry Since the 21st Century" that the privatization of the insurance industry promotes the growth of the industry and overcomes the monopoly of the insurance industry. LIC. Since the liberalization of the insurance industry, total life insurance premiums have tripled. He also said that life insurance companies continue to work on product innovation and new plans to expand their policy holder base.

Basavanthappa C and Rajanalkar L (2009) in their "Life Insurance Company Performance: A Comparative Study" article showed that private insurance companies performed well during the year. The market share of private life insurance companies increased during the year, which gave them many opportunities. In this field, fierce competition is beneficial to everyone. In order to gain a competitive advantage over competitors, the company provides innovative products and various conveniences for customers.

Pasricha and Arora (2009) in their paper studied the recent scenario of life insurance industry in India in the light of various changes like liberalization, privatization, and globalization. The study pertained to the period 2000-01 to 2006-07. The study found LIC registered a growth of 0.6 per cent while private insurers registered a growth rate of 92.4 percent in terms of new offices opened. The growth of premium income of LIC (21.3%) was also found to be lesser than private players (250.4%).

Sumninder Kaur Bawa (2007) presents an in depth analysis of LIC's performance in respect of various indicators since the policy of liberalization was introduced in the country. The productivity analysis of the Corporation has also been carried out using different parameters. The portfolio management of the Corporation has been explained in detail in respect of loans and investments. The book also identifies key determinants of the performance of LIC and makes recommendations for improving it.

Shilpa Rastogi and Runa Sarkar (2007), in their study "Enhancing Competitiveness: The Case of the Indian Life Insurance Industry", identified the reasons and goals of the industry's reforms in 2000, and concluded: In the past ten years in India, the government's hybrid model of combining privatization and supervision has achieved positive results.

Tapen Sinha (2005) examines the regulatory regime that existed before independence. This paper discusses the importance of rural sector and possible impact of privatization on it. He concluded that the definite signal in the insurance business is the integration of different parts of the financial sector. IRDA took a slow approach. He has always been very cautious in licensing. Too many regulations stifle incentives for new immigrants, and two related regulations can lead to failure and fraud, leading to nationalization.

Nalini Prava Tripathy and Prabir Pal (2005) outline the strategies to be adopted for successful marketing of insurance products. They present the need of a new legislative framework in the changed scenario of the financial market.

Sudarsan Reddy, Mohan Reddy and Sivarami Reddy (2004) in their study “Liberalization of Insurance: Opportunities and Challenges”, observe that in liberalized environment, nationalized insurance companies will continue to maintain their dominant position in the market, at least in the foreseeable future. However, given the enormous potential of the Indian market, it is for the insurers to come out with new products, better packaging and improved customer service. Product innovation and channel diversification will gain momentum, in line with global trend of financial service convergence.

Kumar (2003) in his article titled, 'Development of Insurance in India' had emphasized on the various issues relating to insurance business in India like liberalisation, privatisation, regulator's issues and future possibilities, etc. Potential private participants want to score points for customer service, speed, and flexibility. Your opinions will bring customers better products and better choices. As witnessed by countries that have implemented liberalization in other countries in recent years, nationalized participants will continue to occupy a solid market share, but there will be enough business to benefit new entrants.

Samuel (2003) tracked the development of the Indian insurance market. This article covers the theoretical aspects of Indian insurance, historical perspectives, life insurance and non-life insurance business and investment, and the penetration rate assessment of Indian insurance compared to world standards. As private players enter the insurance industry, competition will intensify and the overall functions of the insurance industry will improve. The liberalization process initiated by the insurance industry is expected to lead to better integration of financial markets and promote the country's financial development.

In his article, Ayyar (2000) studied important issues related to entry into new industries for low-income countries and insureds. New entrants in this field conduct technical cooperation with companies headquartered in the United States, Britain, Australia and other countries/regions. They will bring new insurance products and management procedures. It is like opening all windows and allowing wind to enter from all directions. Therefore, India's life insurance business is expected to benefit and grow steadily. Competition will take the form of new products and aggressive marketing strategies from other insurance companies.

### **3. OBJECTIVES OF THE STUDY**

1. To analyze the growth of life insurance industry in India 2001-2018.
2. To estimate a trend for growth of the LIC and private insurers by the end of the year 2020.

#### 4. RESEARCH METHODOLOGY

The research design formed for this research study is descriptive in nature. The period of study for the analysis of life insurance industry is of ten years from 2009-10 to 2017-18. The data collected and used in this study are secondary, obtained from secondary sources such as textbooks, national and international research papers, articles, journals, and to a large extent obtained from IRDA's annual reports. The statistical tool used in this study is regression (least squares method), and the expected value is obtained through a linear trend. The factors studied in detail include First Year Premium (here after, FYP), Total Premium, market share, new policies issued, profitability of LIC and Private Companies.

