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Dr.Sangeetha Natarajan,is a Gold Medalist and University First Rank holder in MBA in Bharathiar University, India and is currently working as a lecturer in Nizwa College of Technology under Ministry of Manpower in Sultanate of Oman. She has qualified both UGC-NET and SLET and has over 15 years of teaching and research experience. Her list of publication includes six books and around 50 articles in leading National and International journals, seminars and conferences. She was the Chairman of Board of Studies, Chairman of PG Board of Central Valuation, a Member of the Expert committee of Commission for new and permanent Affiliation under Hospital Administration, in Bharathiar University from 2010 -2012.She is a member of peer reviewer committee and an Editorial Board member of many national and international journals.She is a recognized Research Supervisor under various Universities. She has specialized in Finance in Ph.D and the present book is one of her limelight in the area of insurance.

Outline of the book:

The insurance industry has undergone a drastic change since liberalization, privatization and globalization of the Indian economy in general and the insurance sector in particular. For almost four decades LIC has been sole player with virtual monopoly in the life insurance sector. In the early 90's the government of India ventured into the policy of liberalization, privatization and globalization. The decision to open up the insurance sector witnessed great public debate. The government went ahead to liberalize the insurance sector on grounds of justification that insurance penetration and density in the country is low, country needs massive investments in infrastructure and liberalizing insurance will help in mobilization of long term funds. The entry of so many companies in this sector was likely to affect the performance of Life Insurance Corporation. Thus the LIC public sector giant, which never faced competition earlier, now has to compete with the private players who boast of the rich and long experience of their partners from the developed countries of the world. The Life Insurance Corporation might even have to change its strategies of marketing, has to improve customer service and increase the level of training to its agents to hold its position in the market.It is therefore necessary to study the business performance of public life insurance company in the post liberalization era, and also the changes that might have progression. The present book evaluates the performances of public life insurance company in India and studies the impact of privatization.

Performance of Life Insurance Industry in India in the Post Liberalisation Period

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CONTENTS

Chapter I - Introduction

1.1 Insurance Overview

"Insurance is a contract between two parties where by one party, insurer undertakes in exchange for a fixed sum called premium to pay the other party on happening of a certain event"

Insurance is the outcome of man's constant search for security and finding out ways and means of ameliorating to the hardships arising out of calamities. Insurance may be described as a social device to reduce or eliminate risk to life and property. Hence, **Professor Rober Mehr and Professor Emesson Cammack** rightly defined Insurance

"As a social device for reducing risk by combining a sufficient number of exposure units to make their individual losses collectively predictable, the predictable loss is then shared proportionally by all these in the combination".

There are two branches of insurance viz, general insurance and life insurance general insurance deals with the exposure of risks of goods and property, whereas life insurance is a way to meet the contingencies of physical death and economic death. In case of premature death of the assured the proceeds of the policy are paid to the beneficiaries and annuities protect the assured against economic death when he lives too long to arrange for his necessities.

Life Insurance:

"Life insurance is a contract for payment of a sum of money to the person assured on the happening of the event insured against". Usually the contract provides for the payment of an amount on the date of maturity or at specified dates at periodic intervals or at unfortunate death, if it occurs earlier.

Life insurance guarantees full protection against risk of death of the assured. Incase of death full sum assured is payable. Life insurance encourages long-term saving. By paying a small premium in easy installments for a long period a handsome saving can be achieved. Loan can be obtained against a policy assured whenever required. Tax relief in income tax and wealth tax can be availed on the premium paid for life insurance.

1.2 History of Insurance:

The roots of insurance might be traced to Babylonia where traders were encouraged to assume the risk of the carvan trade through loans that were paid only after the goods had arrived safely a practice resembling bottamry and given legal force in the code of Hammurabi (C.2100.B.C).

With the growth of towns and trade in Europe the medieval guilds undertook to protect their members from loss by fire and ship wreck and to provide decent burial and support in sickness and poverty. By the middle of the 14thcentury as evidenced by the earliest known insurance contract (Genoa 1347), marine insurance was practically universal among the maritime nations of Europe. In London Lloyd's coffee house (1688) was a place where merchants, ship owners and underwriters met to transact business. By the end of the 18th century, Lloyd's had progressed into one of first modern insurance companies. In 1693, the astronomers Edmony Halley constructed the first mortality table, based on the statistical laws of mortality and compound interest. The table constructed in the year 1756 by Joseph Dodson made it possible to scale the premium rate to age, previously the rate had been the same for all ages.

Insurance developed rapidly with the growth of British trade and commerce in the 17th and 18th centuries. Prior to the formation of insurance corporations devoted solely to the business of writing insurance, policies were signed by a number of individuals each of who writing his name and the amount of risk he was assuming underneath the insurance proposal, hence the term underwriter.

The first joint stock company to engage in insurance was established by charter in England in 1720 and in 1735. The first insurance company in the American colonies was founded at Charfeston. Later, SC Fire Insurance Corporation was founded in New York city in 1787. The Presbyterian Synod of Philadelphia was founded in 1759. This was the first life insurance corporation in America, for the benefit of Presbyterian ministers and their dependents. After 1840, with the decline of religious prejudice against this practice, life insurance entered a boom period. In the 1830s, the practice of classifying risk began.

The Workmen's Compensation Act of 1897 in Britain required employers to insure their employees against industrial accidents, public liability insurance, fostered by legislation made its appearance in the 1880s it attained major importance with the advent of the automobile.

1.3 Origin of Life Insurance in India

In 1818 a British firm called the Oriental Life Insurance Company was formed in Calcutta to serve the interest of those who came from Europe. This was followed by the establishment of the Bombay Life Assurance Company in 1823 in Bombay. The Madras

Equitable Life Insurance Society in 1829 and The Oriental Government Security Life Assurance Company in 1874. It is a telling comment on the British view of Indians that prior to 1871, Indian lives were treated as sub-standard and attracted an extra premium of 15 to 20 percent.

The Bombay Mutual Life Assurance Society, an Indian insurer formed in 1871, was the first one to charge normal rates for Indian lives.

There were no specific regulations for the life insurance business until 1912, when it came to be formally regulated under the provisions of the Indian Life Assurance Companies Act 1912.In 1928 the Indian Insurance Companies Act was enacted to enable the government to collect statistical information about both the life and the non-life insurance business including the provident insurance societies. During the period from 1912 to 1930, the insurance business witnessed a setback. A number of changes took place from 1930 to 1938 and the Government of India passed Insurance Act 1938, with comprehensive provisions for the detailed and effective control over the insurers so as to protect the interest of insuring public.

Nationalisation of Life Insurance Business

By 1956, as many as 154 Indian insurers 16 non Indian insurers and 75 provident societies have entered the life insurance business in India. However, the geographical spread and the number of lives covered were rather small. Insurance companies by and large were governed by short term considerations and consequently the business was confined mainly to cities and the more affluent segments of society. Offering insurance policies to people with small incomes to suit their income and financial position had not even been attempted.

During this period a number of malpractices occurred in the industry causing loss to the unsuspecting public. There were also some instances of mismanagement and mis-utilization of the funds collected. Despite the regulatory measures, the private insurance industry suffered from all the maladies such as under-cutting of premiums, unscrupulous management misfeasance falsification of reports questionable investment. The claims settlement ratio was abysmally poor and so was the high rate of expenses and managerial privileges. Winding up of companies was also not totally unknown. This process gathered momentum especially after the First World War and between 1914 and 1920, many insurance companies were closed down causing large losses for the small investors.

The former **Finance Minister Dr.C,D.Deshmukh** said in parliament during the debate on the life insurance bill 1956 that :

“…the industry was not playing the role expected of insurance in a modern state and efforts at improving the standard by further legislation we felt, were unlikely to be more successful than in the past. The concept of trusteeship which should be the corner stone of life insurance seemed entirely lacking. Indeed most management had no appreciation of the clear and vital distinction that exists between trust moneys and those which belong to joint stock companies”.

Misuse of power position and privilege that we have reasons to believe occurs under existing conditions is one of the most compelling reasons that have influenced us in deciding to nationalize life insurance".

In the light of these developments, the demand for stricter government control of the industry gathered momentum and called for nationalization of insurance business - which almost became a foregone conclusion. Hence, nationalization of life insurance business became necessary with a view to:

- Provide for cent percent security to policy holders
- Ensure the use of life insurance funds for nation building activities
- Avoid wasteful efforts in competition
- Save the dividends paid to shareholders of insurance companies
- Avoid certain undesirable policies adopted by the management of some of the insurance companies.
- Spread the gospel of life insurance into the neglected rural areas.

1.4 Formation of Life Insurance Corporation of India:

The Government of India took the first step towards nationalization of life assurance business in India on 19th January 1956 by promulgating an ordinance vesting the management and control of life insurance business of 154 Indian, 16 Non-Indian Insurers and 75 Provident Societies operating in the country. Moreover, the companies continued to exist as separate entities and the ownership continued to exist with respective shareholders. On June 18, 1956 they put a bill through the parliament which emerged as the Life Insurance Corporation Act (XXXI of 1956) which was gazette the next day. It came into force in July 1956.

By this act all the assets and liabilities pertaining to the life assurance business in India of all registered Indian Insurers were to be transferred to and vested in the Life Insurance Corporation of India as from the appointed day. According to this act, a corporation called the Life Insurance Corporation of India (LIC) was established which started its career on September 1, 1956. Mr. H.M. Patel of the Indian Civil Service (ICS) and Secretary, Ministry of Finance, was nominated as its First Chairman. At the time of its inception, The LIC had five zonal offices, 33 divisional offices and 212 branches.

Objectives of LIC: Pandit Jawaharlal Nehru, the then Prime Minister expressed confidence that (Lok Sabha debates, 1956)," Its objective will be to serve the individual as well as the state. The profit motive goes out of it and the service motive becomes much more dominant. I trust that this corporation will serve an ever-increasing number of our people and will do this work in the true spirit of service.

We require life insurance to spread rapidly all over the country and to bring a measure of security to our people".

Dr. Deshmukh, while piloting the bill for nationalization, outlined the objectives of LIC thus:

1. To conduct the business with the utmost economy in a spirit of trusteeship
2. To charge premium no higher than warranted by strict actuarial considerations
3. To invest the funds for obtaining maximum yield for the policyholders consistent with safety of the capital and
4. To render prompt and efficient service to policyholders thereby making insurance widely popular

In 1974, LIC formulated its objectives in pursuance of the recommendations of the **Administrative Reforms Commission** as under:

1. Spreading life insurance much more widely and in particular to the rural areas and to the socially and economically backward classes with a view to reaching all insurable persons in the country and providing them adequate financial cover against death at a reasonable cost
2. Maximizing mobilization of people's savings by making insurance linked savings adequately attractive
3. Deploying the funds to the best advantage of the investors as well as the community as a whole, keeping in view national priorities and obligations of attractive return
4. Conducting business with utmost economy and with the full realization that the moneys belong to the policyholders
5. Acting as trustees of the insured public in their individual and collective capacities
6. Meeting the various life insurance needs of the community that would arise in the changing social and economic environment
7. Involving all people working in the corporation to the best of their capacity in furthering the interests of the insured public by providing efficient service with courtesy
8. Promoting among all agents and employees of the corporation a sense of participation pride and job satisfaction through discharge of their duties with dedication towards achievement of corporate objective

1.5 Appraisal of LIC Performance from Nationalization Till Sectoral Reforms:

According to 1995 statistics, India has the highest number of life insurance policies in force and the total investible funds with LIC were almost 8% of GDP. The LIC employs more than one lakh employees who in turn supervise through 200 branches and more than five lakh agents.

Table No: 1.1

S No	Performance Indicators	31.12.57	31.3.93
1	New Business (Sum Assured)	Rs.336.67 crs	Rs.36115.80 crs
2	New Business (No. of policies)	9.42 lakhs	99.68 lakhs
3	Rural New Business (Sum Assured)	Rs. 182.59 crs (as on 31.12.61)	Rs. 14085.03 crs
4	Rural New Business (No. of policies)	5.34 lakhs (as on 31.12.61)	44.39 lakhs
5	Percentage of Rural business to Total sum assured	30.49	39.2
6	Percentage of Rural business to Number of policies	36.53	44.6
7	In force policies i) Number of policies ii) Sum Assured	56.86 lakhs Rs.1474.00 crs	566.79 lakhs Rs. 178120.07 crs
8	First Year Premium income	Rs. 13.72 crs	Rs. 1616.58 crs.
9	Renewal premium	Rs.74.35 crs	Rs. 5567.36
10	Total Premium Income	Rs. 88.65 crs	Rs. 7987.24 crs
11	Investment income including miscellaneous income	Rs. 19.3 crs	Rs.4257.00 crs
12	Total Income	Rs. 107.15 crs	Rs.12244.23 crs
13	Life Fund	Rs.410.40 crs	Rs.40998.29 crs
14	Interest realized on life fund	3.74 %	11.56 %
15	Claims: Death , Maturity, Surrender etc.	Rs.34.00 crs	Rs.3580.83 crs
16	No. of complaints per 1000 policies serviced	1.1	0.26

17	Percentage of Outstanding claims to total claims	38.5% as on 31.3.63	5.27%
18	Total No. of staff	30768	114927
19	Average No. of policy serviced per employee (class III)	290	784
20	Salary payments as a percentage of total income	Rs. 12.21 crs	Rs. 799.84 crs
21	Overall Expense Ratio	27.3%	22.89 %
22	Renewal Expense ratio	15.89 %	5.37 %
23	5 % of valuation surplus paid to government	Rs. 1.45 crs (for 16 mths)	Rs.117.6 crs
24	Total Valuation surplus paid	-	Rs. 754.05 crs
25	Income Tax paid	Rs. 4.92 crs	Rs.326.60 crs (for 1991-92)
26	Investment Public sector Coop sector Private sector	 Rs. 255.12 crs - Rs. 74.61 crs	 Rs. 28983.24 crs Rs. 1657.56 crs Rs. 5681.31 crs
27	Sector wise distribution of Investments Public sector Co op sector Private sector	 77.37 % - 22.63%	 79.8 % 4.6 % 15.6 %
28	Socially purposive Investments	Rs.8 crs	Rs.16608 crs

Source: In Defence of Nationalised LIC & GIC, Vol.1 AIIEA Publication, Year 1994

1.6 Review of General Economic Environment:

According to 1995 statistics, India has the highest number of life insurance policies in force and the total investible funds with LIC were almost 8% of GDP. The LIC employs more than one lakh employees who in turn supervise through 200 branches and more than five lakh agents. Yet these numbers believe the fact that life insurance in India is spread very thinly and shallowly and its role as a mobiliser of long –term savings is under developed.

Insurance companies in the developed world also sell products for old age income security in form of pensions and annuities. The absence of pension coverage for a vast important gap to be filled by the life insurance sector. LIC largely remains a slow moving, overstaffed behemoth. The phased globalization of the Indian economy that started in the early 1990s began to have its impact on the monopolistic structure of the Indian Insurance industry. The liberalization of insurance market was among the objectives of the Uruguay round negotiations conducted under the auspices of **General Agreement on Trade and Tariff (GATT)**.However, LIC was put on its toes when in 1993, the Government of India appointed a committee headed by **Shri. R.N. Malhotra** to examine the reforms required in the insurance sector.

The Government with the committee came out with the following arguments in justification of liberalization:

1. Insurance penetration and density in the country is low.

2. The country needs massive investments in infrastructure and liberalizing insurance and pensions will help mobilization of long-term funds.

3. Allowing foreign companies would help them bring a substantial portion of their worldwide premium funds into Indian infrastructure and

4. India is a large economy and a big market with ample space for both private and public sector.

Insurance Regulatory Authority

On the recommendations of Malhotra Committee Indian Parliament passed Insurance Regulatory Development Act (IRDA) in the year 1999. Its main aim is to activate an insurance regulatory authority essential for proper monitoring and control of the Insurance industry. Due to this act, several Indian private companies have entered in the insurance market and some companies have joined with foreign partners.

Mission Statement of IRDA

❖ To protect the interest of and secure fair treatment to policy holders

❖ To bring about speedy and orderly growth of the insurance industry for the benefit of the common man and to provide long term funds for accelerating growth at the economy.

❖ To set, promote, monitor and enforce high standards of integrity, financial soundness, fair dealing and competence of those it regulates

❖ To ensure that insurance customers receive precise, clear and correct information about products and services and make them aware of their responsibilities and duties in this regard

❖ To ensure speedy settlement of genuine claims, to prevent insurance frauds and other malpractices and put in place effective grievance redressal machinery.

❖ To promote fairness, transparency and orderly conduct in financial markets dealing with insurance and build a reliable management information system to enforce high standards of financial soundness amongst market players

❖ To take action where such standards are inadequate or inefficiency enforced and

❖ To bring about optimum amount of self-regulation in day-to-day working of the industry consistent with the requirements of prudential regulation

Reclassification of Rural Business by IRDA:

Life Insurance Corporation of India pegs its rural business at over 50 percent of its total premium collection during 1999-2000.According to **N. Rangachary, IRDA Chairman ,the LIC** has been calculating its rural business on the basis that whatever is not urban can be termed as rural .

i) The IRDA, in its regulations on the obligations of insurers to the rural social sector, has said that **'rural area'** shall mean any place as per the latest census, which has:

✓ a population of not more than 5,000.

✓ a population density of not more than 40 per sqkm

✓ at least 75 per cent of the male working population is engaged in agriculture

ii) IRDA's **`social sector'** definition includes the unorganised sector, the informal sector, the economically vulnerable or backward classes and other categories of persons, both in the rural and the urban areas.

iii) According to the IRDA guidelines, every life insurer, which is in the insurance business after commencement of the IRDA Act, 1999, has to allocate five per cent of its business to the rural sector in the first financial year, seven per cent in the second financial year, 10 per cent in the third financial year, 12 per cent in the fourth fiscal and 15 per cent in the fifth fiscal

iv) **`Unorganised sector'** as defined by the IRDA includes self-employed workers such as agricultural labourers, bidi workers, brick kiln workers, carpenters, cobblers, construction workers, fishermen, hamals, handicraft artisans, handloom and khadi workers, lady tailors, leather and tannery workers, papad makers, powerloom workers, physically handicapped self-employed persons, primary milk producers, rickshaw pullers, safai karmacharis, salt growers, sericulture workers, sugarcane cutters, tendu leaf collectors, toddy tappers, vegetable vendors, washerwomen, working women in the hills, or such other categories of persons, economically vulnerable or backward classes or those who live below the poverty line.

v) IRDA has again relaxed the definition of Rural India to include 10,000 to 5.8 lakh more villages.

Appraisal of ten years of liberalization of life insurance market in India

The Indian insurance industry has registered impressive growth in the past one decade. Many private players entered the market and most of the companies have entered as joint ventures with participation of a foreign partner holding 26% of the total paid-up equity capital. While four private sector companies had underwritten life business during the financial year 2000-01, the number of private players competing for business during the year 2001-02 alone increased to eleven and as of now, 2008-09 it numbered twenty-one in total. The following table gives the total number of insurance companies in India in the year 2011.

Table No: 1.2 - Registered Insurers in India

Type of business	Public Sector	Private Sector	Total
Life Insurance	1	23	24
General Insurance	6	18	24
Re-insurance	1	0	1
Total	**8**	**41**	**49**

Source: IRDA Annual Report 2008-09

The life insurance grew at a very fast pace with new business premium increasing from Rs. 19857.28 crore in 2001-02 to Rs. 87006 crore in 2008-09. The growth continues and for the current financial year with new premium touching Rs.75347.27 crore as at 31st January 2010, similarly the total premium income increased from Rs. 221791 crore in 2008-09. The total assets under management rose to Rs. 931000 crore as at the end of 31st march 2009.

The premium mobilized through life insurance as a percent of GDP has touched 4.1% [9] in 2008-09. The opening up of the sector to the private players witnessed the introduction of a number of new products deserving the attention of the customers and possibly the Indian insurance market is one of the fastest growing markets.

1.7 Statement of the Problem

The insurance industry has undergone a drastic change since liberalization, privatization and globalization of the Indian economy in general and the insurance sector in particular. For almost four decades, LIC has been sole player with virtual monopoly in the life insurance sector. In the early 90's the government of India ventured into the policy of liberalization, privatization and globalization.

The decision to open up the insurance sector witnessed great public debate. There were arguments against opening up of the sector based on the unhappy experiences of the privatization days. The government went ahead to liberalize the insurance sector on grounds of justification that insurance penetration and density in the country is low, country needs massive investments in infrastructure and liberalizing insurance will help in mobilization of long-term funds. Allowing foreign companies would help in bringing substantial portion of worldwide premium funds into Indian infrastructure and India is a large economy and a big market with ample space for both private and public sector.

Consequently, by the year 2000-01, 12 private players entered the life insurance sector. The entry of so many companies in this sector was likely to affect the performance of Life Insurance Corporation. Thus the LIC public sector giant, which never faced competition earlier, now has to compete with the private players who boast of the rich and long experience of their partners from the developed countries of the world. The Life Insurance Corporation might even have to change its strategies of marketing, has to improve customer service and increase the level of training to its agents to hold its position in the market.

It is therefore necessary to study the business performance of public life insurance company in the post liberalization era, and the changes that might have progression. Hence, it becomes imperative to evaluate the performances of public life insurance company in India and to study its impact of privatization.

Chapter II - Review of Literature

This chapter examines the significant studies carried out by the researchers on life insurance business. Some are empirical and some are theoretical. Hence, both the research studies relating to life insurance conducted in India and abroad are reviewed as under:

2.1 Empirical Studies:

Mark J.Browne, Kihong Kim[1] (1993) analysed the life insurance demand internationally and identified factors that lead to variations in the demand for life insurance across countries. Important factors listed were dependency ratio, national income, government spending on social security, inflation, religion and price of insurance. Of these variables, two variables income and inflation were statistically significant. The income variable is positively correlated with life insurance. The findings suggest that economic development and stability greatly increase life insurance consumption.

Gandoliji, AnnaSachko and Miners, Lawrence[2] (1996) analysed the gender based differences in life insurance ownership and examines the differences that exists between them relative to life insurance coverage. In addition, the impact of household production function variables on life insurance is investigated and differences in their effect for husbands and wives are highlighted. The results indicate that there are meaningful differences between husbands and wives in their demand for life insurance functions. Many of the differences in amounts of coverage seen attributable to the wife's labor force participation and the increase in the number of women in the labor force has accounted for much of the increase in wife's life insurance over the last few decades. However, there is evidence that in addition to insuring money income, contributions to household production also influence the purchase of life insurance.

Dr.P.K.Gupta[3] (2000) examines the present state of affairs of rural life Insurance in India and attempts to explore the causes, which led to poor penetration of rural life insurance markets. A survey of the rural customers has been conducted to examine their perception and attitude towards buying life insurance products. The paper analyses the rural insurance marketing and performances of private life insurance players in India. The study concluded that the keys to success in insurance penetration in rural areas for private players are accessibility, reasonably priced products, effective communication and after sales service.

Mishra.K.C [4] (2003) presents the story of Indian Insurance industry in post liberalization era. It brings out the fact that Indian economy is 0.16 percent of US economy but insurance density of India is 0.004 percent of US. India has one of the top growth rates in either the life or general insurance industries in the world, but the regulation of the insurance market has not been able to keep pace with the rapid growth and new products in the current market driven economy. The study listed the merits and demerits of more foreign participation in Indian insurance markets as improvements in customer service and value, transfer of technological and managerial know-how additional external financial capital, creation of beneficial domestic spill overs, dominance of foreign insurers over domestic markets, service by market selectively, etc.

Ramesh lal Dhanda [5] (2004) evaluated the divisional performance of LIC business in North zone on the basis of both primary and secondary data covering both service providers and service users. The results showed that policyholder's opinion regarding reasonableness of premium indicates that 30 percent of the total respondents from different categories rated the premium amount as high, two third of total respondents faced no problem while depositing the amount of premium and about 90 percent respondents reported the dealing and behavior of LIC staff as satisfactory.

Sharma.V.K [6] (2004) examines that the Insurance Industry is a perennial source of long term funds and caters to the needs of capital markets where the corporate can meet their demanding standards of investment that are known as prudential norms. Cash flow management is essential for insurers. Insurers are always in a position to estimate their investible funds and prepare an investment budget keeping in view statutory requirements, opportunities available in various segments like capital markets, real estate and other long term and short-term investments and these transactions will help to bring certainty and stability to uncertain transactions. He concluded saying insurance industry in India is at the threshold of a great financial revolution. Economy is reaching 7 to 8 percent growth in GDP. Globalization and Liberalization opened new threats and challenges. The Indian middle class and lower middle class want to seize these opportunities.

Banerjee T.K [7] (2004) opined that the insurance industry would face greater competition from other financial service providers along all aspects of their value chain. Insurers with their significant and growing asset base shall have to develop asset management capabilities and expertise on par with professional fund managers, otherwise they will face pressure to farm out their funds for professional management. IRDA will monitor the progress of the industry and will continue to consult industry representatives in developing a conducive regulatory environment, and formulating incentives to enhance the operational capabilities of insurers. Such partnership and dialogue will be vital for the growth of the industry and for meeting the challenge of making India a regional insurance hub and an international financial center.

Suranjita Lahiri [8] (2004) made an empirical analysis on brand identity and its influence on customer decision-making process. The study revealed that the insurance companies has four choices under branding strategies namely line extension, brand extension, multi-branding and new branding.

Branding of services is much more difficult than tangibles and when it comes to insurance, it is a function of variety of factors known and unknown. The key factors accounting for the success of any insurance player are continuous product innovations, efficient pricing and effective claim management.

Vinay Verma [9] (2004) examines the challenges and prospects of insurance broking in India. Brokers, as intermediaries, have huge scope and prospects in the distribution and servicing of insurance products. With market-oriented thinking, they can generate risk consciousness, expand shopper pattern and develop insurance market. Broking in insurance will increase range, mobility, integration and above all utmost good faith among parties in insurance contract. Insurance business for decades had been insulated from international competition. With dismantling of regulations not only new players will enter into the market but also there will be professionals to select most excellent among them in order to bring value for the money to the customer. Brokers will need their mind set and expertise to become accustomed to changing requirements and will have to get ready themselves to participate in a new ball game altogether where for almost all major business they will have to interact with likewise expert and conversant rank of mediators.

Forte [10] (2005) analysed the rural insurance market and has found that the more educated have higher earnings capabilities and were potential insurance customers. Majority of the respondents were able to name the types of policy but could not recall the actual name of the policy. Most had purchased the Money back policies and penetration of whole policies was very low. Policies with a sum assured of less than Rs.50, 000 accounted for the most policies taken. A significant number also opted for a higher value policy of up to rupees one lakh. There was a great deal of similarity between the policy actually purchased by the respondents and the policy recommended by the agent at the time of purchase, suggesting that a great influence is exercised by the agents in the selection of insurance products. Policyholders were generally satisfied with the overall insurance process, the premium payment process and their dealings with the agent.

Peter De Groot [11] (2005) examines that insurers should be well aware of the significance of risk assessment and management. The survey results presented in the article provide insight into the risk and capital management practices of the insurers around the world and draws an analysis on the future risk management practices of insurance companies. The results of the survey reflect the views of analysts that the insurance industry lags behind the banking sector in managing investor capital efficiently. The survey was carried out between May and September 2004, through one-to-one interviews, with the exception of Germany, where a postal questionnaire was used. The survey findings suggest that business imperatives and senior management expectations are driving change in risk management and capital allocation. Respondents from Germany, Bermuda and particularly Netherland have tendency to use both economic and regulatory capital.

Anuja Keelshresthra.E [12] (2005) examines challenges, strategic changes and perception of agents and customers towards the liberalization of the insurance sector, focusing on LIC in India. The study concluded that the winds of liberalization have initiated vast changes in the insurance sector. To face the challenges and to enhance its competitiveness LIC has to develop strategies in every front of its operation of distribution channel, products, HRD, IT etc. It is passing through the phase of transition and meta-morphis and this transformation of LIC would help it to emerge as a winner in competitive environment.

Reepali, Anuja and Kulshreeshtha [13] (2005) focus the SWOT analysis of LIC of India and suggest an action plan which on implementing would enhance the business competitiveness in the liberalized scenario. Self-structured close ended questionnaire was used for data collection and was administered to the randomly selected 52 managers and departments from the north central zone of LIC of India. The study was concluded by developing action plan on leveraging strength, exploiting the opportunities, cutting the Gordian Knot, rectifying weakness so as to maintain the reigning kingship and to emerge a winner in the liberalized environment.

Prakash Vel.K and Ravichandran.K [14] (2005) conducted an exploratory study on the role played by product, service and behavioural factors in the purchase of life insurance policies and ended up with a model for the purchase of life insurance policies. The study helps to understand the various marketing and non-marketing factors influencing the purchase of life insurance policies. The model propounded can be used by different life insurance companies to understand the parameters influencing the decision making process of their clients and accordingly formulate suitable marketing strategies in the promotion of their policies.

James C Hao, Lin –Yhi Chou [15] (2006) discusses the impact of merger and regulation regarding minimum capital requirement. The methodology used was Distribution Free Approach (DFA) and Stochastic Frontier Approach to investigate market share, optional scale, diversification of products, strategy, regular scale, merger policy implications for efficient firms operations in the life insurance industry. The study revealed the impact of a merger policy on stockholder's wealth is not significant; stockholders have a negative outlook on the increase of cost inefficiency. Stockholders donot benefit from strict capital; because this regulation will diminish their wealth and finally firm's scale of operation have a positive relation with market share.

Rajagopalan.R [16] (2006) made a comparative evaluation of the traditional insurance policies available in the Indian market from consumer perspective. The methodology adopted was expected present value approach, data on mortality rates, prevailing premiums on insurance policies and interest rates for the comparison within and across policy types. On analysis the conclusions arrived was whole life policies are charging heavy loadings. A participating whole life policy looks better only in comparison to buying a nonparticipating whole life policy and investing the extra premium in the PPF account.

Amit Kumar chakrabarty [17] (2006) measures the efficiency of LIC through agent's ability and business performance. Agent's ability include after sale service, illegal advantage, plan scheme introducing capacity etc. Business performance includes year wise growth of new business, investment and claim settlement operation. The opinion of the policyholders and development offices were taken to judge the agents ability. The study revealed a number of weaknesses of LIC particularly the management of agents and the management must take necessary steps to further improve the payment of death claims.

Sayid Ali, Riyaz Mohammed, Masharique Ahmad [18] (2007) examines the progress of insurance sector after liberalization till 2003. He is with the opinion that insurance sector is not satisfactory and the facilities were not able to provide to general masses and the required mobilization of resources from these sectors could be hampered. He further examined various issues and determinants involving insurance in India and world partially, its performance and its genesis with a view to measure its development. The emphasis was on economic liberalization and insurance sector reforms in India, its development, risk management, organizational structure, the changes in financial products, insurance products, distribution channels, TPA's, IRDA framework, etc.

Karthikeyan.M [19] (2007) examined that India had the nineteenth largest insurance market in the world in 2003. Insurance in India has gone through two radical transformations. Before 1956, industry was private with minimum government intervention. In 1956, life insurance was nationalized and monopoly was created. As a part of the general opening up of the economy after 1992, government appointed a committee and that recommended that private companies should be allowed to operate. And there came many reforms. New private insurers are bringing new products, using innovative distribution channels. Finally, the rural sector has potential for both life and general insurance. To realize this potential designing suitable products is important. Insurers need to pay special attention to the characteristics of the rural labor force, like the prevalence of irregular income streams and preferences for simple products.

Vanniarajan.T, JeyaKumaran.M [20] (2007) made an attempt to identify the discriminate service quality factors among the public and private life insurers. LIC and nine private players were selected

and out of which 250 customers from LIC and 20 customers from each private players have been selected for the study. The study concludes that the important service quality factors in the life insurance market are distribution network, product, responsiveness, reliability, customer relationship management, empathy, brand building, promotion and tangibles. The identified discriminate service quality factors among the public and private players are distribution networks, product and reliability for the private sector.

Debabrata Mitra, Amlan Ghosh [21] (2007) attempts to study the importance of life insurance consumption in rural India and the role of post offices. In the liberalized era where domestic and foreign private insurers are operating in India along with LIC, their reach to the rural masses which constitutes more than seventy percent of our total population was analysed. According to IRDA, LIC's rural coverage was 52 percent, but the new guidelines issued by IRDA to define the rural areas have reduced this share to mere 18 percent in year 2000-2001, resulting in low rural coverage and huge untapped rural population to be covered by the Indian insurers. The study concluded that significant opportunities are available in rural India using post offices as an agent and will give the desired field to keep the momentum for economic growth.

Vijayalakshmi.R and Keerthi.Pa [22] (2007) studied the service quality of LIC as expected and perceived by its policyholders based on SERQUAL technique. The study concluded that trust and confidence in the minds of the policy holders are the two strong factors in which still LIC still reins the insurance industry. In today's liberalized environment, insurance companies operate in a market place that is extremely competitive. If LIC focuses on the efficient and effective delivery of services to the policyholders, it would enhance its corporate goal of increasing coverage more profit and increment in market value and share.

Harsh Arora [23] (2007) examines the ethical aspects which should be considered by the agents or advisor and companies at the time of selling their life insurance products. The ethical issues are categorized into three as system issues, cooperate issues and individual issues. The main objective of the study was to find out which part of ethical issues the insurance companies should consider most in training their insurance advisors to increase number of satisfied customers, retain maximum number of customer and their loyalty with the company. It was concluded that prospective buyer will give positive response to the advisors or the companies, hence companies should train to develop the advisors and managers to gain customers trust.

Dr. Vanniyarajan.T.A, Prabadevi.P, Shankari.L [24] **(2008)** analysed the service quality of life insurance companies in Salem using SERVQUAL model.

The analysis revealed how the profile of the respondents and the various service quality factors are associated. The study identified various service quality factors as customer recognition, customer confidence on employees, agent customer relations, timely service, customer orientation, employees skill, approach and grievance redressal, customer comfort that were positively related with the profile of the respondents.

Syed Ibrahim.M [25] **(2008)** opined the insurance industry in India has witnessed a sea change ever since it was opened up to private players in 1999. The liberalization transformed the industry's outlook towards the huge Indian market. LIC is a major instrument for the mobilization of savings of people and these savings are channeled into investments for the economic development of the country. It may be seen that from about Rs.200 crore in new business in 1957 the Corporation crossed Rs. 1000 crore only in the year 1969-1970 and it took another 10 years for LIC to cross Rs. 2000 crore mark of new business. But with reorganization happening in the early eighties, by 1985-1986 LIC had crossed Rs.7000 crore sum assured on new policies. Today LIC functions with 2048 computerized branch offices, 100 Divisional offices and 7 Zonal offices. The working results of the LIC can be evaluated by various indicators such as Life Insurance Fund, Premium Income, Total Income, Expenses, Interest Rates, Claims-Settlements, Number of Offices, and Productivity of Agents and so on. This study analyses how the corporation helps in corporate sector in terms of financial assistance.

2.2 Theoretical Reviews:

Mishra.M.N [26] **(1985)** opined that there was enough market potentialities for the insurance people in India. But because of the prevailing competition many insurance policies in the past could not continue for the tenure because of lack of services to the policy holders. The study concluded that the opening of new branches, training of LIC agents at periodical intervals, arranging regular meetings of agents, new classification of agents as leaders, challengers, followers and nichers to put the morale of agents at higher level would overcome the shortcomings.

Banerjee A.K [27] **(1992)** opined that the Public Relations activities should not be confined to few persons meant exclusively for that purpose but should be exercised by all right from sub–staff to the branch manager and also by agents and development officers in a branch office. Smiling, courteous and efficient services with the policy – holders are necessary to meet the rising consumer aspirations along with the free flow of information from LIC's branches to divisional, zonal and central offices.

Bernstein I.Jeffrey [28] (1999) discussed the total factor productivity growth and performance in the Canadian life insurance industry. The proportion of GDP contributed by the manufacturing sector during the last three decades has been about 19.0 percent while the service sector has continued to grow reaching 67.0 percent by 1992.Throughout this period, the insurance industry has kept pace with the service sector as a whole. Insurance accounts for about 0.70 percent of GDP. The GDP contribution of Life insurers from 1981 to 1992 increased from 0.30 to 0.42 percent.

Gupta, Aarti and Chuganee, Bhakti [29] (2001) emphasized the steps to be taken by LIC to compete with the new players. As the insurance sector has opened up, the monopoly giant has been challenged and LIC has to face world-class competition. Improvement is needed in the areas of products, services, information technology and active participation of its entire workforce. Through skill upgradation the excess manpower can be utilized in raising business volumes.

Kumar,Neeraj [30] (2002) emphasized that the life insurance is a long term business and for determining the premium, the expected interest rate over the term of the policy is one of the key inputs. Bonus rates are decided based on surplus determined by actuarial valuations, which is done every year. Investment income, which depends on the return on fixed interest investments, is a significant contributor for surplus. Life insurer puts money in government bonds and government guaranteed bonds, which carry almost no default risk and consequently have lower expected returns in comparison to riskier investments. This is done because security of the funds is among the life insurer's foremost concerns.

In an article published in the national newspaper "The Hindu" in **2002, S.B. Mathur [31]** , Chairman of LIC emphasized on the stiff competition from new entrants in the life insurance sector. Twelve new players have entered Indian Life insurance sector and posed a challenge to the growth of the world's biggest insurance corporation LIC of India. They all had sound background and high brand equity. According to Mathur, the new players might not be very ethical in all respects but they pose a big challenge to LIC. Competitors would concentrate on that area which was not covered by LIC and development officers must work carefully to ensure that the people are not weaned way from LIC.

Lorilee schnider [32] (2003) provides a detailed outlook of the change in the demand and supply of insurance around the world taking various appropriate parameters into consideration like, demographics, economics, socio-cultural influences, financial convergence, taxation, legal system, catastrophes, changing patterns of supply, globalization and consolidation, financial integration, liberalization of trade, privatization and individual responsibility, regulation and taxation, etc. He concluded saying that the market place has grown as the world has shrink.

Mathur S.B [33] (2003) has the opinion that joint efforts need to be made by all insurance operators for the market to extend the coverage to millions of insurable people who need and can afford life insurance. LIC, since nationalization, has performed exceedingly well and contributed immensely to the process of economic development through its multi-dimensional activities. LIC today services over 12 crore policies which is a record for any life insurance company in the world. It settled over 86.55 lakh claims including survival benefits payments and maturity claims during the year. There is no other life insurance company in the world that settles such a large number of claims. During 2000, the Indian insurance industry as a whole witnessed an inflation adjusted growth of 16.6 percent as against 6.6 percent of global growth rate. At present there are 58 products being sold by LIC. Yet, the pension market in India mostly remains untapped and this is probably the potential segment of the life insurance market in India. There is also a need for promoting a different distribution channel for expanding the rural insurance market.

Ashish Sadh, Soniya Billore [34] (2003) opined that in the insurance sector, branding has typically involved the concepts of stability, trust and protection. With liberalization of the industry, players have to realize the need for branding in a competitive environment. Insurance companies need to strive to build a brand in order to attract both the end customer and intermediaries. The study tries to understand the features that come up in the insurance product advertisement in the Indian industry and how closely the advertisements are in line with what has been theoretically prescribed as ideal way of communication for the insurance products. The results of the analysis will be particularly useful for the players of the insurance industry, the media world and academicians.

Ayyar [35] (2004) examines the various issues of significance to LIC and to policy-holders on the entry of new players into the industry. New entrants in this area have technical collaboration with companies having headquarters in countries like the USA, UK, Australia, etc. They will bring in new insurance products and administrative procedures. Thus, it is expected that the life insurance business in India will benefit and grow on sound lines. Competition will be in the form of new products from other insurers. If the LIC agents are not fully conversant with the new product of other competing insurers, they will lose out in the race and miss the bus. The way to ensure that such a situation would not develop is to train agents on what is happening around and help them to convert the emerging challenges to opportunities. Moreover, LIC is gearing itself up to attain newer heights through involvement in all its vast workforce. LIC is marketing its products more aggressively and identifying new markets which it plans to tap with specially trained agents. New distribution channels for insurance products are being tried. Banks have been roped in and are authorised to sell insurance.

Ahuja,Rajeev [36] (2004), is of the opinion that the insurance regulator in India, the IRDA is entrusted not only with regulating the Indian insurance market but also developing it. Thereby IRDA imposed social obligation in the form of covering certain minimum number of individuals in certain

Well-identified sections of the society by both life and non-life insurers in each year of their operations. The rural obligations are in terms of certain minimum percentage of total policies written by life insurance companies and the obligations are in terms of percentage of total gross premium collected. The impact of rural and social obligations on extending insurance to the intended people has been positive.

IAIS, Guidance paper on Investment Risk Management [37] (2004) examines how the various investment related risks are identified, measured and managed. The paper provides guidance on effective investment risk management for insurers and reinsurers and highlights issues applicable to the management of marketing risk, credit risk and liquidity risk. Thereby it provides guidance for the supervisor when evaluating investment risk plus policies and practices including the main set of data and documents, which the supervisor should consider when assessing and monitoring the investment risk management of insurers. This covers areas like: conditions for effective insurance supervision, supervisory objectives, Corporate Governance, internal Control, Market analysis, Risk assessment and management, Investments, Derivatives and Commitments.

Ron Clark [38] (2004) examines the challenges faced by the life insurance and financial services industry. These challenges were referred to as “ice bergs” that includes regulation, rating agencies, industry consolidation, product complexity and public perception. But the end game is to make sure that all the aspects of life insurance, annuities etc come together in a way that people can understand and rationalize and concludes with a note that the industry has a bright future.

Srinivasa [39] (2004) attempts to highlight the use of information technology, its utilities, tools, systems and techniques that help improve the spread of the concept of insurance to the general public. For a country with over 100 crore population, manual processes cannot meet the requirements. If digital processes, with user-friendly features, are put in place, India could become the I.T. leader in the world and render services for the rest of the world. The immense untapped potential for the life insurance market demands innovative thinking and execution of the plan in a creative manner. Gone are the days of customer loyalty. These are the days of customer hopping from shop to shop, swapping the channels and surfing the internet. Price is no bar, provided the quality of service is good. Expectations of customers rise exponentially with the refinements to the IT. based devices /utilities. Life insurance is a capital intensive industry, where the breakeven period has been estimated to be around 7 years. Cooperation and coordination amongst the member companies would help improve the image of the industry in the economy.

Agarwal, Preeti [40] (2005) discussed the insurance status in India for the poor. Insurance is more concentrated in relatively financially stable urban areas, but the requirement for a cushion to absorb risks is greater among rural and urban poor. Even after the opening of insurance to private players in India, its penetration is very low compared to that of developed nations. Therefore for the development of the economy, insurance penetration in India should grew, but that growth will be possible only when suitable products become available. The poor and needy find insurance a risky proposition with their uncertain and irregular incomes and with their limited ability to read about its benefits. The male literacy rate in India in the year 2000 was 68.4 percent and female literacy rate in India in the year was only 45.4 percent. Thus, access is not sufficient in rural areas in India. Health insurance, whether social or private whether formal or informal, is extremely limited in India. Although a number of private insurance companies have entered the field, no significant change in health insurance has been observed either in the availability of new health insurance products or in the volume of business.

Ajay Seeneja and Kirti Sharma [41] (2005) examined after privatization of life insurance sector there is tremendous improvement in agency network. But there is still a need to make insurance marketing more professional in terms of knowledge, products and remuneration. Presently the Indian insurance is one of the least insured markets in the world. India has a population of 1044.15 million of which only 77.7 million have life insurance policy. Again the share of India in world market in terms of gross insurance premium is only 0.3 percent and this is mainly because of low insurance awareness, term insurance covers are expensive, returns from insurance products are very low and a strategic dearth of innovation and buyer friendly insurance products.

Priti Saha [42] (2005) studied the relevance of professional qualification in insurance sector and found out that the growth and profitability of an insurer is not only based on simple sales but to a great extent depends on a sizeable percentage of new business retention. Customer retention is result of optimized customer satisfaction, which is based on i) innovative need based products ii) competitive price iii) quality of underwriting of risk and iv) quality after sales service. Competition, new technologies, unbounded globalisation and rise in customer’s expectations have created a compulsion for every insurer to prove itself in creating innovative products, providing effective services and satisfying existing customers in order to survive.

Padmavathi V [43] (2006) evaluates the intricacies involved in selling and buying unit linked insurance policies form risk management perspectives, and makes relevant suggestions to sellers, buyers, financial planners and the regulatory authority. Thereby it states that the insurance companies should think of declining equity markets, should accept the risk and provide protection from risk unlike transfer it to policyholders,

should educate the agent and public regarding features of the product. The regulator should curb the practice of insurance companies deploying all their funds of ULIPs in capital market, should make it mandatory for life insurance companies to offer cover worth four to five times the annual premium for unit linked policies.

P.S. Palande, R.S. Shah and M.L. Lemawat [44] (2007) examines the growth and development of Indian Insurance Industry, ways of preparing for competitive environment, their proactive and focused strategies, new range of products and services, evolving markets and strategies, regulations and emerging scenario. Questions like would privatizations mean only selling of public sector units to private parties or would it be possible to allow public sector companies to continue and encourage the entrance of the private sector was debated. It was concluded that the coexistence of the private and public units would benefit the economy.

Dr. Aravind, Chandrasekhar.S Kancheti [45] (2007) focuses on the relevance of the insurance sector for the overall stability of the financial system. Thereby it studies some major challenges ahead for the insurance sector like, insurers risk management capabilities keeping pace with risk profile, insurance commissions solvency II project, introduction of the (IAS) international accounting standards, ensuring the efficient functioning of the new institutional infrastructure recently setup for the financial sectors.