#### 5. OVERVIEW OF INDIAN INSURANCE INDUSTRY 2001-2018

At the time of liberalization, LIC was the only insurer in life insurance market. By the end of March 2016, there were twenty-four market players in life insurance industry. While there were 5373 offices of the life insurance industry by March 2007, the number has increased to 12018 by March 2010 and then decreased to 11071 offices by the end of 2016. During the period, while the number of offices of LIC has increased from 2301 to 4892, the offices of the private sector players increased from a mere 3072 in 2007 to 6179 in 2016.

##### 5.1. Growth in Premium

In the 2017-18 fiscal year, the premium income of the life insurance industry was Rs 458,809.44 crore, compared to Rs 418,476.62 crore in the previous fiscal year, an increase of 9.64% (14.04% over the previous year). The premium income of private insurance companies increased by 19.15% (17.40% in the same period last year), while LIC increased by 5.90% (12, 78% in the previous year).

Although renewal premiums accounted for 57.68% of the total premiums of life insurance companies (58.13% last year), new business premiums accounted for the remaining 42.32% (41.87% this year). During 2017-18, renewal premiums increased by 8.79% (previous year: 6.62%). The premium income of the new business increased by 10.82%, compared with an increase of 26.26% in the same period last year.

Table 1 shows the growth in the first year premium of both LIC and private companies. The immense growth in first year premium of LIC from Rs.9700.98 crore in 2000-01 to Rs. 134671.7 crore in 2017-18 is visible and so is the growth of the same for private companies from a meager Rs.6.45 crore in 2000-01 to Rs.59482.21 crore in 2017-18 which totaled to Rs.194153.9 crore for the industry in 2017-18.

**Table 1** First Year Life Insurance Premium (in Rs. Crore)

Year	LIC	Private Sector	Total
2000-01	9700.98	6.45	9709.4
2001-02	19588.77	268.51	19959.21
2002-03	15976.76	965.69	16924.01
2003-04	17347.62	2440.71	19796.91
2004-05	20653.06	5564.57	26236.69
2005-06	28515.87	10269.67	38823.61
2006-07	56223.56	19425.65	75746.38
2007-08	59996.57	33715.95	93719.23
2008-09	53179.08	33827.15	86994.87
2009-10	71521.9	38372.12	109928.5
2010-11	87012.35	39385.84	126398.2
2011-12	81862.25	32079.92	113942.2
2012-13	76611.5	30749.58	107361.1
2013-14	90808.79	29510.87	120319.7
2014-15	78509.72	34821.81	113329.5
2015-16	97891.51	40970.8	138862.3
2016-17	124583.3	50619.37	175202.7
2017-18	134671.7	59482.21	194153.9

The Table 2 below shows the growth in total premium for both LIC and private insurers in India. The total premium for LIC increased from Rs.34892.02 crore in 2000-01 to Rs.236942.30 crore in 2013-14 registering an increase of 13.48% over the previous year. On the other hand, total insurance premium for private insurers increased to Rs.77,340.90 crore which shows a negative rate of growth of 1.35% over the previous year. This brought the industry total to Rs.3,14,283.20 crore with a growth rate of 9.43% while the growth during the previous financial year 2012-13 was only 0.05% which showed positive growth rate for LIC but negative growth rate for the private players.

**Table 2** Total Life Insurance Premium (In Rs. Crore)

Insurer	LIC	Growth Rate	Private Total	Growth Rate	Industry	Growth Rate
2000-01	34892.02		6.45		34898.47	
2001-02	49821.91	42.79	272.55	4125.58	50137.25	43.67
2002-03	54628.49	9.65	1119.06	310.59	55757.2	11.21
2003-04	63533.43	16.3	3120.33	178.83	66670.05	19.57
2004-05	75127.29	18.25	7727.51	147.65	82873.05	24.3
2005-06	90792.22	20.85	15083.54	95.19	105896.6	27.78
2006-07	127822.8	40.79	28253	87.31	156116.6	47.42
2007-08	149790	17.19	51561.42	82.5	201368.6	28.99
2008-09	157288	5.01	64503.22	25.1	221796.3	10.14
2009-10	186077.3	18.3	79373.06	23.05	265468.7	19.69
2010-11	203473.4	9.35	88165.24	11.08	291638.6	9.86
2011-12	202889.3	-0.29	89182.83	1.15	292072.1	0.15
2012-13	208803.6	2.92	78398.91	-12.09	287202.5	-1.67
2013-14	236942.3	13.48	77340.9	-1.35	314283.2	9.43
2014-15	239667.7	1.15	88434.36	14.32	328102	4.39
2015-16	266444.2	11.17	100499	13.64	366943.2	11.84
2016-17	300487.4	-12.78	117989.3	-17.4	418476.6	-14.04
2017-18	318223.2	-5.9	140586.2	-19.15	458809.4	-9.64

Data Source: IRDA Annual Reports of various years

## 5.2. Market Share

Based on total premium income, LIC's market share increased from 72.70 percent in 2012-13 to 75.39 percent in 2013-14. But, the market share of private insurers had dropped from 27.30 percent in 2012-13 to 24.61 percent in 2013-14.