Dr. B. Manoharan [46] (2007) examines that today LIC is widely accepted as one of the most attractive financial instruments in an individual's portfolio that provides an assurance of security with attractive returns. Now LIC functions with 2048 fully computerized branches, 101 divisional offices, 7 zonal offices and the corporate office. It has crossed the milestone of issuing 1,01,32,955 new policies by 15th October 2005. LIC invests policyholder's money to various socially oriented sectors and concludes that LIC is the best organization to protect the customer's money and life.

K.C. Mishra [47] (2007) attempts to identify the reasons for low penetration in insurance in the country. It argues how technological developments help the spreading and marketing of life changes and how demographic changes and technological developments impact the spread of insurance in India. The study concluded that life insurers have to continuously change their product and overwriting portfolios. There will be cardinal changes in health management products, pension products and wealth management products, pure risk management products that manage the vertical and horizontal slices of a primary insurer's risk.

V. Padmavathi [48] (2007) focuses on the theoretical base for the cost of lapsation of life insurance policies, by studying what is a lapsation rate, its methods of measurement and ratios to analyze the measurement. The study shows the lost income, lost opportunity and reduced distributable surplus of LIC by taking information from their annual reports.

It concluded with the latest trends in lapsation such as "Lapse supported policies' and "Viatical settlements" in the Indian scenario.

Dr. N.N. Sengupta [49] (2007) examines the reasons for raising FDI and lists that this would open up fresh investment prospects in India, expanding economy and infrastructure, would expand the capacity of Indian insurance industry and employment. Global insurers have brought a substantial number of new and innovative insurance products and services, shared global best practices, management skills and product development know-how with local partners. As a result, insurance business gaining entry to Indian market, policyholders from many walks of life are benefiting from urban dwellers seeking financial planning assistance to farmers benefiting by way of micro insurance. It concluded that there are substantive benefits in raising the FDI caps on insurance from 26 percent to 49 percent and thereby strengthening Indian citizen's ability to manage risk.

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Chapter III - Research Methodology

This chapter highlights the methodology of the study. It consists of seven sections. The first section discusses the objectives of the study and the second deals with the organization of the study. The Third section states the period of the study. The Fourth deals with the method of data collection. The Fifth section lists the determinants identified for the study. The sixth section deals with the statistical tools used for analysis of the study and the seventh section lists the limitations of the study.

3.1 Objectives of the Study

To study the performance of Life Insurance Corporation Of India, the three basic diagnostic tools referred by the **Management Guru, Peter Drucker** in his book “Essential wisdom of Peter Drucker from the pages of Harvard Business Review ” namely Competence, Productivity and Allocation was taken as the base in terms of Performance, Productivity and Investment and thereby the following objectives are identified and defined:

1. To study the overall performance, productivity and investment portfolio management of Life Insurance Corporation of India during the selected period of study

2. To study the impact of the entry of private life insurers in the performance of Life Insurance Corporation of India

3.2 Organization of the Study

The whole study covers a period from 1993-94 to 2007-08 and is presented in five chapters.

Chapter I contains the overview of insurance sector, history and origin of life insurance in India, review of general economic environment, appraisal of life insurance industry with the problem of the study.

Chapter II elaborates the review of literatures covering both empirical and theoretical studies on insurance business.

Chapter III contains the methodology of the study including the objectives of the study, period of the study, method of data collection, list of determinants, the tools used for analysis and the limitations of the study.

Chapter IV contains the entire analysis. The section deals with the analysis of the performance, productivity and investment portfolio of Life Insurance Corporation of India for the period of 15 years.

Chapter V discusses the major findings of the analysis, suggestions, conclusions of the study and the scope for further research.

3.3 Period of Study

The study evaluates the performance of Life Insurance Corporation of India, a public sector giant covering a period of fifteen years from 1993-94 to 2007-08 in consideration of the post liberalization period.

3.4 Data Collection

The study is entirely based on secondary data. These data have been collected from the relevant annual reports of the Life Insurance Corporation of India, Statistical yearbooks of Life Insurance Corporation of India, various news bulletins of LIC and the Annual Reports and Journals of IRDA. Apart from these two major sources various magazines devoted to issues related to Insurance, like Insurance Plus, Insurance Chronicle, Insurance Times, Insurance Worker etc have also been used to supplement data and information required for the study. Interactions and discussions with the officials of the Life Insurance Corporation and private insurance companies have also contributed in augmenting the required data and information. A number of other websites relating to insurance business have been visited for the purpose of data collection.

3.5 Determinants for Assessing the Overall Performance of Life Insurance Corporation of India:

The following are the list of key determinants sourced from the balance sheets and the annual reports of IRDA exclusively for evaluating the insurance companies in India. The determinants identified are listed based on three categories as performance, productivity and investment portfolio as per the objectives of the study.

i) Determinants of Performance of Life Insurance Corporation of India – has been evaluated on the basis of the following indices:

✓ New Business in India

✓ New Business out of India

✓ Business in force in India

✓ Business in force out of India

✓ New Rural Business

✓ Share of Rural business to Total business.

✓ New Business progress under group superannuation schemes

✓ Business in force under group insurance and superannuation schemes

✓ Growth in active agents

✓ Composition of income

✓ Average sum assured per policy

✓ Ratio of First insurance to Total business in terms of number of policies and Sum assured

✓ Life Insurance Fund

✓ Claims settlement operations

✓ Analysis of utilisation of income

ii) Determinants of Productivity of Life Insurance Corporation of India –

This has been measured in terms of the following indices:

✓ New business per branch

✓ New business per agent

✓ Number of policies per branch

✓ Number of policies per agent

✓ Premium income per agent

✓ Premium income per branch

✓ Ratio of expenses to premium income

✓ Complaints per thousand mean number of policies in force

✓ Percentage of outstanding claims to total claims payable

✓ Members of various agents

iii) Determinants of Investment portfolio of Life Insurance Corporation of India - In order to study the investment portfolio of LIC the following variables were identified and analyzed:

✓ Loans advanced for various development activities

✓ Composition of Investments of LIC as per IRDA guidelines

3.6 Tools for Analysis:

The well known statistical package viz., SPSS 11.0 was employed for the analysis. For evaluating the performance of LIC, measuring their productivity, analyzing their portfolio management, **summary statistics showing the minimum value, maximum value, mean, standard deviation, coefficient of variation, annual growth rate, compounded growth rate (CGR),cubic trend equation** were computed for different variables. For the determinants like new business in India, new business out of India, business in force in India, business in force out of India, **Inter correlation matrix, multiple regression models and path coefficient analysis** were further used to test the interrelation and their effects.

For clustering the sources of income of LIC, **factor analysis** was used and to further enhance the interpretability the factors are rotated using **varimax rotation** for better interpretation.

Line graphs and Pie charts have also been drawn wherever necessary, to provide a visual pattern of growth and comparison.

3.7 Limitations of the Study

1. The data collected was mainly of time series in nature. Hence the limitation of time series data in case of using tools for analysis was faced by the researcher
2. To evaluate the efficiency of Life Insurance Corporation of India**,** the researcher concentrated only on three factors namely performance, productivity and investment portfolio of the companies leaving other factors.
3. All the analysis were carried out on the basis of data in financial statements. Hence, the errors in financial statements will reflect in analysis.
4. Primary data has not been included as the focus of the study was on secondary data only.

Chapter IV - Analysis of Overall Performance of Life Insurance Corporation of India and the Impact of Privatization

In analyzing the overall performance of Life Insurance Corporation of India the three main core areas namely performance, productivity and investment portfolio management have been analyzed using the key determinants listed in the reports of Insurance Regulatory Development Authority (IRDA), exclusively for the evaluation of the insurance companies in India.

4.1 Performance of LIC

Performance refers to the accomplishment of a given task measured against preset known standards. In order to evaluate the performance, definite goal and objectives have to be set-up first. Performance evaluation is a must in order to find out the loopholes in the functioning and working of any activity. It also widens the scope for improvement. Thus, performance evaluation is a measure of assignment based on authentic tasks such as activities, exercises or problems.

The main objective of the study is to evaluate the overall performance of LIC of India during a period of fifteen years from 1993-94 to 2007-08.The performance of LIC has been evaluated on the basis of quantum of business as well as income of the Corporation. The analysis has been made by using the following performance measures:

A) Individual Insurance

4.1(a) New business in India

4.1(b) New business out of India

4.1(c) Business in force in India

4.1(d) Business in force out of India

4.1(e) New rural business

4.1(f) Share of rural business to total business

B) Group Insurance

4.1(g) New business progress under group superannuation schemes

4.1(h) Business in force under group insurance and superannuation schemes

C) Other performance measures

4.1(i) Growth in active agents

4.1(j) Composition of income

4.1(k) Average sum assured per policy

4.1(l) Ratio of First insurance to Total business in terms of number of policies

4.1(m) Ratio of First insurance to Total business in terms of sum assured

4.1(n) Life insurance fund

4.1(o) Claims settlement operations

4.1(p) Net lapse ratio

4.1(q) Analysis of utilisation of income

I.A Individual insurance

4.1(a) New business in India

In pursuance of the corporate objectives of providing insurance cover to more and more people, greater emphasis is laid on covering individuals who have no previous insurance on their lives. New business is a pointer towards the spread of message of insurance among those people who have never availed the benefits of life insurance as well as the exiting policyholders. New business of individuals in India includes the performance of the corporation in terms of number of policies, sum assured and the total annual premium during a particular year. It is one of the significant criterion for evaluating the performance of the corporation and thus the performance of the new business in India is analyzed for the period from 1993-94 to 2007-08 in the Table 4.1.

The annual premium ranges between Rs.2507.73 crores to Rs.16009.44 crores with a mean of Rs.8249.79 crores and a coefficient of variation of 58.24 percent. The annual premium has shown an average growth rate of 14.72 percent.

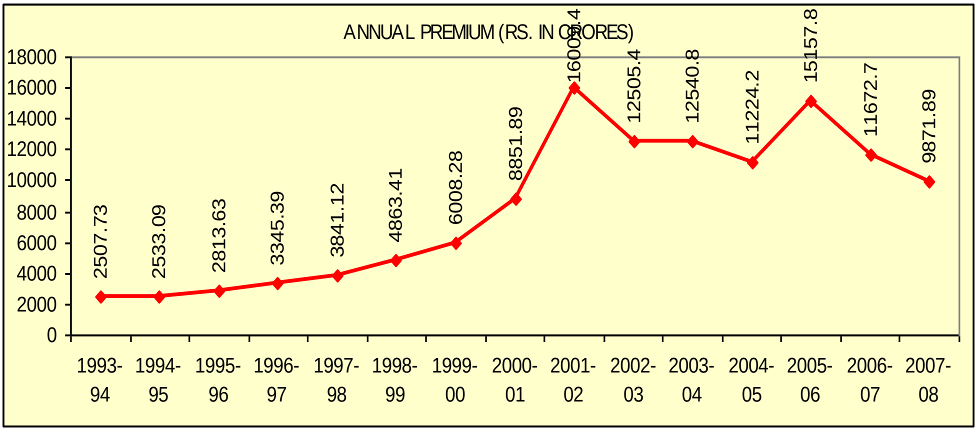
Table No: 4.1 - Table Showing the New Business of LIC in India

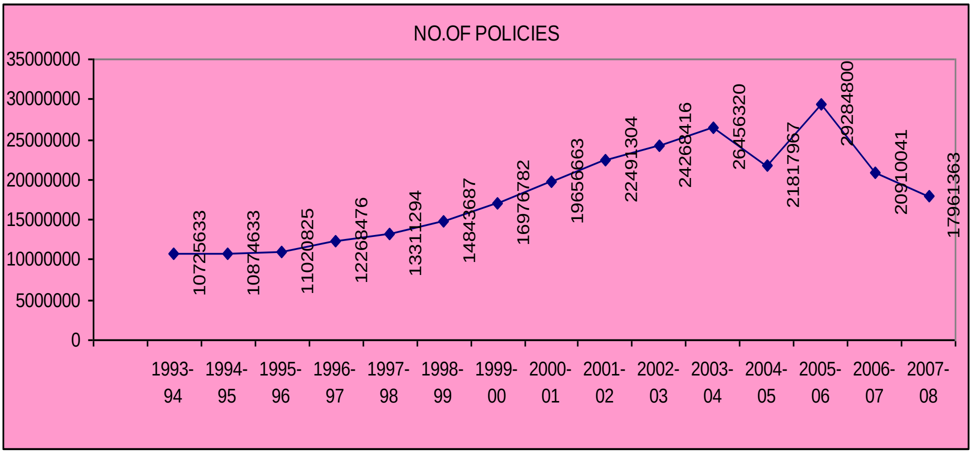
Year	Annual Premium (Rs. in Crores)	Percent Growth Over Previous Year	Number of Policies	Percent Growth Over Previous Year	Sum Assured (Rs. in Crores)	Percent Growth Over Previous Year
1	2	3	4	5	6	7
1993-94	2507.73	-	10725633	-	41813.83	-
1994-95	2533.09	1.04	10874633	1.39	55228.50	32.08
1995-96	2813.63	11.03	11020825	1.34	51815.54	-6.17
1996-97	3345.39	18.89	12268476	11.32	56740.50	9.5
1997-98	3841.12	14.83	13311294	8.5	63617.69	12.12
1998-99	4863.41	26.61	14843687	11.51	75316.28	18.38
1999-00	6008.28	23.54	16976782	14.37	91214.25	21.1
2000-01	8851.89	47.32	19656663	15.78	124771.62	36.78
2001-02	16009.44	80.85	22491304	14.42	192572.27	54.33
2002-03	12505.38	-21.88	24268416	7.9	179512.27	-6.78
2003-04	12540.83	0.28	26456320	9.02	198707.12	10.69
2004-05	11224.19	-10.50	21817967	-17.53	179481.39	-9.68
2005-06	15157.76	35.05	29284800	34.22	283763.74	58.1
2006-07	11672.72	-22.99	20910041	-28.6	201620.74	-28.95
2007-08	9871.89	-15.43	17961363	-14.1	173662.72	-13.87

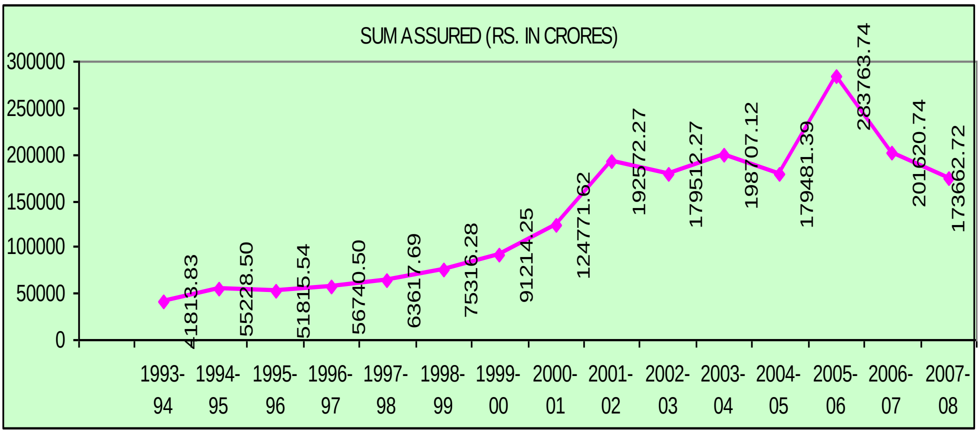
	Min.Val.	Max.Val.	Mean	SD	C.V (%)	C.G.R (%)
Annual premium (Rs. in Crores)	2507.73	16009.44	8249.78	4804.74	58.24	14.72
Number of policies	10725633	29284800	18191214	5986911	32.91	6.70
Sum assured (Rs. in Crores)	41813.83	283763.7	131322.6	74625.15	56.83	14.10

Source: Annual Reports, 1993-94 to 2007-08

Chart No: 4.1 - Charts showing the New Business in India







The number of policy ranges between 10.73 crores to 29.3 crores with a mean of 18.2 crores and a coefficient of variation of 32.91 percent and has shown a growth at 6.70 percent.

The sum assured ranges between Rs.41813.83 crores to Rs.283763.7 crores with a mean of Rs.131322.6 crores and a coefficient of variation of 56.83 percent and has shown a compound growth rate of 14.10 percent.

In all these cases a steady growth has been observed for the period from 1993-94 to 2001-02 after which a fluctuating trend has been observed. From 2002-03 onwards a decline in growth rate has been noticed due to recession as well as intense competition from private insurers. This indicates that the performance of LIC was affected by the entry of private players.

Trend Analysis of New Business in India During 1998-99 To 2007-08

To study the pattern of trend of the parameters the polynomial trend equation namely, cubic trend equation of the form,

$$Y = b_o + b_1 t + b_2 t^2 + b_3 t^3$$

are presented below. Where bi's (i=1,2 & 3) are trend coefficients, b_o = constant, t_i = ith year(i=1,2,.......,10) . The F-values indicate the overall significance of the trend equation and R^2, the coefficient of determination indicates that to what extent the trend coefficients are able to explain the variations of the dependent variables under study.

Table No: 4.2 - Trends in New Business in India

	R^2	D. F	F Value	Trend Coefficients			
				b_0	b_1	b_2	b_3
Annual Premium (Rs. in Crores) Y1	0.902	10	30.7**	5382.7	-2853.8	671.05	-30.78
Number of policies Y2	0.948	10	60.9**	1.5E+07	-4.E+06	939273	-43672
Sum assured (Rs. In Crores) Y3	0.917	10	37.0**	99615	-46577	9836.58	-422.57

** Significant at 1% level

Annual premium (Rs. in Crores) $Y1= 5382.7 -2853.8 t + 671.05 t^2 - 30.78 t^3$

Number of policies $Y2 = (1.5E+07)-4.E+06t + 939273 t^2 – 43672 t^3$

Sum Assured (Rs. in Crores)$Y3= 99615 – 46577 t + 9836.58 t^2 – 422.57 t^3$

The significant F value reveals the overall significance of the above Cubic trend equation. The Coefficient of determination R^2 indicates that the trend equations b1, b2 and b3 put together explain the variations of Y1 to the extent 90.2 percent, Y2 to the extent of 94.8 percent and Y3 to the extent of 91.7 percent, which shows the adequacy of the model fitted to forecast the trend values. The forecasted value for any 't' value-(year) can be obtained from the above trend equation. The above significant cubic trend equations forecast positive trend for this determinant in the future years.

4.1(b) New Business outside India:

The Corporation directly operates through its Branch offices at Port Louis in Mauritius, Suva and Lautoka in Fiji and at Wembley in the United Kingdom. First ever-Representative Office was opened in Singapore on 6th November, 2008. This Office is engaged in market research, study of regulatory issues and assessment of potential for viable operations through appropriate route. LIC operates in international markets through its branch offices as well as joint venture subsidiaries.

Foreign Joint Venture Companies:

i) LIC (International) B.S.C.(c), Bahrain:

LIC (International) B.S.C. (c), Bahrain was established in Bahrain in 1989 as a joint venture company which caters to the life insurance needs of NRIs and local population in the Gulf by issuing policies in US Dollars. The company operates in 5 GCC countries of Bahrain, Kuwait and UAE (through Chief Agents), Qatar (through Broker) and Oman (through Branch Office). As a part of its expansion activities, the Company has entered in to a brokership arrangement with a local company in Thailand.

ii) LIC (Nepal) Ltd:

LIC (Nepal) Ltd., a joint venture company between LIC of India and M/S Vishal Group of companies in the Republic of Nepal was established on 3 rd December 2001.

iii) LIC (Lanka) Ltd:

LIC (Lanka) Ltd., a joint venture company between LIC of India and M/S Bartleet Transcapital Ltd. was established on 1 st March 2003.

iv) Kenindia Assurance Co. Ltd.:

Kenindia Assurance Co. Ltd., a joint venture company between LIC of India, GIC and others was established on 06.12.1978 in Kenya. The Company transacts both life and non-life business.

v) Saudi Indian Company for Co-operative Insurance:

Saudi Indian Company for Co-operative Insurance (SICCI) is a joint venture company between LIC of India, LIC (International) B.S.C. (c), Bahrain, New India Assurance Company Limited, Al-Hokair Group and public from Saudi Arabia where LIC of India and LIC (International) hold 10.2 percent share each. Commercial License was granted on 8.8.2007. The Company began its Life Operations in January 2009.

vi) LIC (Mauritius) Offshore Limited.

LIC (Mauritius) Offshore Limited (LICMOL), a joint venture company between LIC of India and GIC of India where LIC of India holds 70 percent share has decided to defer life business activities and is contemplating to pursue non-life reinsurance business with active participation of GIC of India.

Table 4.3 shows the offshore new business of the corporation for the period of study. The annual premium ranges between Rs.11.46 crores to Rs.26.5 crores with a mean of Rs.18.64 crores and a coefficient of variation of 28.12 percent. There were many fluctuations in the performance of LIC right from the initial period of the study and in particular in 2000-01. This is the year when the private insurers entered the sector. Afterwards LIC gradually picked up with slight increase and decrease in its performance and has shown an average annual growth at 4.61 percent.

Table No: 4.3 - Table Showing the New Business of LIC outside India

Year	Annual Premium (Rs. in Crores)	Percent Growth Over Previous Year	Number of Policies	Percent Growth Over Previous Year	Sum Assured (Rs. in Crores)	Percent Growth Over Previous Year
1	2	3	4	5	6	7
1993-94	12.13	-	12376	-	199.07	-
1994-95	14.93	23.00	13304	7.49	240.32	20.72
1995-96	15.63	4.68	13345	0.30	255.99	6.52
1996-97	15.39	-1.53	12296	-7.86	253.44	-0.99
1997-98	18.07	17.41	13904	13.07	310.14	22.37
1998-99	17.11	-5.31	13356	39.40	289.98	-6.50
1999-00	17.74	3.68	12648	-5.30	276.69	-4.58
2000-01	11.46	-35.40	7911	-37.40	179.01	35.30
2001-02	12.57	9.68	8695	9.91	212.69	18.81
2002-03	18.85	49.96	10359	19.13	298.95	40.55
2003-04	23.27	23.45	11562	11.61	341.4	14.19
2004-05	26.50	13.88	13807	19.42	405.27	18.71
2005-06	25.24	-4.75	13370	-3.17	416.1	2.67
2006-07	24.94	1.19	12059	-9.81	403.71	-2.98
2007-08	25.74	3.21	10509	-12.85	381.08	-5.61

	Min. Val.	Max. Val.	Mean	SD	C.V (%)	C.G.R (%)
Annual premium (Rs. in Crores)	11.46	26.5	18.64	5.24	28.12	4.61
Number of policies	7911	13904	11967	1842.01	15.39	-1.27
Sum assured (Rs. in Crores)	179.01	416.1	297.59	77.63	26.09	4.11

Source: Annual Reports, 1993-94 to 2007-08.

The number of policies ranges between 7911 and 13904 with a mean of 11967 and a coefficient of variation of 15.39 percent and has shown an overall negative growth rate of 1.27 percent.

The sum assured ranges between Rs.179.01 crores to Rs.416.1 crores with a mean of Rs.416.1 crores and a coefficient of variation of 26.09 percent with a growth of 4.11 percent.

It has been observed from the analysis of new business the progress of LIC in foreign countries is highly volatile in case of annual premium, number of policies and sum assured. This is the impact of the entry of private players. Therefore, LIC must make some conscious efforts to explore more business outside India and record a consistent growth.

Chart No: 4.2 - Chart showing the New Business out of India

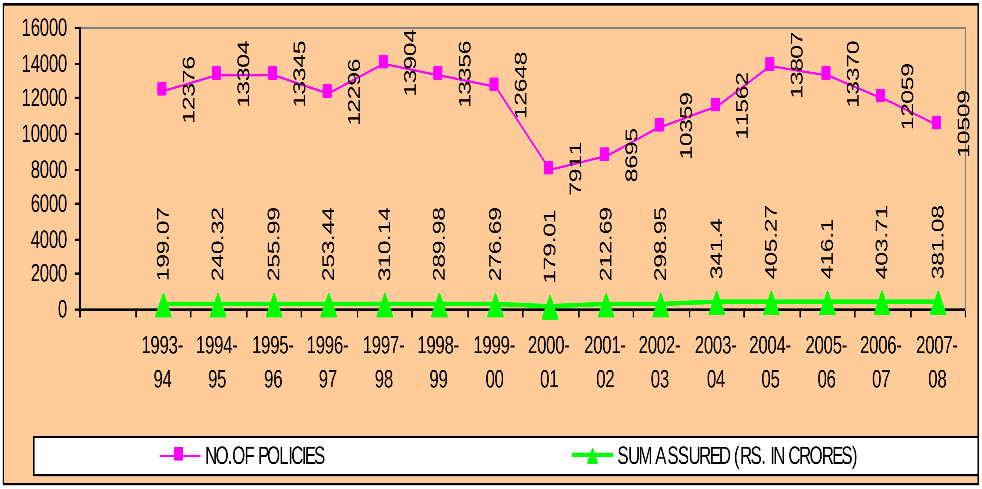


Table No: 4.4 - Trends in New Business Outside India

	R^2	D. F	F Value	Trend Coefficients			
				b_0	b_1	b_2	b_3
Annual premium (Rs. in Crores) Y1	0.716	10	8.40**	12.673	1.105	-0.1	0.0096
Number of policies Y2	0.265	10	1.20	12788.4	388.581	-125.15	6.4593
Sum assured (Rs. in Crores) Y3	0.648	10	6.14*	202.961	21.947	-3.055	0.1733

** Significant at 1% level

Annual premium (Rs. in Crores) $Y1 = 12.673 + 1.105\,t - 0.1\,t^2 + 0.0096\,t^3$

Number of policies $Y2 = 12788.4 + 388.581\,t - 125.15\,t^2 + 6.4593\,t^3$

Sum Assured (Rs. in Crores) $Y3 = 202.961 + 21.947\,t - 3.055\,t^2 + 0.1733\,t^3$

The significant F value reveals the overall significance of the above Cubic trend equation. The Coefficient of determination R^2 indicates that the trend equations b1, b2 and b3 put together explain the variations of Y1 to the extent 71.6 percent, Y2 to the extent of 26.5 percent and Y3 to the extent of 64.8 percent, which shows the adequacy of the model fitted to forecast the trend values. The forecasted value for any 't' value-(year) can be obtained from the above trend equation. The above significant cubic trend equations forecast positive trend for this determinant in the future years.

4.1(c) Business in force in India:

Business in force includes the sum assured, number of policies and the total premium till date. It is the major indicator of the growth of the corporation. It reveals the amount of business that the corporation has been able to conduct in the country.

Table No: 4.5 - Table Showing the Business in Force in India

Year	Annual Premium (Rs. in Crores)	Percent Growth Over Previous Year	Number of Policies (In Lakhs)	Percent Growth Over previous Year	Sum Assured (Rs. in Crores)	Percent Growth Over Previous Year
1	2	3	4	5	6	7
1993-94	8758.19	-	608.00	-	207601.00	-
1994-95	10384.91	18.57	645.52	7.65	253333.00	22.02
1995-96	12093.63	16.46	708.78	8.30	294336.00	16.18
1996-97	14499.50	19.89	776.66	9.57	343018.00	16.53
1997-98	17065.64	17.69	849.15	9.33	398959.00	16.31
1998-99	20234.05	18.56	916.37	7.91	457435.00	14.65
1999-00	24540.37	21.28	1012.99	10.54	534589.00	16.86
2000-01	34117.92	39.02	1130.24	11.57	643241.00	20.32
2001-02	42336.84	24.08	1257.89	11.29	809170.00	25.79
2002-03	48148.98	13.72	1387.88	10.33	957501.00	17.96
2003-04	62333.71	12.30	1539.21	10.90	1113735.00	16.68
2004-05	68700.99	10.21	1629.50	5.67	1029839.00	11.32
2005-06	77303.43	12.52	1795.63	10.20	1280159.00	24.31
2006-07	81382.12	5.28	1895.17	5.54	1397468.01	9.16
2007-08	79142.55	-2.75	1924.28	1.54	1485379.90	6.25
	Min.Val.	**Max.Val.**	**Mean**	**SD**	**C.V (%)**	**C.G.R (%)**
Annual premium (Rs. in Crores)	8758.19	81382.12	40069.52	27389.94	68.36	19.11
Number of policies (In Lakhs)	608	1924.28	1205.15	464.62	38.55	9.30
Sum assured (Rs. in Crores)	207601	1485380	747050.90	437433.2	58.55	15.81

Source: Annual Reports,, 1993-94 To 2007-08.

Table 4.5 shows the business in force in India of LIC and it reveals that the annual premium ranges between Rs.8758.19 crores to Rs.81382.12 crores with a mean of Rs.40069.52 crores and a coefficient of variation of 68.36 percent and has shown a compounded growth rate of 19.11 percent.

The performance has been consistent till 2001-02 and thereafter from 2002-03 onwards the business in force has shown a decline in growth rate.

The number of policies ranges between 608 lakhs to 1924.28 lakhs with a mean of 1205.15 lakhs and a coefficient of variation of 38.55 percent on an average annual growth at 9.30 percent. The graph of the policies tend to go upward starting from 608 lakhs policies in the year 1993-94 to 1924.28 lakhs number of policies in the year 2007-08.

The Sum assured ranges between Rs.207601 crores to Rs.1485380 crores with a mean of Rs.747050.9 crores, coefficient of variation of 58.55 percent and has shown an average growth rate of 15.81 percent. LIC's performance was consistent with Rs.207601 crores in the year 1993-94 to Rs. 1485379.90 crores in the year 2007-08.

It was witnessed from the analysis that the growth progress of LIC was steady till 2001-02 and with a decline in the growth rate from 2002-03 onwards. This is due to the competition given by private players to LIC and was the impact of the entry.

Chart No: 4.3 (a) - Chart Showing the Business in force in India

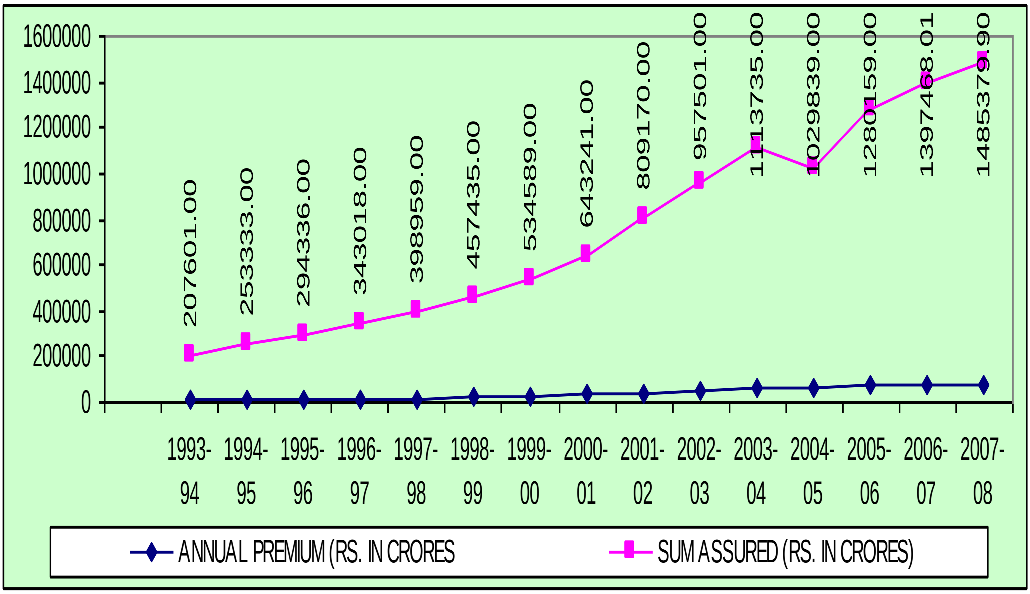


Chart Showing the Business in force in India (In lakhs)

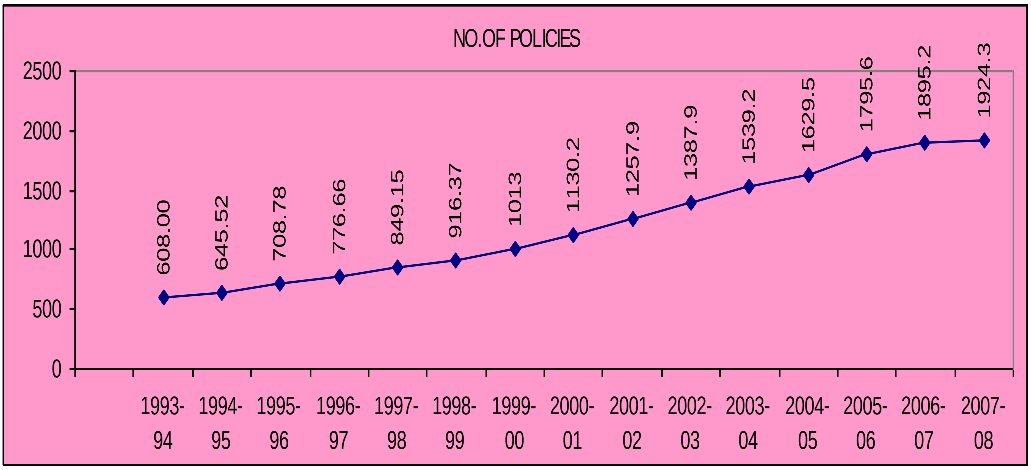


Table No: 4.6 - Trends in Business in Force in India

	R^2	D. F	F Value	Trend Coefficients			
				b_0	b_1	b_2	b_3
Annual premium Y1	0.990	10	332.**	16929.8	- 6643.2	1553.83	- 54.467
Number of policies Y2	0.998	10	1382**	639.029	- 24.606	15.1472	- 0.5084
Sum assured Y3	0.996	10	766.**	274060	- 50175	17375.9	- 574.97

** Significant at 1% level

Annual premium (Rs. in Crores) $Y1 = 16929.8 – 6643.5\ t + 1553.83\ t^2 - 54.467\ t^3$

Number of policies (in Lakhs) $Y2 = 639.029 – 24.606\ t + 15.1472\ t^2 - 0.5084\ t^3$

Sum Assured (Rs. in Crores) $Y3 = 274060- 50175\ t + 17375.9\ t^2 – 574.97\ t^3$

The significant F value reveals the overall significance of the above Cubic trend equation. The Coefficient of determination R^2 indicates that the trend equations b1, b2 and b3 put together explain the variations of Y1 to the extent 99 percent, Y2 to the extent of 99.8 percent and Y3 to the extent of 99.6 percent, which shows the adequacy of the model fitted to forecast the trend values. The forecasted value for any 't' value-(year) can be obtained from the above trend equation. The above significant cubic trend equations forecast positive trend for this determinant in the future years.

4.1(d) Business in Force Outside India

LIC caters to the needs of Non-Resident Indians and people of Indian origin by having its existence in the international market through its branches and joint venture subsidiaries. In order to evaluate its business performance it is important to discuss its business in force outside India in terms of premium income, number of policies and sum assured for all the years. Table 4.7 shows the total business in force out of India in respect of various parameters for the years 1993-94 to 2007-08.

Table No: 4.7 - Table showing Business in force outside India

Year	Annual Premium (Rs. in Crores)	Percent Growth over Previous Year	Number of Policies (In Lakhs)	Percent Growth Over Previous Year	Sum Assured (Rs. In Crores)		Percent Growth Over Previous Year
1	2	3	4	5	6		7
1993-94	46.19	-	0.73	-	1018.00		-
1994-95	57.43	24.13	0.77	5.48	1239.00		21.70
1995-96	65.41	14.07	0.82	6.49	1422.00		14.76
1996-97	73.87	12.93	0.84	2.43	1601.00		12.50
1997-98	81.00	9.65	0.88	4.76	1789.00		11.74
1998-99	81.83	1.02	0.89	1.13	1766.00		-1.28
1999-00	90.00	9.98	0.90	1.12	1862.00		5.43
2000-01	89.85	-0.16	0.87	-3.34	1801.00		-3.27
2001-02	96.60	7.51	0.87	0.00	1847.00		2.55
2002-03	106.33	10.07	0.90	3.34	2174.00		17.70
2003-04	131.42	23.61	0.93	7.33	2038.00		-6.67
2004-05	137.16	4.37	1.00	7.53	2213.00		8.59
2005-06	145.00	5.72	0.98	-2.00	2308.00		4.29
2006-07	139.81	-3.57	1.00	2.04	2588.00		12.13
2007-08	145.40	4.01	0.99	-1.00	2598.00		0.39
		Min. Val.	Max. Val.	Mean	SD	C.V (%)	C.G.R (%)
Annual premium (Rs. in Crores)		46.19	145.4	99.15	33.33	33.62	8.00
Number of policies (in lakhs)		0.73	1	0.89	0.08	9.11	1.89
Sum assured (Rs .in Crores)		1018	2598	1884.27	454.54	24.12	5.74

Source: Annual Reports,, 1993-94 To 2007-08.

The annual premium ranges between Rs. 46.19 crores to Rs.145.4 crores with a mean of Rs.99.15 crores and a coefficient of variation of 33.62 percent with an annual growth rate of 8 percent.

The number of policy ranges between 0.73 lakh to 1 lakh with a mean of 0.89 lakh and a coefficient of variation of 9.11 percent. This has shown an average growth rate of 1.89 percent.

The sum assured ranges between Rs.1018 crores to Rs.2598 crores with a mean of Rs.1884.27 crores and a coefficient of variation 24.12 percent. This has shown an average annual growth rate of 5.74 percent.

It was clear from the table that the growth rate of LIC in case of business in force out of the country was fluctuating with slight increase and decrease in their quantum of business and it was negative in the year 2000-01. This was the year when IRDA came into existence and foreign players in collaboration with private players entered this sector. Therefore, LIC must make effort to capture world market.

Chart No: 4.4 - Chart Showing the Business in Force outside India

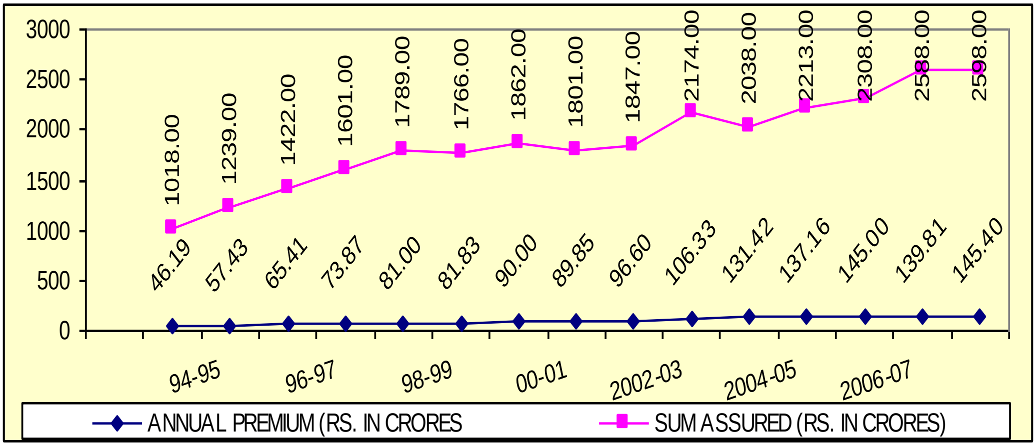


Chart showing the Number of policies (In Lakhs)

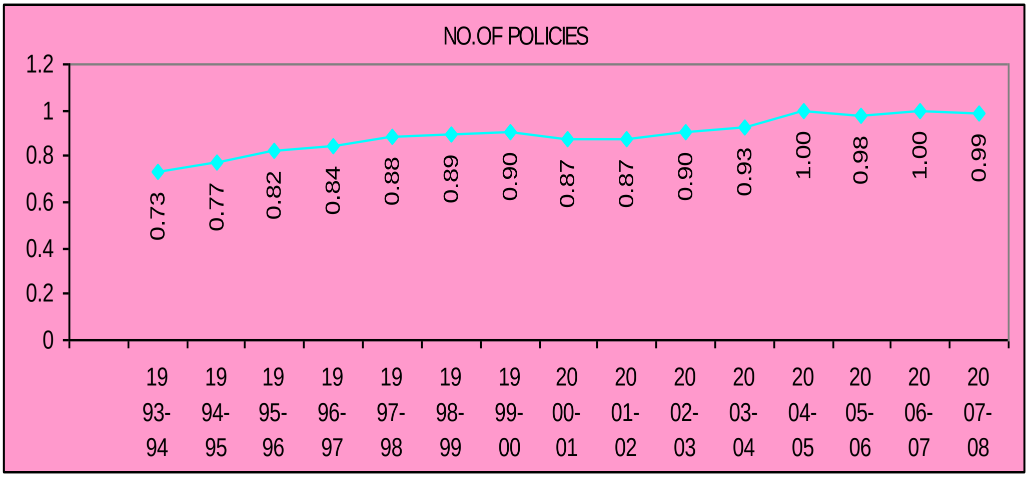


Table No: 4.8 - Trends in Business in Force Outside India

	R^2	D. F	F Value	Trend Coefficients			
				b_0	b_1	b_2	b_3
Annual premium (Rs. in Crores) Y1	0.965	10	90**	45.027	5.428	0.1811	-0.0051
Number of policies (In lakhs) Y2	0.945	10	57**	0.6728	0.0657	-0.0069	0.0003
Sum assured (Rs. in Crores) Y3	0.971	10	112**	734.052	319.357	-31.963	1.2875

** Significant at 1% level

Annual premium (Rs. in Crores) Y1 = $45.027 + 5.428\ t + 0.1811\ t^{2} - 0.0051\ t^{3}$

Number of policies (In Lakhs) Y2 = $0.6728 + 0.0657\ t - 0.0069\ t^{2} + 0.0003\ t^{3}$

Sum Assured (Rs. in Crores) Y3 = $734.052 + 319.357\ t - 31.963\ t^{2} + 1.2875\ t^{3}$

The Coefficient of determination R^2 indicates that the trend equations b1, b2 and b3 put together explain the variations of Y1 to the extent 96.5 percent, Y2 to the extent of 94.5 percent and Y3 to the extent of 97.1 percent, which shows the adequacy of the model fitted to forecast the trend values. The forecasted value for any 't' value-(year) can be obtained from the above trend equation. The above significant cubic trend equations forecast positive trend for this determinant in the future years.

4.1(e) New Rural Business:

As per the Insurance Regulatory and Development Authority (Obligation of Insurers to Rural or Social Sectors) Regulations, 2002 as amended in 2007 the insurance companies are required to achieve the prescribed percentage of their policies in the rural sector in the respective year of their operations in India. Hence, the performance of new rural business has been analyzed in terms of number of policies and sum assured. Table 4.9 gives a detailed picture of rural business of LIC and its growth rate for different years.

The table depicts that there has been a steady growth in the new business of rural market of the LIC. The new rural business was divided into two parts based on time period. Year 1993-94 to 1999-2000 forms the first part and 2000-01 to 2007-08 constitutes the second part of the rural new business. The reason for this division was the change in the definition of rural areas after the formation of IRDA.

In 1999, because of privatization, IRDA came into force and changed the definition of rural areas. This leads to a huge change in the figures related to number of policies and sum assured of the rural market after 1999-2000.

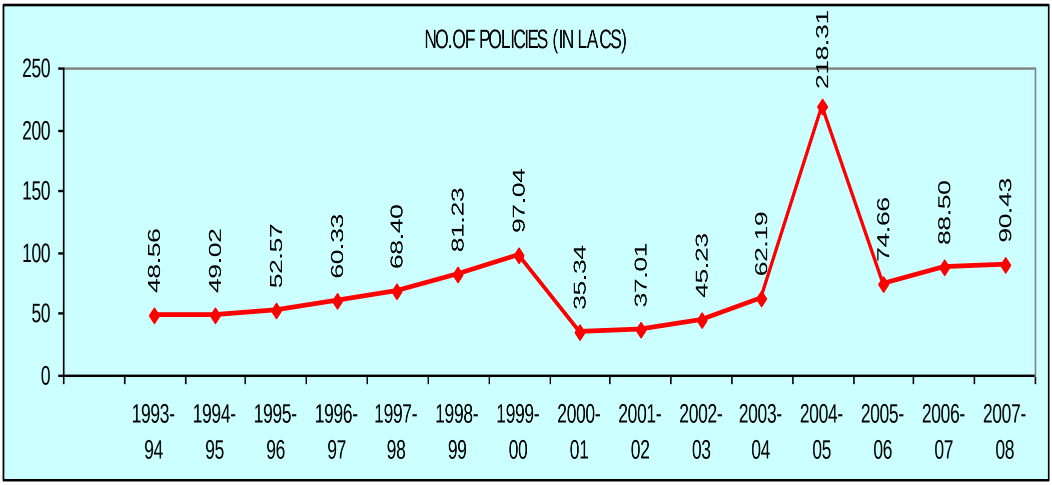
Table No: 4.9 - Table showing the New Rural Business in India

Year	Number of Policies (In Lakhs)	Percent Growth Over Previous Year	Sum Assured (Rs. in Crores)	Percent Growth Over Previous Year
1	2	3	4	5
1993-94	48.56	-	16680.41	-
1994-95	49.02	1.00	21571.00	29.30
1995-96	52.57	7.20	21263.59	-1.40
1996-97	60.33	14.80	25278.73	18.90
1997-98	68.40	13.38	27550.69	9.00
1998-99	81.23	18.80	35372.94	28.40
1999-00	97.04	19.50	44168.19	24.90
2000-01	35.34	-36.41	17955.88	-59.30
2001-02	37.01	4.72	25461.94	41.80
2002-03	45.23	22.21	23547.69	-7.51
2003-04	62.19	37.50	35651.99	51.40
2004-05	218.31	251.03	179886.66	404.56
2005-06	74.66	-65.80	60971.85	-66.11
2006-07	88.50	18.54	68497.21	12.34
2007-08	90.43	2.18	56694.44	-12.85

	Min. Val.	Max. Val.	Mean	SD	C.V (%)	C.G.R (%)
Number of policies (In Lakhs)	35.34	218.31	73.92	44.45	60.14	2.80
Sum assured (Rs. in Crores)	16680.41	179886.7	44036.88	40958.43	93.01	8.31

Source: Annual Reports, 1993-94 to 2007-08

Chart No: 4.5 - Chart Showing the New Rural Business



The number of policies ranges between 35.34 lakhs to 218.31 lakhs with a mean of 73.92 lakhs and a coefficient of variation of 60.14 percent. The new rural policies of LIC on an average annually has shown a growth rate of 2.80 percent. The sum assured ranges between Rs.16680.41 crores to Rs.179886.7 crores with a mean of Rs.44036.88 crores and a coefficient of variation of 93.01 percent. LIC has shown an annual growth rate of 8.31 percent.