In 2013-14, the market share of private insurance companies in first-year premiums was 24.53% (28.64% in 2012-13). The proportion of LIC is 75.47% (71.36% in 2012-13). However, in the renewal premiums, LIC's share in 2013-14 was 75.34% (2012-13: 73.5%), and its share was 24.66% (2012-13: 26.50%) 2012-13). Based on total premium income, the market share of LIC dropped from 71.81% in 2016-17 to 69.36% in 2017-18. The market share of private insurance companies increased from 28.19% in 2016-17 to 30.64% in 2017-18 as is shown in the Table No.3 below.

**Table 3** Market Share of Life Insurer (in percentage)

Insurers/ Year	FIRST YEAR PREMIUM			RENEWAL PREMIUM			TOTAL PREMIUM		
	LIC	Pvt.	Total	LIC	Pvt.	Total	LIC	Pvt.	Total
2000-01	99.93	0.07	100	100	--	100	99.98	0.02	100
2001-02	98.65	1.35	100	99.99	0.1	100	99.46	0.54	100
2002-03	94.3	5.7	100	99.6	0.4	100	97.99	2.01	100
2003-04	87.44	12.56	100	98.55	1.45	100	95.29	4.71	100
2004-05	78.78	21.22	100	96.18	3.82	100	90.67	9.33	100
2005-06	73.52	26.48	100	92.82	7.18	100	85.75	14.25	100
2006-07	74.35	25.65	100	89.03	10.97	100	81.92	18.08	100
2007-08	64.02	35.98	100	83.42	16.58	100	74.39	25.61	100
2008-09	61.12	38.88	100	77.24	22.76	100	70.92	29.08	100
2009-10	65.08	34.92	100	73.64	26.36	100	70.1	29.9	100
2010-11	68.85	31.15	100	70.49	26.36	100	69.78	30.22	100
2011-12	71.85	28.15	100	69.91	30.09	100	70.68	29.32	100
2012-13	71.36	28.64	100	73.5	26.5	100	72.7	27.3	100
2013-14	75.47	24.53	100	75.34	24.66	100	75.39	24.61	100
2014-15	69.27	30.73	100	75.04	24.96	100	73.05	26.95	100
2015-16	70.5	29.5	100	73.09	26.1	100	72.61	27.39	100
2016-17	71.11	28.89	100	72.31	27.69	100	71.81	28.19	100
2017-18	69.36	30.64	100	69.35	30.65	100	69.36	30.64	100

Data Source: IRDA Annual Reports of various years

### 5.3. New Policies Issued

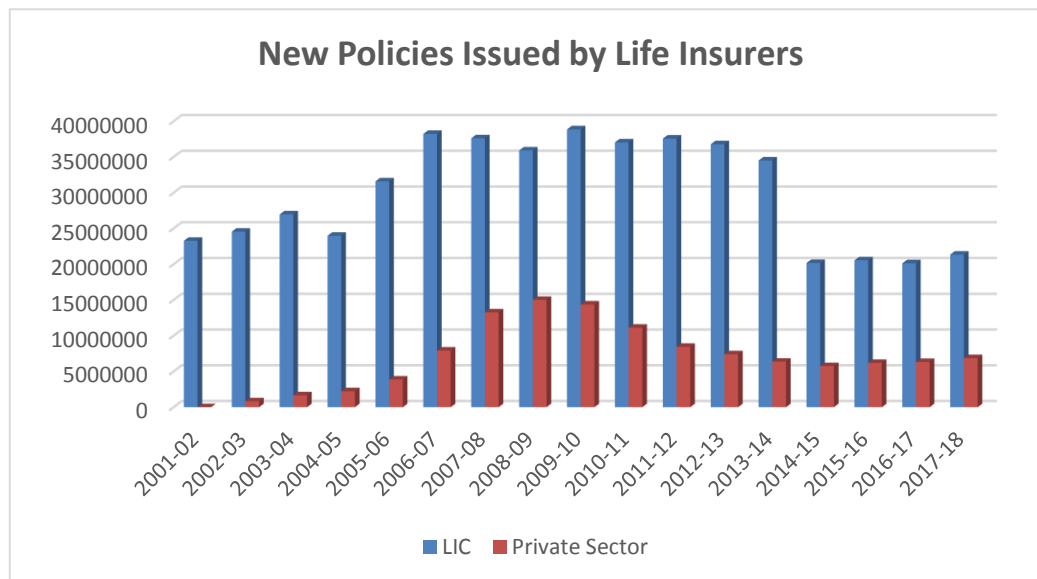
During 2013-14, life insurers issued 408.72 lakh new policies, out of which, LIC issued 345.12 lakh policies and the private life insurers issued 63.60 lakh policies. While LIC reported a decline of 6.17 percent (against a growth of 2.88 percent in 2012-13) in the number of policies issued over the previous year, the private sector insurers continued the previous years' experience of significant decline and reported a dip of 14.11 percent (against a decline of 12.88 percent increase in 2012-13). Overall, the industry witnessed a 7.50 percent decline (against a decline of 0.01 percent in 2012-13) in the number of new policies issued. During 2017-18, life insurance companies issued 28.197 million new personal insurance policies, of which LIC issued 2133.8 trillion insurance policies (accounting for 75.7% of new policies issued) and private life insurance companies issued 68 insurance policies. A total of 5.9 million policies (accounting for 24.3% of the total number of newly issued policies). The number of new policies issued by the private sector increased by 8.47% compared to last year, while LIC increased by 5.99% as shown in the Table 4 below.