During 1993-94 to 1999-2000, the new business in terms of number of policies of the rural market was consistent. It showed an increase year after year showing a healthy growth rate in terms of number of policies and sum assured. Later from the year 2000-01, LIC 's performance shows a sudden decline, this is basically due to the change in the definition of rural areas after the formation of IRDA.

But there after LIC showed consistent growth rate from 35.34 lakh number of policies in the year 2000-01 to 90.43 lakh number of policies in the year 2007-08. Similarly, in case of sum assured also it started from Rs. 17955.88 crores in the year 2000-01 and reached Rs. 68497.21crores in 2006-07. This shows that LIC restored its position in rural business and was satisfactory.

Table No: 4.10 - Trends in New Rural Business

	R^2	D. F	F Value	Trend Coefficients			
				b_0	b_1	b_2	b_3
Number of policies (In Lakhs) Y1	0.452	10	2.74	21.865	22.667	-3.493	0.155
Sum assured (Rs. in Crores) Y2	0.734	10	9.19	10977.9	6899.49	-981.28	51.872

** Significant at 1% level

Number of policies (In Lakhs) Y1 = 21.865 + 22.667 t - 3.493 t^2 + 0 .155 t^3

Sum Assured (Rs. In Crores) Y2 = 10977.9 + 6899.49 t – 981.28 t^2 + 51. 872 t^3

The Coefficient of determination R^2 indicates that the trend equations b1, b2 and b3 put together explain the variations of Y1 to the extent 45.2 percent, Y2 to the extent of 73.4 percent, which shows the adequacy of the model fitted to forecast the trend values. The forecasted value for any't' value-(year) can be obtained from the above trend equation. The above significant cubic trend equations forecast positive trend for this determinant in the future years.

4.1(f) Share of Rural business to Total business

Total new business includes the urban new business and rural new business during a particular year .The percentage share of number of policies as well as sum assured of the rural business was calculated for the different years in order to evaluate the performance of rural market. Table 4.11 shows the percentage share of the number of policies and sum assured to the total new business for the different years of the study period. For analysis, this table has also been divided into two parts i.e. period before the formation of IRDA and period after the formation.

The percentage share of number of rural policies range between 16.94 to 57.5 with a mean of 34.58 and a coefficient of variation of 44.60 percent and has registered a negative growth rate of 7.38 percent.

The percentage share of rural sum assured ranges between 13.37 to 48.7 with a mean of 30.65 and a coefficient of variation of 44.06 percent among the rural area and has shown a negative growth rate of 6.73 percent. From 1993-94 to 1999-2000, rural business has remarkably contributed to the total business of LIC. The figures of number of policies and sum assured shows a consistent growth in all the years and this shows that LIC was able to explore more business from rural areas as compared to urban areas.

Table No: 4.11 - Table showing the Share of Rural business to Total Business

Year	% Share of Number of Policies	% Share of Sum Assured
1993-94	45.30	39.90
1994-95	45.10	39.10
1995-96	47.70	41.00
1996-97	49.18	42.79
1997-98	51.04	43.30
1998-99	54.70	47.00
1999-00	57.50	48.70
2000-01	18.18	14.59
2001-02	16.94	13.65
2002-03	18.90	13.37
2003-04	22.79	17.85
2005-06	23.65	21.21
2006-07	23.16	22.60
2007-08	21.67	24.06

	Min. Val.	Max. Val.	Mean	SD	C.V (%)	C.G.R (%)
Percentage share of number of policies	16.94	57.5	34.58	15.42	44.60	-7.38
Percentage share of sum assured	13.37	48.7	30.65	13.50	44.06	-6.73

Source: Annual Reports, 1993-94 To 2007-08

Sustained and conscious efforts are made to carry the message of Life insurance into the rural areas, especially the backward and remote areas (Annual report of LIC, year 2007-08).LIC has been successful in creating its rural market and building confidence among them. After privatization and in consequence of the redefinition of rural areas by IRDA there has been a decline in the graph in the year 2000-01. The percentage share of rural business in terms of number of policies was 18.18 percent and that of sum assured was 14.59 percent. But thereafter from 2003-04 onwards till 2007-08 its share rose up to 23.16 percent in number of policies and 24.06 percent in sum assured respectively. LIC maintained consistent percentage in all the consecutive years too showing that it would do better and better in the future years and maintain its faith and confidence in the minds of the rural people.

Chart No: 4.6 - Chart Showing the Share of Rural Business to Total Business

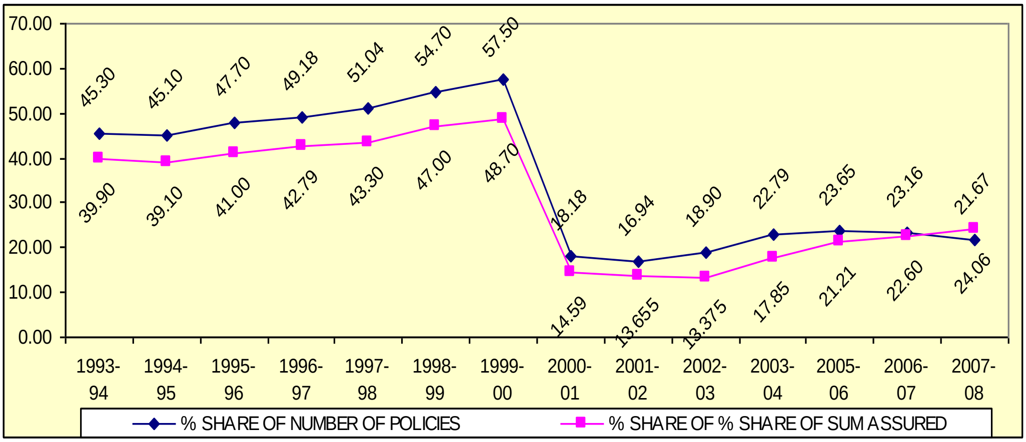


Table No: 4.12

Trends in Share of Rural Business to Total Business

	R^2	D. F	F Value	Trend Coefficients			
				b_0	b_1	b_2	b_3
Percentage share of number of policies Y1	0.705	10	7.98**	30.888	13.39	-2.444	0.102
Percentage share of sum assured Y2	0.704	10	7.93**	26.175	12.499	-2.357	0.102

** Significant at 1% level

Percentage share of number of policies Y1 = 30.888 + 13.39 t - 2.444 t^2 + 0 .102 t Percentage share of Sum Assured Y2 = 26. 175 + 12. 499 t - 2.357 t^2 + 0.102 t^3

The Coefficient of determination R^2 indicates that the trend equations b1, b2 and b3 put together explain the variations of Y1 to the extent 70.5 percent, Y2 to the extent of 70.4 percent, which shows the adequacy of the model fitted to forecast the trend values.

The forecasted value for any ‘t’ value-(year) can be obtained from the above trend equation. The above significant cubic trend equations forecast positive trend in the future years.

I.B Group Insurance

4.1(g) New Business under Group Insurance

Group insurance is an insurance that covers a group of people, usually who are the members of societies, employees of a common employer, or professionals in a common group. Group life insurance covers the lives of multiple persons such as some or all employees of a business, members of a labor union, or members of an association. (www.freebusinessdictionary.com). The eligible groups include Employer–Employee Groups, Labour–Union Groups, Creditor – Debtor Groups, Associations, Cooperatives and Government Schemes. Instead of using the term policy, under group insurance, term “ scheme ” is used and for total number of people, term “ lives or members ” is used. Sum Assured is referred to as “Annuity”.

New business for group insurance under superannuation scheme has been analyzed for assessing the performance of LIC during the period of study. Table 4.13 depicts the new business performance under group insurance in terms of number of schemes, number of members and total annuity per annum for fifteen years of the study period.

The number of schemes ranges between 127 to 445 with a mean of 331 and a coefficient of variation of 25.06 percent. The number of schemes has shown a negative growth rate of 3.43 percent. The table depicts that the performance of LIC in number of schemes was good from the year 1993-94 till 2001-02 as it ranged from 273 to 427 number of schemes. From 2002-03 till 2005-06 there was a decline in the trend and this was due to the impact of competition with the private insurers. Soon LIC picked up in the last two years attaining the maximum of 445 number of schemes in the year 2007-08.

In case of number of members the figures ranges between 31299 to 421000 with a mean of 99597.87 and a coefficient of variation of 97.83 percent. The above table shows that LIC’s performance was affected in the years 2001-02 and 2004-05, but shot up in the next two years reaching the height of 421000 in the year 2007-08. This shows though LIC was affected by the entry of private insurers and got recovered in its position in the later years.

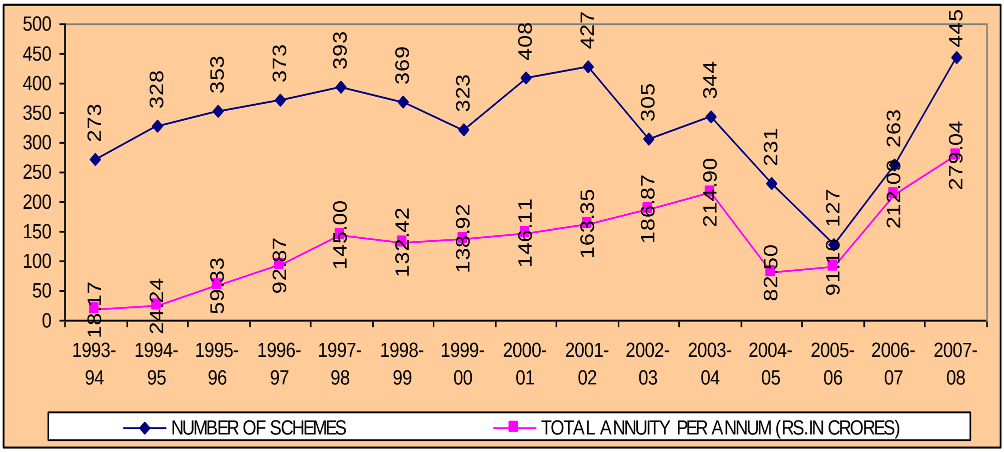
Table No: 4.13 - Table showing New Business under Group Insurance

Year	Number of Schemes	Percent Growth Over Previous Year	Number of Members	Percent Growth Over Previous Year	Total Annuity Per Annum (Rs. in Crores)	Percent Growth Over Previous Year
1	2	3	4	5	6	7
1993-94	273		31695		18.17	
1994-95	328	20.15	31299	-1.25	24.24	33.40
1995-96	353	7.62	75692	141.83	59.33	144.76
1996-97	373	5.66	125275	65.50	92.87	56.53
1997-98	393	5.36	33143	-73.54	145.00	56.13
1998-99	369	-6.10	51592	55.66	132.42	-8.67
1999-00	323	-12.47	64004	24.05	138.92	5.00
2000-01	408	26.31	93695	46.39	146.11	5.17
2001-02	427	4.65	59814	-36.16	163.35	11.80
2002-03	305	-28.80	108759	81.82	186.87	14.40
2003-04	344	12.79	172000	58.04	214.90	15.00
2004-05	231	131.80	43000	-75.00	82.50	-61.61
2005-06	127	45.02	71000	65.12	91.10	10.42
2006-07	263	107.09	112000	57.75	212.09	131.79
2007-08	445	69.20	421000	275.89	279.04	31.57

	Min. Val.	Max. Val.	Mean	SD	C.V (%)	C.G.R (%)
Number of schemes	127	445	331	82.89339	25.06	-3.43
Number of members	31299	421000	99597.87	97435.68	97.83	6.66
Total Annuity per annum (Rs. in Crores)	18.17	279.04	132.46	73.104	55.19	13.42

Source: Annual Reports, 1993-94 to 2007-08.

Chart No: 4.7 - Chart Showing the New Business under Group Insurance



The total annuity per annum ranges between Rs.18.17 crores to Rs.279.04 crores with a mean of Rs.132.46 crores and a coefficient of variation of 55.19 percent. The performance was poor initially as the growth rate declined and was negative in the year 1998-99 but thereafter till 2003-04 it picked up gradually showing a growth rate of 13.42 percent.

On the whole the growth rate of new business of LIC under group insurance has been inconsistent especially in the year 2004-05 and 2005-06 with drastic downfall but it restored its position during the later years.

Table No: 4.14 - Trends in New Business under Group Insurance

	R^2	D. F	F Value	Trend Coefficients			
				b_0	b_1	b_2	b_3
Number of schemes Y1	0.629	10	5.64*	213.794	66.54	-7.186	0.166
Number of members Y2	0.205	10	0.86	26491	12193.9	-765.56	18.03
Total Annuity per annum (Rs. in Crores) Y3	0.641	10	5.95*	-54.727	57.315	-5.122	0.15

** Significant at 1% level

Number of schemes $Y1 = 213.794 + 66.54\,t - 7.186\,t^2 + 0.166\,t^3$

Number of members $Y2 = 26491 + 12193.9\,t - 765.56\,t^2 + 18.03\,t^3$

Total Annuity per annum $Y3 = -54.727 + 57.315\,t - 5.122\,t^2 + 0.15\,t^3$

The Coefficient of determination R^2 indicates that the trend equations b1, b2 and b3 put together explain the variations of Y1 to the extent 62.9 percent, Y2 to the extent of 20.5 percent and Y3 to the extent 64.1percent, which shows the adequacy of the model fitted to forecast the trend values. The forecasted value for any 't' value-(year) can be obtained from the above trend equation. The above significant cubic trend equations forecast positive trend in the future years.

4.1 (h) Business In force under Super Annuation scheme

Superannuation scheme means money, which people pay while they are working, so that they will receive payment when they stop working or when they are old. The performance of LIC has been evaluated based on business in force of group insurance under superannuation schemes. Under group insurance, business in force has been analyzed in terms of number of schemes, sum assured and the premium income of different years of the study period. Sum assured includes the amount of bonuses in it.

Table 4.15 depicts the performance of business in force under super annuation scheme during the period of study. The table shows that LIC's performance in terms of number of schemes was tremendous as it raises from 64426 in the year 1993-94 and gradually increases year by year and attains 128840 in the year 2007-08. In total the number of schemes ranges between 64426 to 128840 with a mean of 90711, coefficient of variation of 19.82 percent and has shown a growth rate of 4.15 percent.

Table No: 4.15

Table Showing Business In force under Super Annuation Scheme

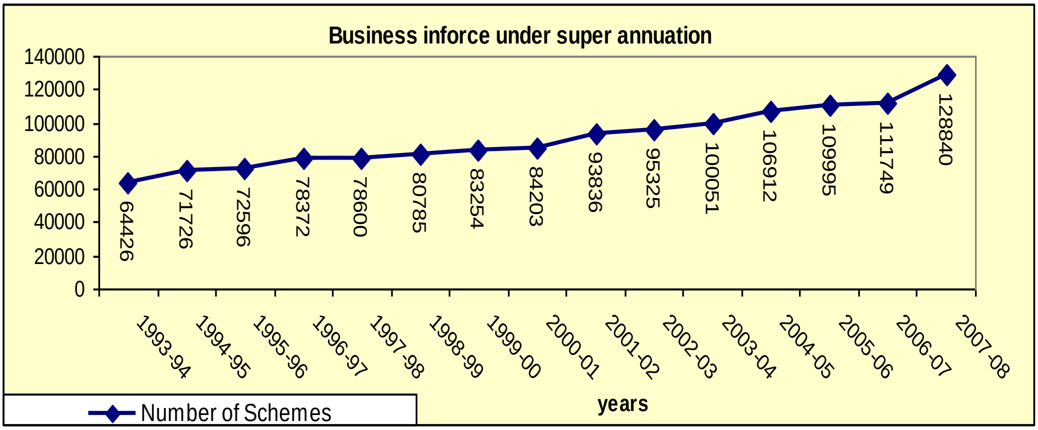
Year	Number of Schemes	Percent Growth Over Previous Year	Sum Assured (Rs. in Crores)	Percent Growth Over Previous Year	Premium Income (Rs. in Crores)	Percent Growth Over Previous Year
1993-94	64426	-	46742.95	-	873.38	
1994-95	71726	11.33	51034.71	9.18	1034.07	18.40
1995-96	72596	1.21	64651.54	26.68	1979.08	91.38
1996-97	78372	7.95	64606.60	-0.07	1631.45	-17.56
1997-98	78600	0.29	74798.75	15.77	2064.16	26.52
1998-99	80785	2.78	77918.65	4.17	2435.5	17.98
1999-00	83254	3.05	76384.53	-1.96	2693.51	10.60
2000-01	84203	1.14	89326.19	16.94	3115	15.64
2001-02	93836	11.44	100597.64	12.61	4225.99	35.66
2002-03	95325	1.58	124312.26	23.57	5111.55	20.95
2003-04	100051	4.95	143398.20	15.35	3617.38	-29.23
2004-05	106912	6.86	136286.92	-5.00	4019.57	11.12
2005-06	109995	2.88	199427.16	46.33	4669.76	16.18
2006-07	111749	1.59	322042.20	61.48	11462.91	145.47
2007-08	128840	15.29	306711.77	-4.76	12088.24	5.46

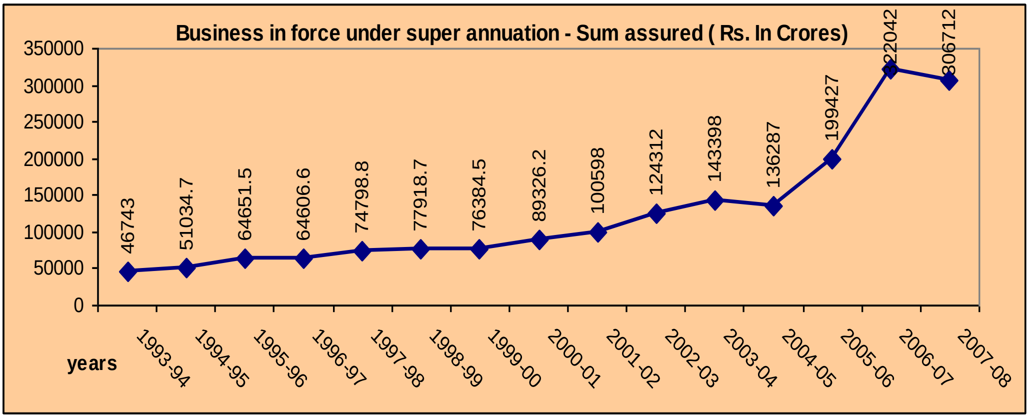
	Min. Val	Max. Val	Mean	SD	C.V (%)	C.G.R (%)
Number of schemes	64426	128840	90711	17976.08	19.82	4.15
Sum Assured (Rs. in Crores)	46742.95	322042.2	125216	86891.79	69.39	13.06
Premium Income (Rs. in Crores)	873.38	12088.24	4068.103	3379.338	83.07	16.21

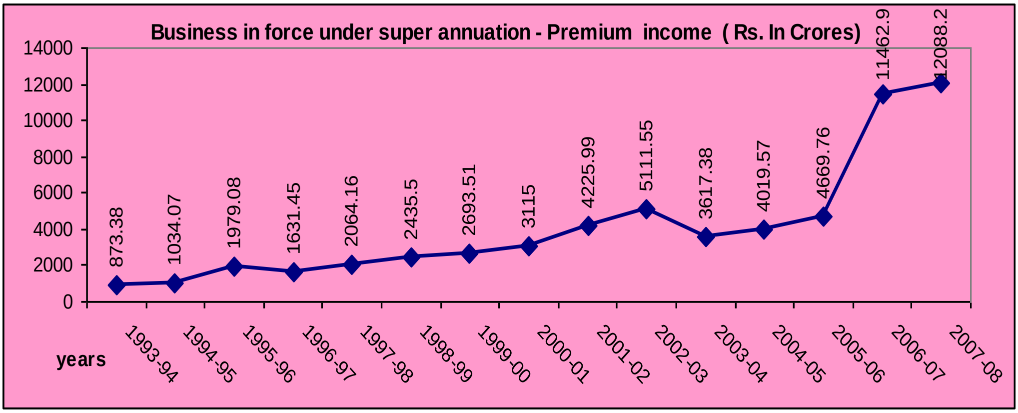
Source: Annual Reports, 1993-94 To 2007-08.

Chart No: 4.8

Chart Showing the Business Inforce under Super Annuation







LIC showed better performance in case of sum assured in business in force under super annuation scheme and it ranges between Rs.46742.95 crores to Rs.322042.2 crores with a mean of Rs.125216 crores and a coefficient of variation of 69.39 percent and has shown a growth rate of 13.06 percent.

The premium income in business in force under super annuation scheme ranges between Rs.873.38 crores to Rs.12088.24 crores with a mean of Rs.4068.103 crores and a coefficient of variation of 83.07 percent. This has an average annual growth rate of 16.21 percent. It is notable that LIC's premium in business in force under super annuation scheme got raised from Rs. 873.38 crores in the year 1993-94 to Rs.12088 crores in the year 2007-08.

In all the cases mentioned above the quantum of business was increasing but the growth rate has been fluctuating and was low. This implies that the corporation has to strive not only to spread insurance to individuals but also to groups of people working or living under one roof.

Table No: 4.16

Trends in Business In Force Under Super Annuation Scheme

	R^2	D. F	F Value	Trend Coefficients			
				b_0	b_1	b_2	b_3
Number of schemes Y1	0.981	10	175**	63833	2941.4	-29.33	5.359
Number of members Y2	0.950	10	13**	5623.3	37001.9	-6456	377.361
Total Annuity per annum (Rs. in Crores) Y3	0.798	10	158**	-1127.2	1685.89	-260.59	13.805

** Significant at 1% level

Number of schemes $Y1 = 63833 + 2941.4\ t - 29\ .33\ t^2 + 5.359\ t^3$

Number of members $Y2 = 5623.3 + 37001.9\ t - 6456\ t^2 + 377.361\ t^3$

Total Annuity per annum $Y3 = -\ 1127.2 + 1685.\ 89\ t - 260.59\ t^2 + 13.805\ t^3$

The Coefficient of determination R^2 indicates that the trend equations b1, b2 and b3 put together explain the variations of Y1 to the extent 98.1 percent, Y2 to the extent of 95 percent and Y3 to the extent 79.8 percent, which shows the adequacy of the model fitted to forecast the trend values. The forecasted value for any 't' value-(year) can be obtained from the above trend equation. The above significant cubic trend equations forecast positive trend in the future years.

4.1(i) Growth in Active Agents

The performance of insurance business to a large extent is dependent on the skills and ability of the well-trained agents as most people have their first contact with an insurance company through a sales agent. These workers help individuals, families and businesses select insurance policies that provide the best protection for their lives. In insurance industry, the term agent is ordinarily applied to a person engaged by the insurer to procure new business.

Section 2 (10) of the Insurance Act 1938 defines " Insurance Agent " as insurance agent licensed under section 42 being an individual who receives or agrees to receive payment by way of commission or other remuneration in consideration of his soliciting or procuring insurance business including business relating to the continuance, renewal or revival of policies of insurance.

Table No: 4.17 - Table showing the Growth in Active Agents

Year	Number of Active Agents	Percentage Growth
1993-94	524427	-
1994-95	519504	-0.93
1995-96	513897	-1.08
1996-97	533133	3.74
1997-98	558517	1.04
1998-99	598217	7.10
1999-00	683190	14.20
2000-01	743064	8.76
2001-02	744003	0.12
2002-03	902199	21.26
2003-04	1003241	11.20
2004-05	980836	-2.23
2005-06	987689	0.70
2006-07	1028256	4.12
2007-08	1117908	8.72

	Min. Val.	Max. Val.	Mean	SD	C.V (%)	C.G.R (%)
Number of Active agents	513897	1117908	762539	220152.6	28.87	6.63

Source: Annual Reports, 1993-94 to 2007-08

The performance of the corporation depends upon the active agents. Thus to evaluate the performance of the corporation, it is significant to study the strength of active agents and its growth rate during the period of study. The table 4.17 depicts the number of agents and their percentage of growth for the entire period of the study.

The number of active agents ranges between 513897 to 1117908 with a mean of 762539 and a coefficient of variation of 28.87 percent. This has shown an average annual growth rate of 6.63 percent. The number of active agents increased from 524427 in the year 1993-94 to 1117908 in the year 2007-08.

There was drastic increase in the number of agents in the year 1999-2000 and 2002-03 with 14.2 percent and 21.26 percent increase respectively. This was the year when the private players entered the Indian scenario. There was inconsistency and decline in the graph towards the end years in the growth rate of the agents. But it is worth mentioning at this instance that from 524427 number of agents in the year 1993-94, LIC got raised to 117908 number in the year 2007-08 .

Chart No: 4.9 - Chart Showing Growth in Active Agents

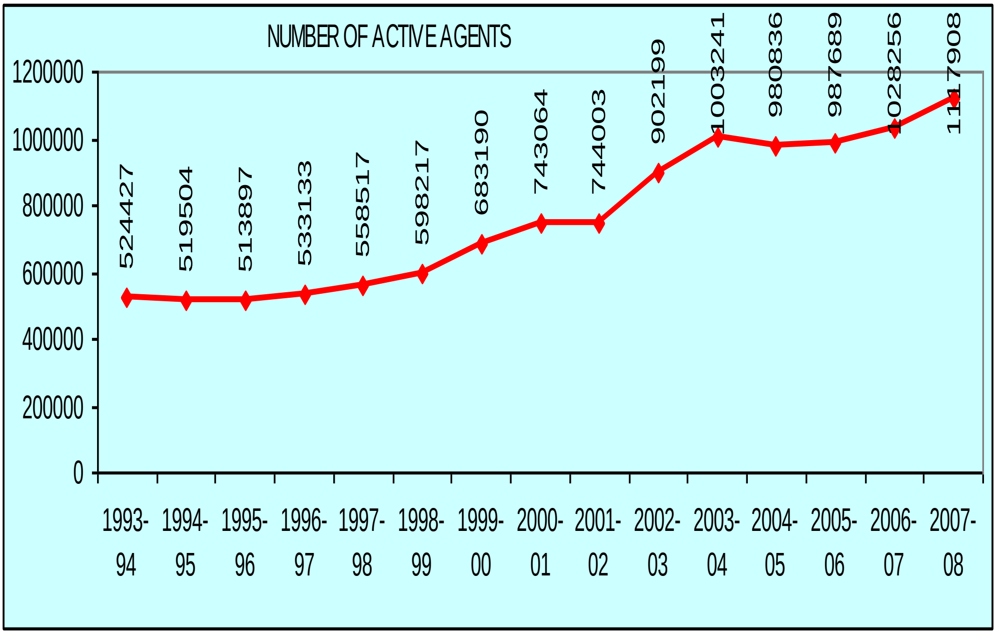


Table No: 4.18 - Trends in Growth of Active Agents

	R^2	D. F	F Value	Trend Coefficients			
				b_0	b_1	b_2	b_3
Number of Active agents Y	0.979	10	158**	606379	-83410	18539.4	-746.36

** Significant at 1% level

Number of Active agents Y = 606379 – 83410 t + 18539. 4 t^2 – 746.36 t^3

The Coefficient of determination R^2 indicates that the trend equations b1, b2 and b3 put together explain the variations of Y to the extent 97.9 percent, which shows the adequacy of the model fitted to forecast the trend values. The forecasted value for any 't' value-(year) can be obtained from the above trend equation. The above significant cubic trend equations forecast positive trend in the future years.

4.1 (j) Composition of Income

Income of an organization is one of the important parameters for evaluating its performance. Income generated by LIC every year is a composition of various variables. It comes from different areas and in different forms. The total income of LIC can be analyzed in different categories in order to assess the contribution of each variable or category to the total income in each year. Thus, for this purpose the percentage is calculated for each variable to know the exact contribution of these variables in the total income. Income from LIC comes from First year premium, Renewal premium, Single premium and consideration for annuities, Income from Investments and Miscellaneous.

Table 4.19 shows the percentage share of each component to the total income of LIC over the period of the study. Huge percentage of income comes from the renewal premium every year. The second big percentage was the income from investments then first year premium followed by single premium and consideration for annuities and the smallest contribution was given by miscellaneous income.

The percentage of income from first year premium ranges between 9.29 to 14.11 with a mean of 14.36 and a coefficient of variation of 73.55 percent. This has shown a negative annual growth rate of 0.45 percent. The percentage of income from renewal premium ranges between 40.74 to 52.32 with a mean of 45.53 and a coefficient of variation of 28.19 percent with an average growth rate of 0.03 percent.

Table No: 4.19 - Composition of Income (In Percentage)

Year	First Year Premium	Renewal Premium	Single Premium	Income from Investments	Miscellaneous
1	2	3	4	5	6
1993-94	12.80	49.87	1.33	35.01	0.99
1994-95	11.57	50.67	1.44	35.00	1.32
1995-96	10.79	48.85	4.68	34.99	0.69
1996-97	11.14	50.14	1.61	36.39	0.72
1997-98	11.00	49.35	2.29	36.76	0.60
1998-99	11.20	48.72	2.81	36.27	1.00
1999-00	11.32	47.17	2.90	35.90	2.71
2000-01	12.44	45.96	4.99	34.59	2.02
2001-02	14.11	40.74	12.43	31.19	1.53
2002-03	13.13	47.73	6.60	30.93	1.61
2003-04	12.00	50.30	5.41	29.23	2.95
2004-05	10.93	50.55	0.69	33.44	4.39
2005-06	11.38	50.61	1.19	31.56	5.26
2006-07	9.29	52.11	0.75	32.16	5.69
2007-08	6.84	52.32	0.19	33.82	6.83

	Min. Val.	Max. Val.	Mean	SD	C.V (%)	C.G.R (%)
First year premium	9.29	14.11	14.36	10.56	73.55	-0.45
Renewal premium	40.74	52.32	45.53	12.83	28.19	0.03
Single premium	0.19	12.43	5.53	8.40	152.06	-1.74
Income from investments	29.23	36.76	32.01	7.34	22.93	-2.1
Miscellaneous	0.60	6.83	2.24	1.72	76.70	16.73

Source: Annual Reports, 1993-94 to 2007-08

The percentage of income from single premium ranges between 0.19 to 12.43 with a mean of 5.53 and a coefficient of variation of 152.06, with a negative growth rate of 1.74 percent. The percentage of income from investments ranges between 29.23 to 36.76 with a mean of 32.01 and a coefficient of variation of 22.93 percent. This has shown a negative growth rate of 2.1 percent. The Miscellaneous income ranges between 0.60 to 6.83 with a mean of 2.24 and a coefficient of variation of 76.70 percent and has shown an average growth rate of 16.73 percent.

In total LIC has shown consistent performance in renewal premium, income from investments and miscellaneous income. In case of first year premium and single premium there was slight downfall in the later years on which LIC has to concentrate.

Chart No: 4. 10 - Chart showing the Composition of Income

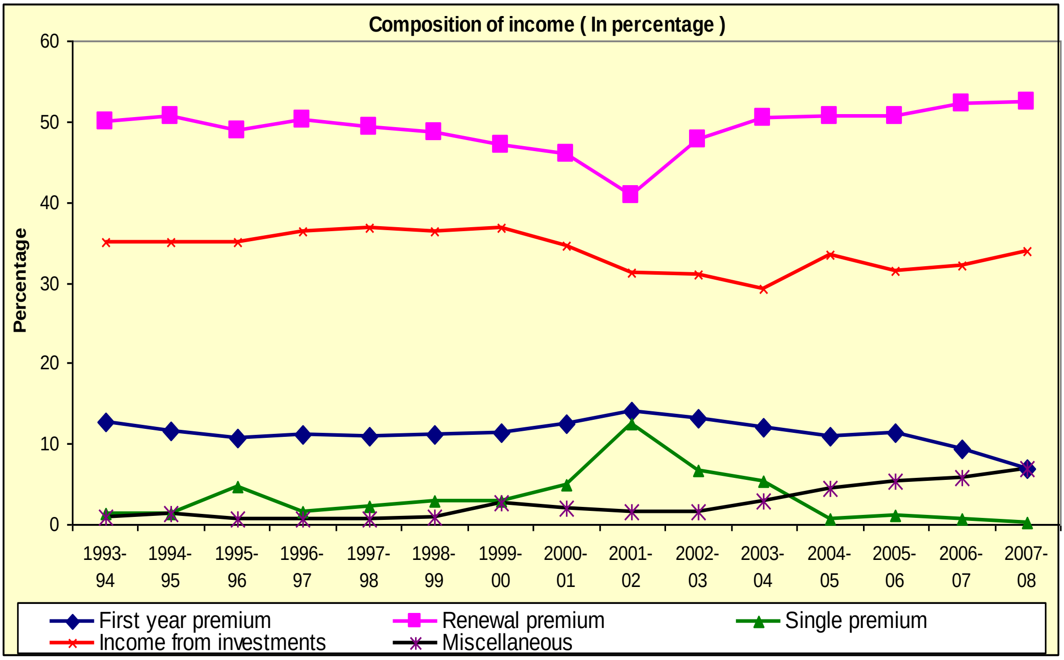


Table No: 4.20 - Trends in Composition of Income

	R^2	D. F	F Value	Trend Coefficients			
				b_0	b_1	b_2	b_3
First year premium Y1	0.752	10	10**	14.372	-2.048	0.364	- 0.02
Renewal premium Y2	0.496	10	3.3	50.232	0.39	- 0.229	0.016
Single premium Y3	0.448	10	2.7	2.779	-1.265	0.383	- 0.022
Income from investments Y4	0.745	10	9.7**	31.549	2.977	- 0.516	0.022
Miscellaneous Y5	0.896	10	28.7**	1.039	-0.032	- 0.006	0.002

** Significant at 1% level

First year premium	$Y1 = 14.372 - 2.048\ t + 0.364\ t^2 - 0.2\ t^3$
Renewal premium	$Y2 = 50.232 + 0.39\ t - 0.229\ t^2 + 0.016\ t^3$
Single premium	$Y3 = 2.779 - 1.265\ t + 0.383\ t^2 - 0.022\ t^3$
Income from investments	$Y4 = 31.549 + 2.977\ t - 0.516\ t^2 + 0.022\ t^3$
Miscellaneous	$Y5 = 1.039 - 0.32\ t - 0.006\ t^2 + 0.002\ t^3$

The Coefficient of determination R^2 indicates that the trend equations b1, b2 and b3 put together explain the variations of Y1 to the extent 75.2 percent, Y2 to the extent 49.6 percent, Y3 to the extent 44.8 percent, Y4 to the extent 74.5 percent, Y5 to the extent 89.6 percent which shows the adequacy of the model fitted to forecast the trend values. The forecasted value for any 't' value-(year) can be obtained from the above trend equation. The above significant cubic trend equations forecast positive trend in the future years.

4.1(k) Average Sum Assured per policy

The performance of LIC can be evaluated in terms of average sum assured per policy by taking sum assured of new business for different years and dividing it with the number of policies for different years. Thus for every year of the study period average sum assured per policy has been calculated and presented in table 4.21.

The sum assured ranges between Rs.41813.83 crores to Rs.283763.7 crores with a mean of Rs.131322.6 crores and a coefficient of variation of 56.83 percent. This has shown a growth rate of 15.79 percent. The number of policy ranges between 1.07 crores to 2.93 crores with a mean of 1.82 crores and a coefficient of variation of 32.91 percent and has shown a growth at 8.11 percent.

The average sum assured per policy ranges between Rs.38,984 to Rs.96,898 with a mean of Rs.67,047.33 and a coefficient of variation of 30.97. This has shown an average annual growth at 7.11 percent. To summarize LIC's performance in case of average sum assured per policy was commendable with steady growth rate, except in the years 2002-03 and 2003-04 with a declining sum of Rs.73970 and Rs.75108 respectively. This was the impact of the entry of private insurers. But LIC gradually regained its position in the next consecutive years and maintained its level with Rs.96000 till 2007-08 showing its performance was good.

Table No: 4.21 - Table Showing Average Sum Assured per Policy

Year	Sum Assured (Rs. in Crores)	Number of Policies	Average Sum Assured per Policy (In Rs.)
1993-94	41813.83	10725633	38984
1994-95	55228.50	10874682	50786
1995-96	51815.54	11020825	47016
1996-97	56740.5	12268476	46219
1997-98	63617.69	13311294	47792
1998-99	75316.28	14843687	50739
1999-00	91214.25	16976782	53729
2000-01	124771.62	19656663	63475
2001-02	192572.27	22491304	85621
2002-03	179512.22	24268416	73970
2003-04	198707.12	26456320	75108
2004-05	179481.39	21817967	82263
2005-06	283763.74	29284800	96898
2006-07	201620.74	20910000	96423
2007-08	173662.72	17961363	96687

	Min. Val.	Max. Val.	Mean	SD	C.V (%)	C.G.R (%)
Sum Assured (Rs. in Crores)	41813.83	283763.7	131322.6	74625.14	56.83	15.79
Number of policies	10725633	29284800	18191214	5986906	32.91	8.11
Average Sum Assured/Policy (In Rs.)	38984	96898	67047.33	20763.67	30.97	7.11

Source: Annual Reports, 1993-94 to 2007-08

Chart No: 4.11 - Chart Showing the Average Sum Assured per Policy

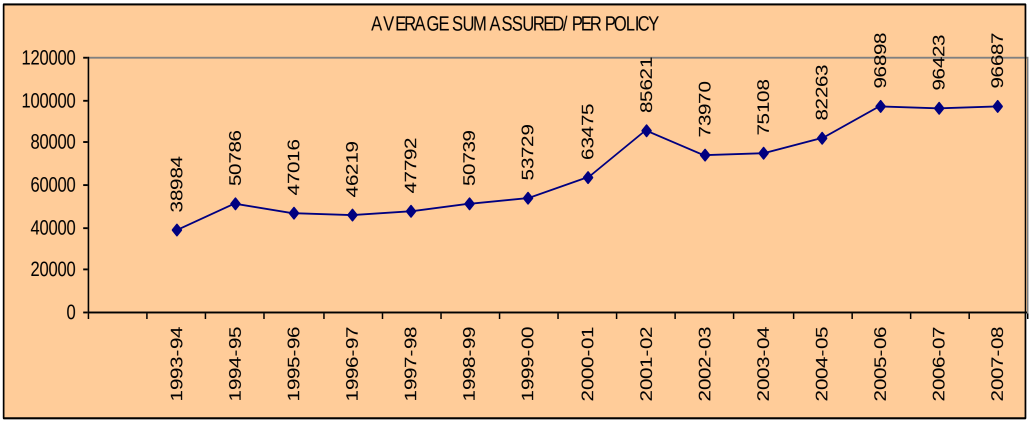


Table 4.22 - Trends in Average Sum Assured / Policy

	R^2	D. F	F Value	Trend Coefficients			
				b_0	b_1	b_2	b_3
Sum Assured (Rs. in Crores)	0.902	10	30.7**	78009.6	-29840	6879.15	-285.27
Number of policies	0.917	10	37**	1.4E+07	-3.E+06	752733	-35338
Average Sum Assured / Policy Y (In Rs.)	0.909	10	33**	45370	-2325	788.516	-25.612

** Significant at 1% level

Average Sum Assured/Policy Y = 45370 – 2325 t+ 788.52 t^2 – 25.612 t^3

The Coefficient of determination R^2 indicates that the trend equations b1, b2 and b3 put together explain the variations of Y to the extent 90.9 percent, which shows the adequacy of the model fitted to forecast the trend values. The forecasted value for any 't' value-(year) can be obtained from the above trend equation. The above significant cubic trend equations forecast positive trend in the future years.

4.1(l) Ratio of First insurance to Total insurance completed:

The analysis was done:

a) In respect of Policies
b) In respect of Sum Assured

The performance of LIC was evaluated in terms of first insurance to total business completed in respect of policies as well as sum assured. Out of the total new business completed during the financial year, there was first insurance with regard to the number of policies as well as sum assured during that financial year. The ratio was calculated for each year of the study period by dividing the total policies in a year by the first insurance of number of policies in that year. Table 4.23 depicts the ratio of first insurance in respect of number of policies.

The table 4.23 reveals that the total number of policies ranges between 10725633 to 29284800 with a mean of 18191217 and a coefficient of variation of 32.9 percent and has shown an average growth rate of 8.11 percent.

Table No: 4.23 - Table showing the Ratio of First Insurance to Total Insurance Completed

Year	Total Number of Policies	First Insurance Policies	Ratio of First Insurance to Total Number of Policies (%)
1993-94	10725633	7702000	71.81
1994-95	10874682	7690000	70.71
1995-96	11020825	7663000	69.53
1996-97	12268476	8455000	68.91
1997-98	13311294	9255000	69.53
1998-99	14843687	10753000	72.44
1999-00	16976782	12535000	73.83
2000-01	19656663	14430000	74.25
2001-02	22491304	16230000	74.29
2002-03	24268416	19180000	80.15
2003-04	26456320	20242000	76.69
2004-05	21817967	18592000	85.21
2005-06	29284800	24365000	83.20
2006-07	20910041	34338000	163.73
2007-08	17961363	35547000	197.91

	Min. Val.	Max. Val.	Mean	SD	C.V (%)	C.G.R (%)
Total Number of Policies	10725633	29284800	18191217	5986907	32.9	8.11
First Insurance Policies	7663000	35547000	16465133	9148835	55.5	11.92
Ratio of First insurance/Total number of policies	68.91	197.91	88.81	38.22	43.0	3.55

Source: Annual Reports,, 1993-94 To 2007-08.

The First insurance policy ranges between 7663000 to 35547000 with a mean of 16465133 and a coefficient of variation of 55.5 percent, with an average annual growth rate at 11.92 percent.

The ratio of first insurance to total number of policies ranges between 68.91 to 197.91 with a mean of 88.81 and a coefficient of variation of 43 percent and has shown an average growth rate of 3.55 percent.

Chart No: 4.12 - Chart Showing the Ratio of First Insurance to Total Insurance Completed

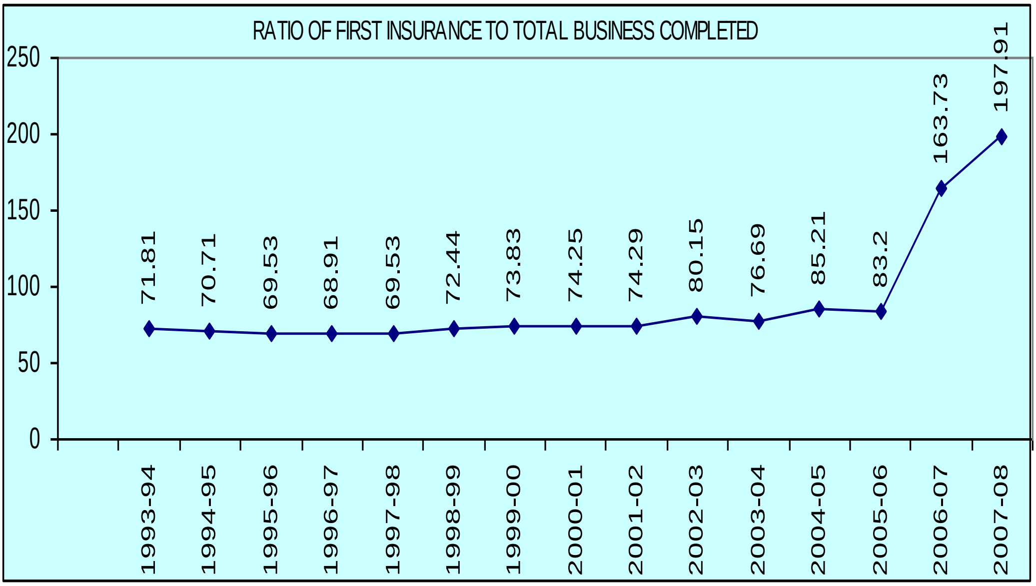


Chart 4.12 shows that LIC was striving hard on all its grounds to cover more and more individuals and tries to reach every nook and corner in order to spread the importance of insurance. LIC was able to capture 71.81 percent in the year 1993-94 and with 70.71, 69.53, 68.91 and 69.53 percent in the years 1994-95, 1995-96, 1996-97 and 1997-98 respectively. It gradually picked up and sustained its growth rate in 70's and then in 80's in the years 2004-05 and 2005-06. It has shown an appreciable rate, when it doubled to 163.73 percent in 2006-07 and touched its peak with 197.91 percent in 2007-08. This shows that the performance of LIC in terms of ratio of first insurance to total insurance completed was excellent.