This shows that the negative trends are not getting arrested and overall growth of business is getting affected. Table 4 and figure 1 below shows that LIC has continuously led the industry in number of new policies issued which has culminated into a good rate of growth of policies issued in the country. Figure 1 below shows linear uptrend in LIC, private sector insurance and overall insurance industry for new policies issued. But this trend is high for LIC.

**Table 4** New Policies Issued by Life Insurers (in numbers)

Year	LIC	Growth (in %)	Private Sector	Growth (in %)	Total	Growth (in %)
2000-01	19673000				19673000	
2001-02	23275476	18.31			23275494	18.31
2002-03	24545580	5.46	825094		25370674	9
2003-04	26968069	9.87	1658847	101.05	28626916	12.83
2004-05	23978123	-11.09	2233075	34.62	26211198	-8.44
2005-06	31590707	31.75	3871410	73.37	35462117	35.29
2006-07	38229292	21.01	7922274	104.64	46151566	30.14
2007-08	37612599	-1.61	13261558	67.4	50874157	10.23
2008-09	35912667	-4.52	15010710	13.19	50923377	0.1
2009-10	38863327	8.22	14362117	-4.32	53225444	4.52
2010-11	37038000	-4.7	11114000	-22.62	48152000	-9.53
2011-12	37571000	1.44	8442000	-24.04	44193000	-8.22
2012-13	36782000	-2.1	7405000	-12.28	44187000	-0.01
2013-14	34512000	-6.17	6360000	-14.11	40872000	-7.5
2014-15	20171000	-41.55	5737000	-9.79	25908000	-36.61
2015-16	20547000	1.86	6192000	7.92	26738000	3.2
2016-17	20132000	-2.02	6324000	2.13	26456000	5.99
2017-18	21338000	5.99	6859000	8.47	28197000	8.47

Data Source: IRDA Annual Reports of various years



**Figure 1** New Policies Issued 2001-02 to 2017-18

## 6. DATA ANALYSIS AND INTERPRETATION

Data collected from the secondary source, has been properly arranged, and interpretation of the analysis is given in the following lines:



### 6.1. Estimation of First Year Premium

Estimation of First Year Premium of LIC and Private Companies has been done using the method of Least Squares Method. Following two equations of Least Square have been used :

$$\sum Y = NA + B\sum X \quad (i)$$

$$\sum XY = A\sum X + B\sum X^2 \quad (ii)$$

Assuming  $\sum X = 0$ , the above two equations have been reduced to the following two equations :

$$A = \sum Y / N$$

$B = \sum XY / \sum X^2$ , and value of A and B have been derived from the calculation given in following Table 5 for LIC and Table 6 for private insurance companies.

**Table 5** Estimation of First Year Premium of LIC

Year	First Year Premium (Y)	2 x Time Deviation from 2009.5 (X)	$X^2$	XY
2001	9700.98	-17	289	-164916.66
2002	19588.77	-15	225	-145514.7
2003	15976.76	-13	169	-254654.01
2004	17347.62	-11	121	-175744.36
2005	20653.06	-9	81	-156128.58
2006	28515.87	-7	49	-144571.42
2007	56223.56	-5	25	-142579.35
2008	59996.57	-3	9	-168670.68
2009	53179.08	-1	1	-59996.57
2010	71521.9	1	1	53179.08
2011	87012.35	3	9	214565.7
2012	81862.25	5	25	435061.75
2013	76611.5	7	49	573035.75
2014	90808.79	9	81	689503.5
2015	78507.72	11	121	998896.69
2016	97891.51	13	169	1020600.36
2017	124583.31	15	225	1468372.65
2018	134671.69	17	289	2289418.73
N=18	$\sum Y = 1124653.29$	$\sum X = 0$	$\sum X^2 = 1938$	$\sum XY = 6204887.17$