Table No: 4.24

Trends in Ratio of First Insurance to Total Business Completed

	R^2	D. F	F Value	Trend Coefficients			
				b_0	b_1	b_2	b_3
Total Number of Policies	0.917	10	36**	1.4 E+07	-3.E+06	752731	-35338
First Insurance Policies	0.944	10	56**	5633202	1273555	-142748	13036.8
Ratio of First insurance/Total no of policies Y	0.758	10	10**	51.599	15.913	-3.165	0.1773

** Significant at 1% level

Ratio of First insurance/Total number of policies Y= 51.599 + 15.913 t – 3.165 t^2 + 0.1773 t^3

The Coefficient of determination R^2 indicates that the trend equations b1, b2 and b3 put together explain the variations of Y to the extent 75.8 percent, which shows the adequacy of the model, fitted to forecast the trend values. The forecasted value for any 't' value-(year) can be obtained from the above trend equation. The above significant cubic trend equations forecast positive trend in the future years.

4.1(m) Ratio of first insurance to total Business completed (Sum Assured)

The ratio of first insurance to total business completed in respect of sum assured has been calculated by dividing the total sum assured for new business by sum assured for first business. Table 4.25 depicts the ratio of first insurance in terms of sum assured. The total business ranges between Rs.41813.83 crores to Rs.283763.7 crores with a mean of Rs. 131322.6 crores and a coefficient of variation of 56.83 percent. The total business of LIC has shown an average growth rate of 15.79 percent.

The First insurance policy ranges between Rs.28618.16 crores to Rs. 260873.2 crores with a mean of Rs.108527.2 crores and a coefficient of variation of 75.16 percent. This has shown a growth at 18.73 percent.

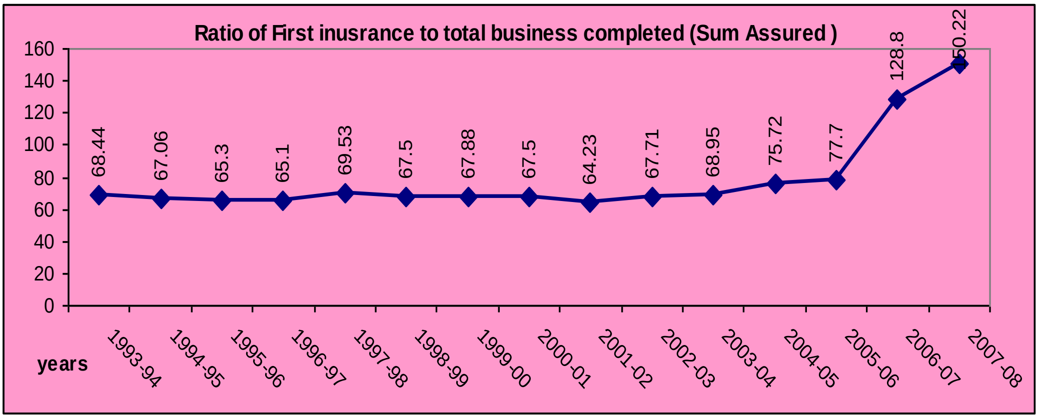
Table No: 4.25 - Table showing Ratio of First Insurance to Total Business Completed (Sum Assured)

Year	Total Business (Sum Assured) (Rs. in Crores)	First Insurance (Sum Assured) (Rs in Crores)	Ratio of First Insurance to total Business -Sum Assured (In Percent)
1993-94	41813.83	28618.16	68.44
1994-95	55228.50	37040.49	67.06
1995-96	51815.54	33884.32	65.30
1996-97	56740.50	36935.63	65.10
1997-98	63617.69	41576.45	69.53
1998-99	75316.28	50845.63	67.50
1999-00	91214.25	61915.50	67.88
2000-01	124771.62	84320.79	67.50
2001-02	192572.27	119859.73	64.23
2002-03	179512.22	119221.07	67.71
2003-04	198707.12	136703.32	68.95
2004-05	179481.39	135909.80	75.72
2005-06	283763.74	220523.50	77.70
2006-07	201620.74	259680.31	128.80
2007-08	173662.72	260873.23	150.22

	Min. Val.	Max. Val.	Mean	SD	C.V (%)	C.G.R (%)
Total Business (Rs. in Crores)	41813.83	283763.7	131322.6	74625.14	56.83	15.79
First Insurance (Rs in Crores)	28618.16	260873.2	108527.2	81568.16	75.16	18.73
Ratio of First insurance to Total sum assured	64.23	150.22	78.10	25.51	32.66	2.51

Source: Annual Reports, 1993-94 to 2007-08

Chart No: 4.13 - Chart Showing the First Insurance to Total Business (Sum Assured in Percentage)



The ratio of first insurance to total business in respect of sum assured ranges between 64.23 percent to 150.22 percent with a mean of 78.10 percent and a coefficient of variation of 32.66 percent and has shown an average annual growth of 2.51 percent.

To summarise the table 4.25 shows consistent growth starting from Rs. 28618.16 crores in the year 1993-94 to Rs. 260873.23 crores in the year 2007-08. LIC sustained its growth rate with 67 percent it gradually increased to 150.22 percent in 2007-08. Except with a slight decline in the year 2001-02 when its growth rate of first insurance came down to 64.23 percent. But LIC was able to restore its position with increasing trend and touched its peak with 128.80 percent and 150.22 percent in the years 2006-07 and 2007-08 respectively, thus the performance of LIC was good.

Table No: 4. 26 - Trends in Ratio of First Insurance to Total Business Completed

	R^2	D. F	F Value	Trend Coefficients			
				b_0	b_1	b_2	b_3
Total New Business	0.902	10	30.**	78009.6	- 29840	6879.15	103.033
First Insurance	0.966	10	95**	22244.3	5881.1	-687.53	103.033
Ratio of First insurance/Total new sum assured Y	0.916	10	14**	52.881	12.29	-2.4996	0.1386

** Significant at 1% level

Ratio of First insurance/Total new sum assured $Y=52.881 + 12.29\ t - 2.4996\ t^2 + 0.1386\ t^3$

The Coefficient of determination R^2 indicates that the trend equations b1, b2 and b3 put together explain the variations of Y to the extent 91.6 percent which shows the adequacy of the model fitted to forecast the trend values. The forecasted value for any 't' value-(year) can be obtained from the above trend equation. The above significant cubic trend equations forecast positive trend in the future years.

4.1(n) Life Fund

Prudence and law requires all income from life insurance business including investment income be kept aside in a fund called life fund, to meet the liabilities of life insurance policies. Life fund can be used to pay claims and expenses of running life insurance business. Hence, it represents reserves for life insurance policies to meet policy liabilities. To analyse the performance of LIC, the evaluation of Life fund is important. Thus Table 4.27 depicts the amount of Life fund in crores and also the percentage increase over previous year for the complete period of the study.

Chart No: 4.14 - Chart Showing the Life Fund (In Percentage)

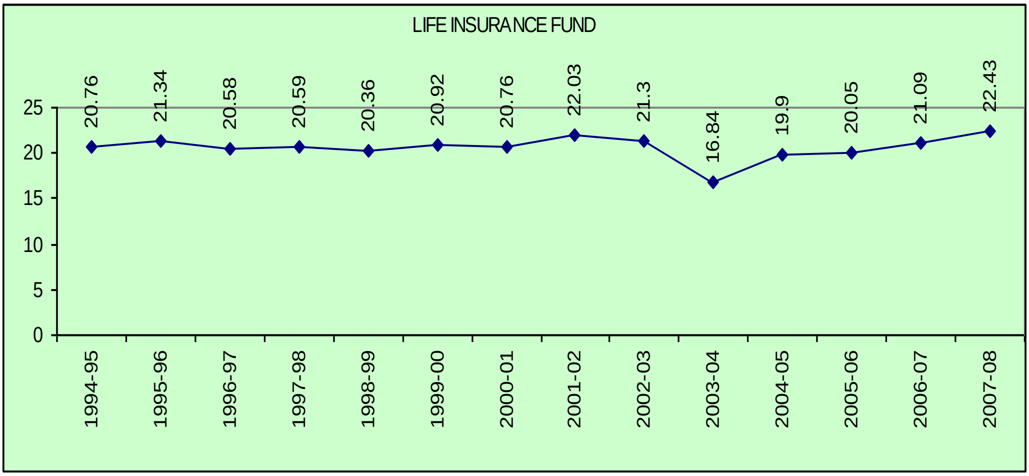


Table No: 4.27 - Table showing the Life Fund of LIC

Year	Life Fund (Rs. in Crores)	Percentage Increase Over Previous Year
1	2	3
1993-94	49665.52	
1994-95	59978.90	20.76
1995-96	72780.06	21.34
1996-97	81759.96	20.58
1997-98	105832.89	20.59
1998-99	127389.06	20.36
1999-00	154043.73	20.92
2000-01	186024.75	20.76
2001-02	227008.98	22.03
2002-03	275391.72	21.30
2003-04	321759.55	16.84
2004-05	385791.21	19.90
2005-06	463147.62	20.05
2006-07	560806.33	21.09
2007-08	686616.45	22.43

The above table 4.27 depicts the tremendous growth rate of Life Fund over the last fifteen years. The percentage growth in the Life fund has been constant throughout the study period. LIC was able to maintain its growth rate between 20% and 22%. Only in the year 2003-04 the growth rate of LIC fund declined to 16.84 percent but then in the consecutive years it restored its position gaining 19.90, 20.05, 21.09 and 22.43 percent in the years 2004-05, 2005-06, 2006-07 and 2007-08 respectively. To its credential LIC was able to raise up its life fund from Rs. 49665.52 crores in the year 1993-94 to its great height of Rs. 686616.45 crores in the year 2007-08.

4.1(o) Claims settled during the year

The settlement of claims is a very important aspect of service to the policyholders. Hence, the corporation has laid great emphasis on expeditious settlement of the maturity as well as death claims

(Annual report of LIC, Year 2007-08). Table 4.28 shows the number and amount of claims settled during the entire period of the study.

Table No: 4.28 - Table showing the Claims Settled during the Year

Year	Number (In Lakhs)	Amount (Rs in Crores)
1993-94	34.47	3354.09
1994-95	40.24	4076.07
1995-96	41.67	4532.22
1996-97	49.49	5691.49
1997-98	56.52	6677.04
1998-99	59.83	7583.18
1999-00	66.42	9211.30
2000-01	75.86	11637.98
2001-02	87.67	14519.25
2002-03	96.91	17035.81
2003-04	103.53	19607.20
2004-05	115.05	23661.53
2005-06	120.90	28572.46
2006-07	135.31	36485.91
2007-08	141.00	37019.51

Claims	Min. Val.	Max. Val.	Mean	SD	C.V (%)	C.G.R (%)
Number (In lakhs)	34.47	141	81.66	35.60	43.61	11.17
Amount (Rs. in Crores)	3354.09	37019.51	19317.67	17286.6	89.49	16.97

Source: Annual Reports, 1993-94 to 2007-08

The number of claims settled ranges between 34.47 lakhs to 141 lakhs with a mean of 81.66 lakhs and a coefficient of variation of 43.61 percent. LIC has shown an average growth rate of 11.17 percent in terms of number of claims settled.

The amount of claim settled ranges between Rs.3354.09 crores to Rs.37019.51 crores with a mean of Rs.19317.67 crores and 89.49 percent of coefficient of variation with a compounded growth rate of 16.97 percent.

The settlement of claims increases steadily and gradually year after year right from 1993-94 till 2007-08. This indicates that LIC settles majority of the claims every year.

Chart No: 4.15 - Chart Showing the Number of Claims Settled (In Lakhs)

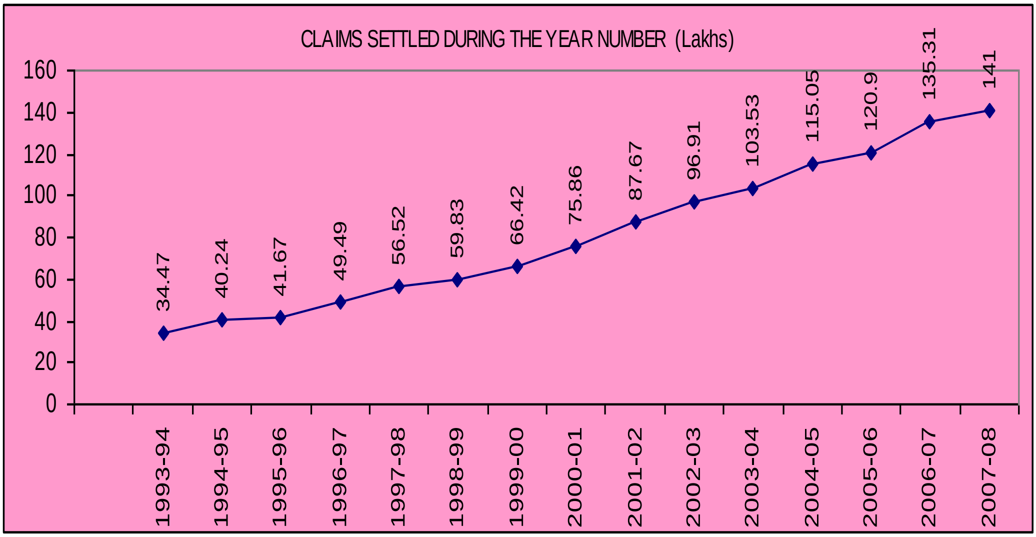


Table No: 4.29 - Trends in Claims Settled During the Year

Claims	R^2	D. F	F Value	Trend Coefficients			
				b_0	b_1	b_2	b_3
Number (in lakhs) Y1	0.997	10	1126**	32.978	1.773	0.571	-0.013
Amount (Rs. in Crores) Y2	0.274	10	1.26	-16914	17279.2	-2530.9	112.839

** Significant at 1% level

Number of claims settled $Y1 = 32.978 + 1.773\,t + 0.571\,t^2 - 0.013\,t^3$

Claims settled in terms of amount $Y2 = -16914 + 17279.2\,t - 2530.9\,t^2 + 112.839\,t^3$

The Coefficient of determination R^2 indicates that the trend equations b1, b2 and b3 put together explain the variations of Y1 to the extent of 99.7 percent, Y2 to the extent of 27.4 percent, which shows the adequacy of the model fitted to forecast the trend values. The forecasted value for any 't' value-(year) can be obtained from the above trend equation. The above significant cubic trend equations indicates positive trend in the future years in number of claims and amount settled.

4.1(p) Percentage of Net Lapses to Mean Life Insurance Business in Force

When the premium is not paid within the days of grace, the policy lapses. A grace period of one month but not less than thirty days is allowed for payment of yearly, half yearly and quarterly premiums and fifteen days for payment of monthly premiums. The policy can however be revived within five years from the date of maturity, if applicable. Net lapses refers to the total number of policies lapsed minus the total number of policies revived.

Net lapses = Lapses – revivals

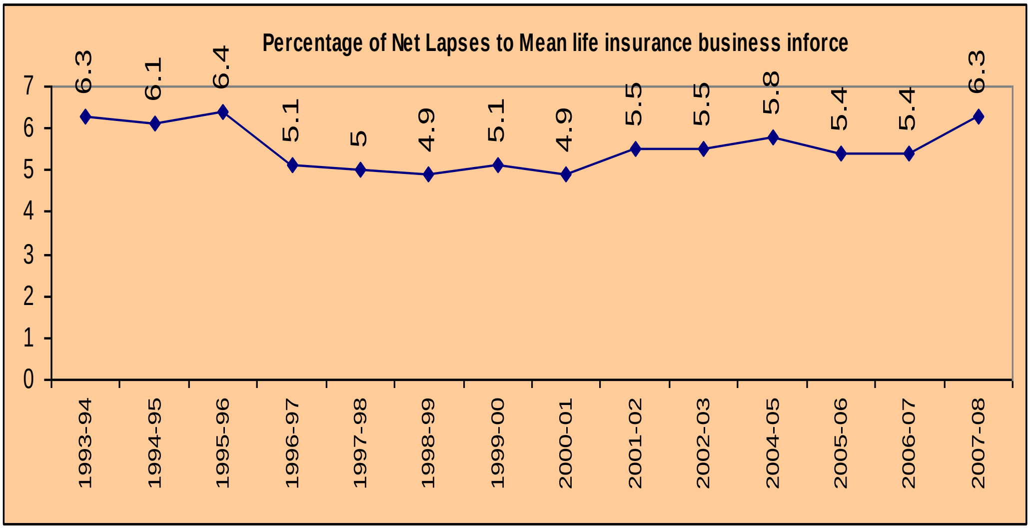
The performance of LIC was evaluated based on net lapses. For this, the percentage of net lapses to mean life insurance business in force is calculated for the period of the study. Mean life insurance business in force is the average of the business in force during the last five years. The increase in the percentage of net lapses to mean business in force shows the poor performance of LIC and vice versa. Table 4.30 depicts the percentage of net lapses to mean life insurance business in force for different years of the study period.

From the table it is clear that LIC has shown a consistent percentage of net lapses. However, during 2007-08 an increase in percentage has been observed. LIC should take steps to reduce lapsation of policies

Table No: 4.30 - Table Showing the Percentage of Net Lapses to Mean Life Insurance Business In Force

Year	Percentage
1993-94	6.30
1994-95	6.10
1995-96	6.40
1996-97	5.10
1997-98	5.00
1998-99	4.90
1999-00	5.10
2000-01	4.90
2001-02	5.50
2002-03	5.50
2004-05	5.80
2005-06	5.40
2006-07	5.40
2007-08	6.30

Chart No: 4.16 - Chart Showing the Percentage of Net Lapses to Mean Life Insurance Business In Force



4.1(q) Analysis of Utilisation of Income

Table No: 4.31 - Table Showing Analysis of Utilisation of Income (In Percentage)

Year	A. Claims By Maturity	B. Claims BY Death	C. Annuities	D. Surrenders	E. Commission to Agents Etc	F. Salary and Other Benefits to Employees	G. Other Mgt. Expenses	H. Other Outgo (Taxes, Transfer to Reserves)	I. Govt. Share of Valuation Surplus	J. Excess of Income Over Outgo Added to Life Insurance Fund
1993-94	18.04	4.14	0.83	2.27	6.15	5.85	1.96	3.00	0.78	56.98
1994-95	18.91	3.91	0.82	2.14	5.88	5.93	1.82	2.85	0.77	56.97
1995-96	16.99	3.85	1.31	2.13	5.45	6.33	1.59	3.55	0.73	58.07
1996-97	18.21	3.95	1.19	2.21	5.62	6.31	1.65	2.19	0.66	58.01
1997-98	17.92	3.79	1.25	2.49	5.55	5.63	1.69	2.23	0.65	58.80
1998-99	17.16	3.79	1.29	2.81	5.51	5.68	1.65	2.17	0.64	59.30
1999-00	17.05	3.66	1.33	2.93	5.6	5.85	1.54	1.92	0.59	59.53
2000-01	18.08	3.54	1.2	3.16	6.03	5.18	1.39	1.57	0.59	59.26
2001-02	16.79	2.95	1.38	3.15	6.31	4.35	1.26	1.56	1.12	61.13
2002-03	17.84	3.14	1.48	3.17	6.18	4.09	1.56	12.39	0.60	49.55
2003-04	19.31	3.4	1.63	3.65	6.65	4.02	2.00	2.65	0.63	56.06
2004-05	18.73	3.04	1.52	3.06	5.75	3.18	2.33	6.39	0.64	55.36
2005-06	20.36	3.1	1.63	3.07	5.84	2.96	2.01	3.51	0.52	57.00
2006-07	21.29	2.95	1.45	10.58	6.08	2.70	1.99	3.42	0.50	49.04
2007-08	19.16	3.16	1.43	10.8	5.73	3.02	1.95	2.31	0.50	51.94

The income is generated by LIC from various different sources such as total premium income, income from investments, etc. The income generated during the year is to be utilized in different years. The analysis of utilization of income is done in order to evaluate the performance of the corporation. The percentages of utilization of income in different activities are calculated in order to analyze the share of each activity in the total income.

The utilization of income of LIC is done in the form of making various payments such as payment of claims both maturity as well as death payment in case of surrender of a policy, commission to agents, salary to employees, management expenses, taxes, transfer to reserves etc. Table 4.31 shows the percentage of various components in which the total income of LIC is utilized every year during the period of the study.

Factor Analysis

Factor analysis is a multivariate statistical technique used to condense and simplify the set of large number of variables to smaller number of variables called factors. This technique is helpful to identify the underlying factors that determine the relationship between the observed variables and provides an empirical classification scheme of clustering of statements into groups called factors. Using all the ten items of utilization of income namely claims by maturity -A, claims by death -B, Annuities -C, Surrenders -D, Commission to agents –E, salary and other benefits - F, Other Management Expenses– G, Other Outgo – H, Government share of Valuation Surplus- I, Excess of income over outgo added to Life Insurance Fund –J factor analysis was performed in order to simplify, condense and extract groups called Factors on priority basis. The following table 4.32(a) clusters the ratios into the factors and the results were presented as below:

Table No: 4.32 (a) - Rotated Factor Loadings

Utilization of Income	Factors				Communality
	1	2	3	4	
A-Claims by maturity	**0.893**	-0.249	-0.032	0.142	0.881
B-Claims by death	-0.179	**0.910**	-0.152	-0.256	0.948
C-Annuities	0.073	**-0.898**	0.161	-0.107	0.849
D-Surrenders	**0.656**	-0.492	-0.159	-0.010	0.698
E-Commission to agents	0.121	-0.191	0.119	**0.899**	0.874
F-Salary & other benefits to employees	-0.537	**0.770**	-0.133	-0.228	0.951
G-Other Mgt. expenses	**0.796**	-0.006	0.131	-0.012	0.651
H-Other outgo	0.029	-0.161	**0.981**	0.052	0.993
I-Government share of valuation surplus	**-0.651**	0.184	-0.196	0.576	0.828
J-Excess of income over outgo	**-0.682**	0.279	-0.567	-0.070	0.869
Eigen value	3.091	2.705	1.447	1.297	8.541
% Of variance	30.915	27.051	14.473	12.973	85.412
Cumulative % variance	30.915	57.965	72.438	85.412	

The above table 4.32(a) depicts the rotated factor loadings, communalities, eigen values and the percentage of variance explained by the factors. Out of the ten variables, four factors have been extracted. The variables were grouped based on values, which explains how closely the variables were related to each one of the factors discovered. As such under Factor – I, the variables Claims by maturity of LIC scores the highest value 0.893, followed by Other management expenses (0.796), Surrenders with (0.656), Government share of valuation surplus (–0.651) and excess of income over outgo (–0.682) are grouped together. Again under factor II three variables namely, Claims by death (0.910), Annuities (-0.898), Salary and other benefits to employees (0.770) are grouped. Only one source namely other outgo (0.981) constitutes factor III and Commission to agents (0.899) constitutes factor IV. These four factors put together explain the total variance of these ratios to the extent of 85.412 percent.