Calculation of the value of A and B by least square method:

$$A = \sum Y / N = 1124653.29 / 18 = 62480.74$$

$$B = \sum XY / \sum X^2 = 6204887.17 / 1938 = 3201.69$$

$$Y_{LFYP} = A + BX_{LFYP}$$

Putting the values, calculated above, in the above equation we get,

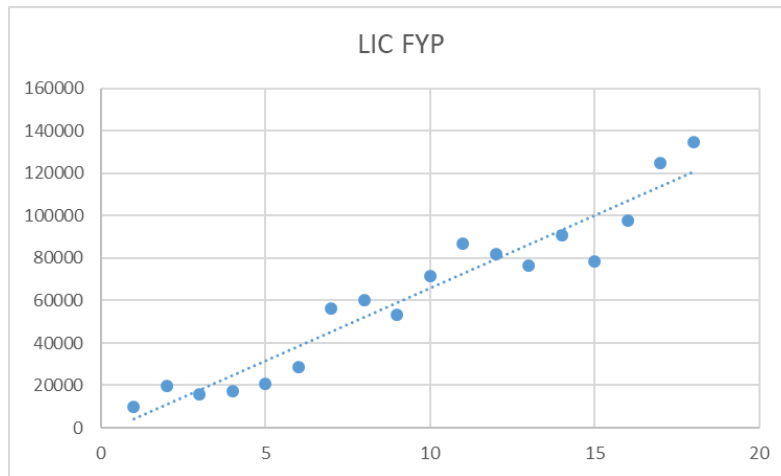
$$Y_{LFYP} = 62480.74 + 3201.69X_{LFYP}$$

Where,  $Y_{LFYP}$  is estimated value of first year premium for the financial year 2020 of LIC, which has been calculated in the following line and  $X_{LFYP}$  is the variable calculated for the model as 2 times of time deviation from the year 2008.5. Calculation has been shown in table 5.

$$Y_{LFYP2020} = 62480.74 + 3201.69 \{(2020-2009.5) * 2\}$$

$$Y_{LFYP2020} = 62480.74 + 67235.49$$

$$Y_{LFYP2020} = 129716.23 \text{ crore}$$



**Figure 2** First Year Premium of LIC

Fig. 2 above shows the trend line for the first year premium of LIC and the estimated growth in future.

## 6.2. Interpretation

Based on the intermediate years between 2009 and 2010, the linear function  $Y = A + BX$  (where A and B are constants) can be used to calculate the trend value for 2020. If these values are inserted into the trend line equation, the projected first year of LIC's business in India by 2020 will be Rs. 129,716.23 million. It shows that insurance business of LIC in India is in increasing trend.

**Table 6** Estimation of First Year Premium of Private Companies

Year	First Year Premium (Y)	2 x Time Deviation from 2009.5 (X)	X <sup>2</sup>	XY
2001	6.45	-17	289	-109.65
2002	268.51	-15	225	-4027.65
2003	965.69	-13	169	-12553.97
2004	2440.71	-11	121	-26847.81
2005	5564.57	-9	81	-50081.13
2006	10269.67	-7	49	-71887.69
2007	19425.65	-5	25	-97128.25
2008	33715.95	-3	9	-101147.85
2009	33827.15	-1	1	-33827.15
2010	38372.12	1	1	38372.12
2011	39385.84	3	9	118157.52
2012	32079.92	5	25	160399.6
2013	30749.58	7	49	215247.06
2014	29510.87	9	81	265597.83
2015	34821.81	11	121	383039.91
2016	40970.8	13	169	532620.4
2017	50619.37	15	225	759290.55
2018	59482.21	17	289	1011197.57
18	462476.87	$\sum X = 0$	1938	3086311.41

Table 6 shows the calculation for estimation of First Year Premium of Private Companies. Calculation has been done by using following equations:

$$A = \sum Y/N = 462476.87/18 = 25693.16$$

$$B = \sum XY/\sum X^2 = 1592.523947$$

$$Y_{PFYP} = A + BX_{PFYP}$$

Putting the values, calculated above, in the above equation we get,

$$Y_{PFYP} = 25693.16 + 1592.52X_{PFYP}$$

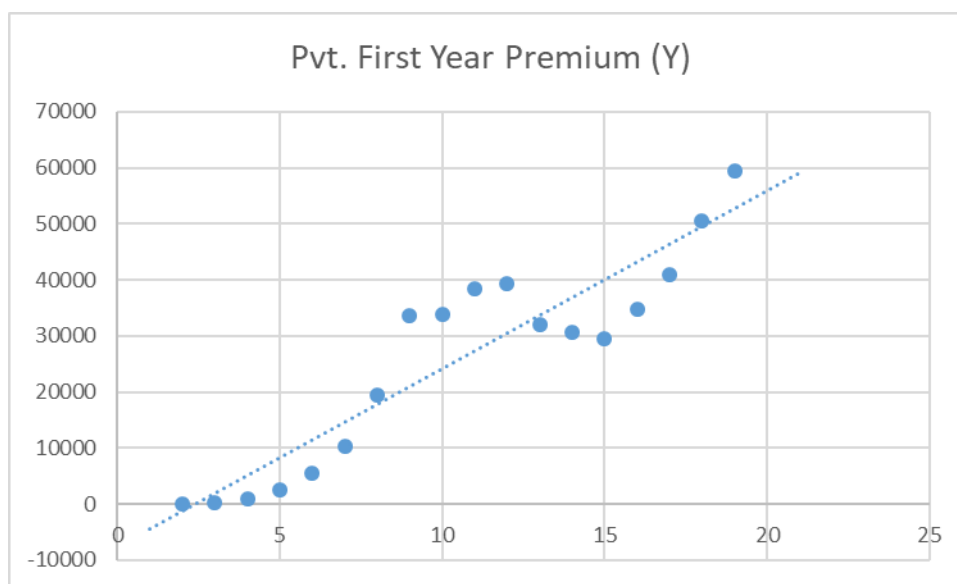
Where,  $Y_{PFYP}$  is estimated value of first year premium for the financial year 2020 of private insurance companies, which has been calculated in the following line and  $X_{PFYP}$  is the variable calculated for the model as 2 times of time deviation from the year 2009.5. Calculation has been shown in table 6.

$$Y_{p2020} = 25693.16 + 1592.52\{(2020-2009.5) * 2\}$$

$$Y_{p2020} = 25693.16 + 33442.92$$

$$Y_{p2020} = 59136.08 \text{ crore}$$

Fig. 3 below shows the growth of first year premium of private companies as a whole and the estimated figure of growth in 2020.



**Figure 3** Growth of First Year Premium of Private Insurance Companies

### 6.3. Interpretation

Based on the intermediate years 2009 and 2010, the linear function  $Y = A + BX$  (where A and B are constants) can be used to calculate the trend value for 2020. If these values are inserted into the trend line equation, the expected first-year premium of Indian private companies in 2020 is Rs. 82218.02 million. It shows that the business of Indian private companies is also in a growth trend, but it is still not as good as LIC, which proves the leading position of LIC.

6.3.1. Total Premium

Table 7 Estimation of Total Premium of LIC

Year	Total Premium (Y)	2 x Time Deviation from 2009.5 (X)	X <sup>2</sup>	XY
2001	34892.02	-17	289	-593164.34
2002	49821.91	-15	225	-747328.65
2003	54628.49	-13	169	-710170.37
2004	63533.43	-11	121	-698867.73
2005	75127.29	-9	81	-676145.61
2006	90792.22	-7	49	-635545.54
2007	127822.84	-5	25	-639114.2
2008	149789.99	-3	9	-449369.97
2009	157288.04	-1	1	-157288.04
2010	186077.31	1	1	186077.31
2011	203473.4	3	9	610420.2
2012	202889.28	5	25	1014446.4
2013	208803.58	7	49	1461625.06
2014	236942.3	9	81	2132480.7
2015	239667.65	11	121	2636344.15
2016	266444.21	13	169	3463774.73
2017	300487.36	15	225	4507310.4
2018	318223.2	17	289	5409794.4
18	2966704.52	∑X= 0	1938	16115278.9

$$A = \sum Y/N = 164816.92$$

$$B = \sum XY/\sum X^2 = 8315.417389$$

$$Y_{TPL} = A + BX$$

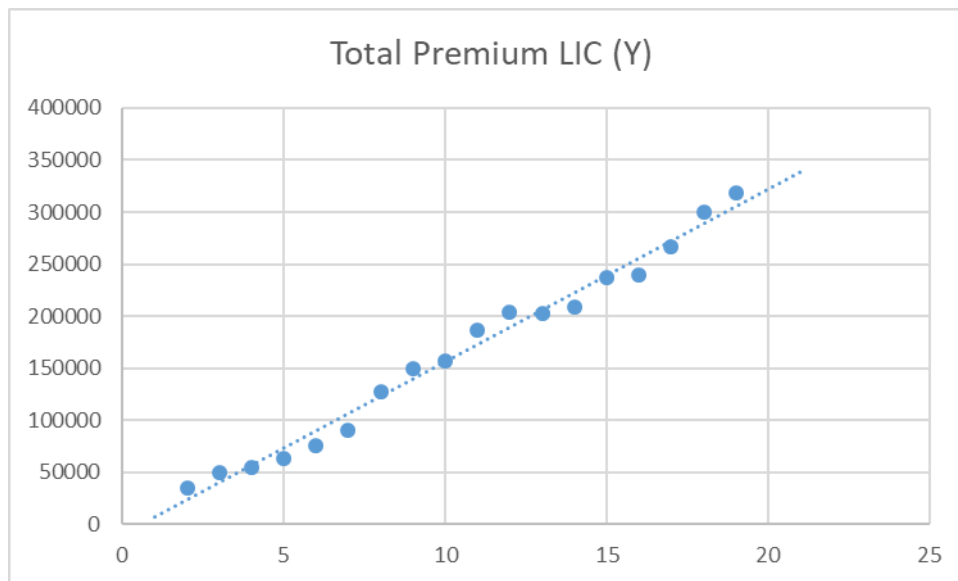
$$Y_{TPL} = 164816.92 + 8315.41X_{TPL}$$

Where, Y<sub>TPL</sub> is estimated value of total premium for the financial year 2020 of LIC, which has been calculated in the following lines and X<sub>TPL</sub> is the variable calculated for the model as 2 times of time deviation from the year 2009.5 which has been shown in the above table 7.

$$Y_{TPL2020} = 164816.92 + 8315.41 \{(2020-2009.5) * 2\}$$

$$Y_{TPL2020} = 164816.92 + 174623.61$$

$$Y_{TPL2020} = 339440.53 \text{ Crore}$$



**Figure 4** Total Premium of LIC

Figure 4 shows a definite upward trend in total premium of LIC till the year 2020.

#### 6.4. Interpretation

Based on the average of 2008 and 2009, the linear function  $Y = A + BX$  can be used to calculate the trend value for 2020, where A and B are constants. If these values are inserted into the trend line equation, the total business premium of LIC in India in 2020 is Rs. 330,989.05 million. This shows that India's total LIC premiums are also on the rise.

**Table 8** Estimation of Total Premium of Private Companies

Year	Total LI Premium (Y)	2 x Time Deviation from 2009.5 (X)	X <sup>2</sup>	XY
2001	6.45	-17	289	-109.65
2002	272.55	-15	225	-4088.25
2003	1119.06	-13	169	-14547.78
2004	3120.33	-11	121	-34323.63
2005	7727.51	-9	81	-69547.59
2006	15083.54	-7	49	-105584.78
2007	28253	-5	25	-141265
2008	51561.42	-3	9	-154684.26
2009	64503.22	-1	1	-64503.22
2010	79373.06	1	1	79373.06
2011	88165.24	3	9	264495.72
2012	89182.83	5	25	445914.15
2013	78398.91	7	49	548792.37
2014	77340.9	9	81	696068.1
2015	88434.36	11	121	972777.96
2016	100499.03	13	169	1306487.39
2017	117989.26	15	225	1769838.9
2018	140586.24	17	289	2389966.08
18	1031616.91	$\sum X = 0$	1938	7885059.57

$$A = \sum Y/N = 57312.05$$

$$B = \sum XY / \sum X^2 = 4068.658189$$

$$Y_{TPPC} = A + BX$$

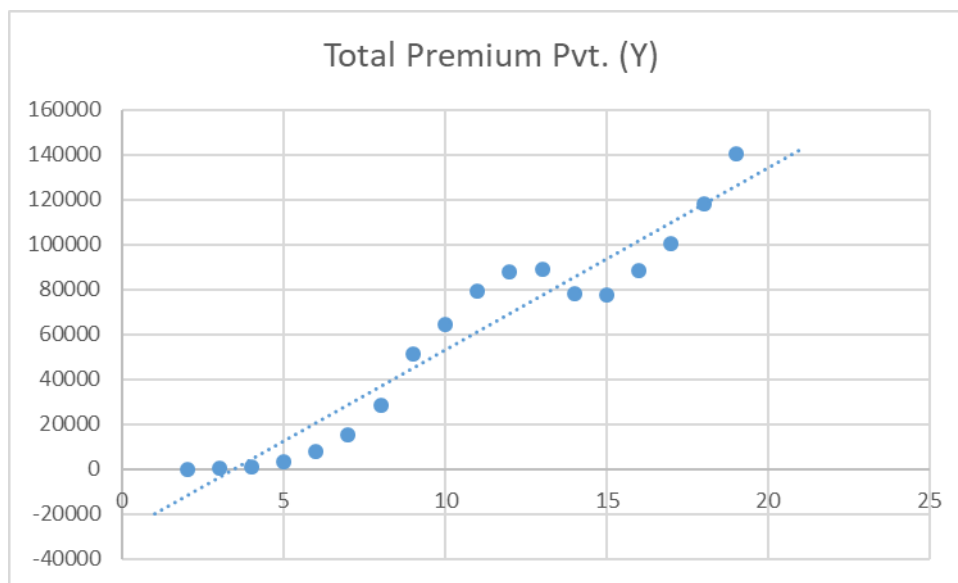
$$Y_{TPPC} = 57312.05 + 4068.66 X_{TPPC}$$

Where,  $Y_{TPPC}$  is estimated value of total premium for the financial year 2020 of private insurance companies, which has been calculated in the following lines and  $X_{TPPC}$  is the variable calculated for the model as 2 times of time deviation from the year 2009.5. Calculation has been shown in table 8.

$$Y_{TPPC2020} = 57312.05 + 4068.66 \{ (2020 - 2009.5) * 2 \}$$

$$Y_{TPPC2020} = 48315.09 + 89147.62$$

$$Y_{TPPC2020} = 142753.91 \text{ crore}$$



**Figure 5** Total Premium of Pvt. Insurers

Fig. 5 above shows the positive trend of growth in total premium of private insurers and provides a bright view of the future.

### 6.5. Interpretation

Based on the average values in 2009 and 2010, the linear function  $Y = A + BX$  can be used to calculate the trend value for 2020, where A and B are constants. If these values are substituted into the trend line equation, the total expected premium of Indian private companies for 2020 is Rs. 142,753.91 million. The analysis shows that the business of Indian private life insurance companies is growing, but LIC is still the market leader.

### 7. CONCLUSION

The analysis of data shows that the economic reforms during liberalization and post liberalization have had a positive influence on the insurance market of India and the First Year and Total Premiums are expected to continuously rise but the LIC will still remain the leader in the market in line with the trend of various other countries where insurance industry was liberalized. But the growth in the past decade has not been significant as per the coverage of

the vast population i.e. the insurance density, which shows that we have a long way to go in terms of real insurance protection to the common man.

The onus of increasing awareness about insurance, its importance and benefits and IRDA etc. lies on the insurers now. The private insurers as well as LIC have already started it by advertising through print and electronic media. In the process, the customers and prospective customers will also develop a better understanding of the nitty-gritty of various insurance products. Various interesting avenues of publicity of insurance could also be taken into considered by the insurers. Well-trained workforce equipped with the Insurance Information System, the Internet and all sorts of knowledge about the availability of products (also, the need of new products, if any), the requirement and financial level of the insuring public etc. may result in higher understanding and awareness among people about the necessity of insurance in one's life.

In the process of the study it was observed that the insurers face several challenges in the present environment of fast pace of developments, enhanced awareness among people about insurance and changing needs of the customers. The challenges are: lack of qualified and skilled workforce, shortage of well-trained field staff, changing the perception about insurance, facing stiff competition, devising new distribution channels, introducing innovative and low priced products, retaining the customers, ensuring efficient customer service, maintaining high return on investments, laying of strong underwriting norms, controlling high expenses, reformulating certain IRDA regulations, liberalizing stringent investment restrictions, limited access to foreign capital, developing insurance information system and internet application, adapting to modernizing economy, non-conducive re-insurance regime and absence of renewal check mechanism. In order to realize the full potential of the Indian insurance industry, the solution of these challenges need serious thinking and discussion, and suitable measures need to be evolved to combat them.

Similarly, customers are also facing numerous problems in the volatile environment of the insurance industry presently, some of them are lack of awareness among the people about the benefits of insurance; rural areas have low insurance penetration; the population below poverty line cannot afford by themselves to buy insurance policies. The required attention of Central and state governments and/or NGOs is not available to most of them; the customer service is not fully satisfactory; the claims settlement machineries of insurance companies are slow and inhospitable and they have not adequately modified their documentation procedures; unwillingness of the insurers to get impaired lives insured is very common; lapses control mechanism needs complete rethinking in order to get the lapsation rates lowered; and implementation of IRDA guidelines on redressal of grievances of the customers has so far been unsatisfactory and needs to be readdressed on top-priority basis.

## **8. FUTURE PROSPECTS AND SUGGESTIONS**

Future avenues lie in further innovation in products and changes in product mix; products with built-in elements meant to overcome things like inflation; products providing insurance to impaired/disabled lives; pension driven plans which have huge growth potential; rural area business; selling products in supermarkets, malls, petrol pumps, airports etc.; use of new technologies, e.g., Insurance Information System, Internet etc.; bancassurance and involvement of NGOs in rural sector.

Insurance Companies may explore opportunities outside India, in areas such as Middle East, Africa and South Asia etc. Outsourcing of certain non-core jobs may be adhered to. Strict/severe penalties in case of non-compliance of the regulations are required to be incorporated in IRDA regulations. Present FDI cap of 26% should be raised to 49% and licenses may be granted to

more insurers since the Indian insurance market offers tremendous opportunities to prospective insurers and can sustain about hundred insurers. Permission to the international re-insurers to operate in India through branches should be granted. There should be extensive linkages between regulatory bodies of different countries to develop international norms for insurance business. In a nutshell, we can say that Indian Life Insurance Industry has come a long way and still it has to go miles and miles till the market reaches its saturation and every insurable individual is insured adequately.

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