Factor loadings help the researcher to explain how closely the variables are related to each one of the factors. In order to reduce the number of factors and enhance the interpretability, the factors were rotated. The rotation increases the quality of interpretation of the factors. There are several methods of the initial factor matrix to attain simple structure of the data. The varimax rotation is one such method. To obtain better results for interpretation it was employed and the results were given in table 4.32(b).

Table No: 4.32 (b)

Clustering of Items of Utilization of Income into Factors

Factor	Sources of Income	Rotated factor loadings
I. (30.915**%)**	A-Claims by maturity	0.893
	D-Surrenders	0.656
	G-Other Management expenses	0.796
	I-Govt share of valuation surplus	-0.682
	J-Excess of income over outgo	-0.682
II.(27.051 %)	B-Claims by death	0.910
	C-Annuities	-0.898
	F-Salary & other benefits to employees	0.770
III.(14.473 %)	H-Other outgo	0.981
IV.(12.973 %)	E-Commission to agents	0.899

Five factors were identified as being maximum percentage variance accounted. The five items of utilization of income A, D, G, I and J under one group as factor I accounts 30.913 percent of the total variance. The three items of utilization of income B, C and F constituted the factor II and accounts 27.051 percent of the total variance. One item of utilization of income H constituted the factor III and accounts 14.473 percent of the total variance. The one financial ratio E constituted the factor IV and accounts 12.973 percent of the total variance. The factor analysis condensed and simplified ten items of utilization of income of LIC and grouped into four factors explaining 85.412 percent of the variability of all the ten items of utilization of income.

Majority of the income of LIC was utilized in the form of claims by maturity, management expenses, surrenders, Government share of valuation surplus and excess of income over outgo. This is followed by Claims by death, Annuities, Salary and other benefits to employees.

Inter-correlation and Regression Analysis

There are many indicators of the performance of LIC out of which few major parameters were taken and an attempt was made to test the inter relations and correlation existing between the variables considered for the study: It includes:

a) New business in India

b) New business out of India

c) Business in force In India

d) Business in force out of India

e) Premium Income and

f) Life insurance fund

a) New Business in India

In assessing the performance of LIC, New business in India is considered to be a significant parameter. The components used to measure new business in India are annual premium, number of policies and sum assured. The Inter-correlation between the three variables is computed and are given in the following Table 4.33 (a)

Table No: 4.33 (a)

Inter-Correlation Matrix New Business in India

	Annual premium (Rs. in Crores)-Y	**No. of Policies-X1**	**Sum Assured (Rs. in Crores)-X2**
Annual premium (Rs. in Crores)-Y	1.000		
No. of Policies-X1	0.944**	1.000	
Sum Assured (Rs. in Crores)-X2	0.955**	0.952**	1.000

**-Significant at 1% level

The correlation matrix shows that all the correlation coefficients between the independent variables and between the dependent and independent variables were significant at one percent level. This indicated strong relationship between the variables considered. In way of preceding the analysis, multiple regression was applied and the estimated equation was as under :

Regression Model for Y-Annual Premium

Variables	Regression Coefficient	Standard Error	t- value (d.f = 12)	R^2
Constant	-2245.752	1846.189	-1.216	0.926
No. of Policies-X1	0.000	0.000	1.436	
Sum Assured-X2 (Rs. in Crores)	0.039	0.017	2.352*	

*- : Significant at 5 % ** : significant at 1% level

Regression Fitted: Y = -2245.752 + 0 .000 X1+0 .039 X2

Analysis of variance for regression

Source	S S	D F	M S	F
Regression	2.99E+08	2	149588350.89	74.73**
Residual	24021019	12	2001751.579	

**- Significant at 1 % level

The multiple regression model indicated that out of the 2 explanatory variables, X2 the sum assured has significantly contributing to Y the premium income. The analysis of variance of multiple regression model for Y indicates the overall significance of the model fitted. The coefficient of determination R^2 value showed that these variables put together explained the variations of Y to the extent of 92.6 percent.

b) New Business Out of India

In assessing the performance of LIC under this parameter Annual premium income is considered to be a function of variables Number of policies (X1) and Sum assured (X2) .The inter-correlations between these variables are given in the following Table 4.33(b)

Table No: 4.33(b)

Inter-Correlation Matrix New Business Out of India

	Annual Premium (Rs. in Crores)	No. of Policies	Sum Assured (Rs. in Crores)
Annual premium (Rs. in Crores)	1.000		
No. of Policies	0.326	1.000	
Sum Assured (Rs. in Crores)	0.984**	0.401	1.000

**Significant at 1% level

The correlation matrix shows that only the independent variable Sum assured (X2) is positively correlated and was significant at one percent level. This indicates that relationship is more influencing between sum assured and premium income in respect of New Business out of India.

Regression Model for Annual Premium

Variables	Regression Coefficient	Standard Error	t- value (d.f = 12)	R^2
Constant	0.987	1.638	0.602	0.974
No. of Policies-x1	0.000	0.000	-1.602	
Sum Assured-x2 (Rs. in Crores)	0.069	0.003	19.986**	

**: significant at 1% level

Regression Fitted: Y =0 .987 +0 .000 X1+0 .069 X2

Analysis of Variance for Regression

Source	S S	D F	M S	F
Regression	374.535	2	187.268	224.16**
Residual	10.025	12	0.835	

**- Significant at 1 % level

The multiple regression model indicated that out of the 2 explanatory variables, X2 Sum assured has significantly contributed to Y the premium Income. The analysis of variance of multiple regression model for Y indicates the overall significance of the model fitted.

The coefficient of determination R^2 value showed that these variables put together explained the variations of Y to the extent of 97.4 percent.

c) Business In force in India

In assessing the performance of LIC under this parameter Annual premium income is considered to be a function of variables Number of policies (X1) and Sum assured (X2) .The inter-correlations between these variables are given in the following Table 4.33(c)

Table No: 4.33 (c)

Inter-Correlation Matrix -Business In Force of India

	Annual premium (Rs. in Crores)	**No. of Policies**	**Sum Assured (Rs. in Crores)**
Annual Premium (Rs. in Crores)	1.000		
No. of Policies	0.995**	1.000	
Sum Assured (Rs. in Crores)	0.989**	0.995**	1.000

**-Significant at 1% level

The correlation matrix shows that all the correlation coefficients between the independent variables and between the dependent and independent variables were significant at one percent level. This indicated strong relationship and all the variables are influencing one another. In way of preceding the analysis, multiple regression was applied and the estimated equation was as under:

Regression Model for Annual Premium

Variables	**Regression Coefficient**	**Standard Error**	**t- value (d.f = 12)**	**R^2**
Constant	-33313.9	7200.242	- 4.627	0.990
No. of Policies-x1	65.262	16.924	3.856**	
Sum Assured-x2 (Rs. In Crores)	-0.007	0.018	- 0.392	

**: significant at 1% level.

Regression Fitted: Y = -33313.9 + 65.262 X1- 0.007 X2

Analysis of Variance for Regression

Source	S S	D F	M S	F
Regression	1.04E+10	2	5199876687.9	604.82**
Residual	1.03E+08	12	8597426.974	

**- Significant at 1 % level

The multiple regression model indicated that out of the 2 explanatory variables, X1 has significantly contributed to Y. The analysis of variance of multiple regression model for Y indicates the overall significance of the model fitted. The coefficient of determination R^2 value showed that these variables put together explained the variations of Y to the extent of 99.0.

d) Business In force out of India

In assessing the performance of LIC under this parameter Annual premium income is considered to be a function of variables Number of policies (X1) and Sum assured (X2) .The inter-correlations between these variables are given in the following Table 4.33(d)

Table No: 4. 33(d)

Inter-Correlation Matrix Business In Force Out of India

	Annual Premium (Rs. in Crores)	No. of Policies	Sum Assured (Rs. in Crores)
Annual premium (Rs. in Crores)	1.000		
No. of Policies	0.955**	1.000	
Sum Assured (Rs. in Crores)	0.947**	0.963**	1.000

**-Significant at 1% level

The correlation matrix shows that all the correlation coefficients between the independent variables and between the dependent and independent variables were significant at one percent level. This indicated strong relationship between the variables considered. In way of preceding the analysis, multiple regression was applied and the estimated equation was as under:

Regression Model for Annual Premium

Variables	Regression Coefficient	Standard Error	t- value (d.f = 13)	R^2
Constant	-250.155	30.270	-8.264	0.912
Sum Assured (Rs. in Crores)	391.894	33.829	11.584**	

**: significant at 1% level

Regression Fitted Y = -250.155 + 391.894 X1

Analysis of Variance for Regression

Source	S S	D F	M S	F
Regression	14186.76	1	14186.76	134.19 **
Residual	1374.328	13	105.7176	

**- Significant at 1 % level

The simple regression model indicated that Sum Assured X1 has significantly contributed to Y the annual premium. The analysis of variance of multiple regression model for Y indicates the overall significance of the model fitted. The coefficient of determination R^2 value showed that these variables put together explained the variations of Y to the extent of 91.2 percent.

e) Premium Income

Premium income (Y) was considered to be a function of X2 –Number of policies, X3 – Sum assured ,X4- Number of Active agents and X5- loans advanced .The multiple regression model between these variables are given in the following Table 4.33 (e)

Table No: 4. 33 (e) - Regression Model for Premium Income

Variables	Regression Coefficient	Standard Error	t- value (d.f = 14)	R^2
Constant	-611.331	2011.079	-0.304	0.965
X2	0.000	0.000	-1.519	
X3	0.096	0.022	4.380**	
X4	0.009	0.004	2.010*	
X5	-0.531	0.164	-3.248**	

*-: Significant at 5 %   ** : significant at 1% level

Regression Fitted: Y = -611.331 + 0 .000 X2 + 0 .096 X3 +0.009 X4 -0 .531 X5

Analysis of Variance for Regression

Source	S S	D F	M S	F
Regression	3.12E+08	4	77967336.929	68.825**
Residual	11328373	14	1132837.301	

**- Significant at 1 % level

The multiple regression model indicated that X3, X4 and X5 have significantly contributed to Y. The analysis of variance of multiple regression model for Y indicates the overall significance of the model fitted. The coefficient of determination R^2 value showed that these variables put together explained the variations of Y to the extent of 96.5 percent. Hence, the premium income of LIC largely depends on sum assured, number of active agents and loans advanced and LIC has to strive increasing these factors for its improved performance.

f) Life Fund

Life fund indicates the balance of income of LIC after all the expenses are met. Following relationship was considered in this case:

Y = f(x1,x2,x3,x4,x5)

Where Y = Life Fund

X1 = Annual premium

X2 = Number of policies

X3 = Sum assured

X4 = Number of active agents

X5 = Loans advanced

The inter-correlation matrix of explanatory variables namely X1-Annual premium, X2-No of policies, X3-Sum assured, X4- No of active agents and X5-Loans advances with dependent variable Y-Life fund is furnished in the table 4.33 (f) given below.

Table No: 4. 33 (f) - Inter-Correlation Matrix

	X1	X2	X3	X4	X5	Y
X1	1.000					
X2	0.944**	1.000				
X3	0.955**	0.952**	1.000			
X4	0.812**	0.813**	0.884**	1.000		
X5	0.540**	0.521**	0.708**	0.851**	1.000	
y	0.690**	0.639**	0.797**	0.942**	0.951**	1.000

** Significant at one percent level

It is seen from the above table the correlation between all the explanatory variables are significant at one percent level and was positive. Further, it is also seen that all these explanatory variables are, significantly and positively correlated with the dependent variable connected load. This indicated strong relationship between the selected variables. In way of preceding the analysis, multiple regression was applied and the estimated equation was as under:

Regression Model for Life Insurance Fund

Variables	**Regression Coefficient**	**Standard Error**	**t- value (d.f = 14)**	**R^2**
Constant	-122820.4	54504.401	-2.253	0.986
X1	7.655	8.531	0.897	
X2	-0.020	0.008	-2.584**	
X3	0.917	1.007	0.911	
X4	0.627	0.143	4.381*	
X5	11.595	6.325	1.833	

*- : Significant at 5 %   ** : significant at 1% level

Regression Fitted Y = -122820.4 + 7.655 X1-.020 X2 +0.917 X3 +0.627 X4 + 11.595 X5

Analysis of Variance for Regression

Source	S S	D F	M S	F
Regression	5.35E+11	4	1.0702E+11	129.798**
Residual	7.42E+09	14	824475331.61	

**- Significant at 1 % level

The multiple regression model indicated that X2- Number of policies and X4- Number of active agents have significantly contributed to Y-the life Fund. The analysis of variance of multiple regression model for Y indicates the overall significance of the model fitted. The coefficient of determination R^2 value showed that these variables put together explained the variations of Y to the extent of 98.6 %. Thus, LIC have to concentrate on the number of policies and number of active agents to increase the flow to life fund so that it is able to play more meaningful role in the development of the country.

Path Coefficient Analysis

The direct effect of each of the explanatory variables on the dependent variable and the indirect effect of each explanatory variables on the dependent variable through other explanatory variables are explained by path coefficient analysis and the results are furnished in the table 4.33 (g) given below:

Table No: 4. 33 (g) - Direct & Indirect Effect of Explanatory Variables on Connected Load during 1998-2007

	X1 (Annual Income)	X2 (Number of Policies)	X3 (Sum Assured)	X4 (Number of active agents)	X5 (Loans advances)	Y (Life Fund)
X1	0.187	-0.573	0.332	0.570	0.175	0.690**
X2	0.176	-0.607	0.331	0.570	0.169	0.639**
X3	0.179	-0.578	**0.348**	0.620	0.229	0.797**
X4	0.152	-0.494	**0.307**	**0.701**	0.275	0.942**
X5	0.101	-0.317	0.246	0.597	**0.323**	0.951**

It was seen from the above table that among the five explanatory variables X1-Annual premium, X2-Number of policies, X3-Sum assured, X4- Number of active agents and X5-Loans advances, three explanatory variables namely X3, X4 and X5 have higher positive direct effect on the dependent variable Y -Life fund. The variable X3 (sum assured) also has a higher positive indirect effect on Y through X4 (Number of active agents). Similarly the variable X4(Number of active agents) also had positive indirect effect on the dependent variable Y through X3 (Sum assured). The variable X5 (Loans advances) also had higher positive indirect on the dependent variable Y through X4(Number of active agents). Hence the three explanatory variables, X3-Sum assured, X4- Number of active agents and X5-Loans advances were substantially important as they contributes to variable to Y(Life Fund).

1.2 Productivity of LIC

Productivity in general refers to the amount of output per unit of input. Productivity shows whether the activity of an organization is efficient and effective. Productivity requires both efficiency and effectiveness, because a certain activity will not be productive if it is only efficient, but not effective, or effective, but not efficient. Increasing productivity reduces the costs of output, which enables the producers to supply the goods and services at lower prices to the customers.

According to **I.L.O** productivity is defined as "In the broadest concept, productivity may be taken to constitute the ratio of available goods and services to the potential resources of the group, community or country."

According to **Paul Mali**, "Productivity is the measure of how well resources are brought together in organization and utilized for accomplishing set of results".

There are many different ways of measuring productivity. Many researchers argued that application of productivity concept in service sector is more complicated task than its application in manufacturing. Productivity concept in manufacturing is analyzed in the scope of organization, but in the service sector this scope is larger and involves an external element from the organizational position – customer. Quantity and quality aspects in the determination of productivity will differ in different spheres of service sector.

In the case of insurance sector, IRDA has defined following specific variables to measure the productivity:

4.2 (a) New Business per branch

4.2 (b) New Business per active agent

4.2 (c) Number of polices per branch

4.2 (d) Number of polices per active agent

4.2 (e) Premium income per branch

4.2 (f) Premium income per agent

4.2(g) Ratio of expenses to premium Income

4.2(h) Complaints per thousand mean number of policies in force

4.2(i) Outstanding claims to claims payable during the year

4.2(j) Membership of various agents club

4.2(a) New Business per Branch

New business under individual insurance refers to the sum assured underwritten during the current financial year. In order to measure the productivity of LIC, the sum assured underwritten was considered as one of the important variable. Productivity of the branches can be measured by calculating sum assured per branch i.e. dividing the total sum assured in a year by the total number of branches in that year. The results would tell us the efficiency and effectiveness of various branches as of the LIC during various years. Table 4.34 reveals that the average business done by branches during different years.

The table shows a gradual increase in the productivity of LIC per branch from the year 1993-94 till 2001-02. Notably there was hike in the years 2001-02 and 2005-06 and downfall in the years 2002-03, 2004-05, 2006-07 and 2007-08 showing LIC has to improve its performance in this case.

The new business per branch ranges between Rs.2082.36 lakhs to Rs.13855.65 lakhs with a mean of Rs.6421.737 lakhs and a coefficient of variation of 56.57 percent, with a compound growth rate of 13.89 percent.

By comparing the new business per branch in a year with the actual new business of every branch in that year, LIC can take strategic decisions as to which branch need to be paid more attention. Through this LIC can also identify the geographical pockets of concentration of its business.

Table No: 4.34 - Table Showing the New Business per Branch

Year	New Business (Rs. in Lakhs)	Total Number of Branches	New Business per Branch (Rs. in Lakhs)			
1993-94	4181383	2008	2082.36			
1994-95	5522850	2021	2732.73			
1995-96	5181554	2024	2560.05			
1996-97	5674050	2024	2803.38			
1997-98	6361769	2046	3109.36			
1998-99	7531628	2048	3677.55			
1999-00	9121425	2048	4453.82			
2000-01	12477162	2048	6092.36			
2001-02	19257227	2048	9402.94			
2002-03	17951222	2048	8765.24			
2003-04	19870712	2048	9702.49			
2004-05	17948139	2048	8763.74			
2005-06	28376374	2048	13855.65			
2006-07	20162074	2048	9844.76			
2007-08	17366272	2048	8479.63			
	Min. Val.	**Max. Val.**	**Mean**	**SD**	**C.V (%)**	**C.G.R (%)**
New business (Rs. in Lakhs)	4181383	28376374	13132256	7462514	56.83	14.02
Total number of branches	2008	2048	2040	13.55518	0.66	0.12
New business / branch (Rs. in Lakhs)	2082.36	13855.65	6421.737	3632.892	56.57	13.89

Source: Annual Reports, 1993-94tTo 2007-08

Chart No: 4.17 - New Business per Branch (Rs. in Lakhs)

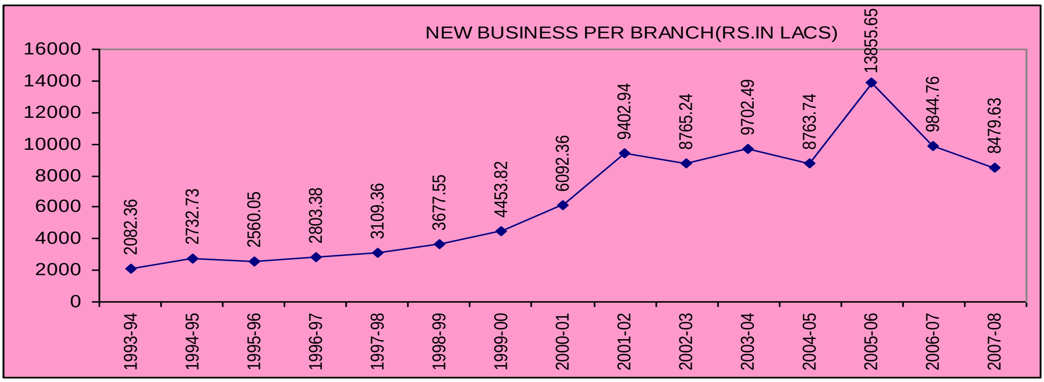


Table No: 4.35 - Trends in New Business Per Branch

	R^2	D. F	F Value	Trend Coefficients			
				b_0	b_1	b_2	b_3
New business (Rs. in Lakhs)	0.897	11	32**	8914744	-4.E+06	848295	-36489
Total number of branches	0.927	11	46**	1993.60	14.5976	-1.2472	0.0343
New business / branch Y	0.896	11	31**	4411.51	-1898.4	415.192	-17.839

** Significant at 1% level

New business per branch Y = 4411.51 – 1898.4 t + 415.192 t^2 – 17.839 t^3

The Coefficient of determination R^2 indicates that the trend equations b1, b2 and b3 put together explain the variations of Y to the extent of 89.6 percent, which shows the adequacy of the model, fitted to forecast the trend values. The forecasted value for any 't' value-(year) can be obtained from the above trend equation. The above significant cubic trend equations indicates positive trend in the future years.

4.2(b) New Business Per Active Agent

Insurance sales agents commonly referred to as "producers" in the insurance industry as they involve in selling and procuring new business. Productivity of the agents can be measured by dividing the total sum assured in a year by total number of active agents in that year, i.e. average business per active agents. It gives the average productivity of agents. Table 4.36 shows the new business per active agent for the years 1992-93 to 2007-08.

The table 4.36 reveals that the new business per active agent ranges between Rs.7.97 lakhs to Rs.28.73 lakhs with a mean of Rs.16.076 lakhs and a coefficient of variation of 36.78 percent. The average business per agent and their productivity increases year by year till 2001-02 and reaches great hikes in the years 2001-02 and 2005-06 with Rs. 23.55 lakhs and Rs.28.73 lakhs respectively.

Table No: 4.36 - Table showing the New Business per Active Agent

Year	New Business (Rs. in Lakhs)	Total Number of Active Agents	Average Business per Agent (Rs. in Lakhs)
1993-94	41813.83	524427	7.97
1994-95	5522850	519504	10.63
1995-96	5181554	513897	10.08
1996-97	5674050	533133	10.64
1997-98	6361769	558517	11.39
1998-99	7531628	598217	12.59
1999-00	9121425	683190	13.28
2000-01	12477162	743064	16.56
2001-02	19257227	744003	23.55
2002-03	17951222	902199	19.51
2003-04	19870712	1003241	21.97
2004-05	17948139	980836	18.30
2005-06	28376374	987689	28.73
2006-07	20162074	1028256	20.41
2007-08	17366272	1117908	15.53

	Min. Val.	Max. Val.	Mean	SD	C.V (%)	C.G.R (%)
New business (Rs. in Lakhs)	41813.83	28376374	12856285	7881927	61.31	27.94
Total number of active agents	513897	1117908	762538.7	220152.6	28.87	6.55
New business /active agent (Rs. in Lakhs)	7.97	28.73	16.076	5.913	36.78	7.18

Source: Annual Reports, 1993-94 to 2007-08.

The graph shows ups and downs after the entry of private insurers from 2002-03 onwards due to intense competition. The overall compounded growth rate of LIC in case of average business per agent is 7.18 percent.

Chart No: 4.18 - Chart Showing the New Business Per Active Agent

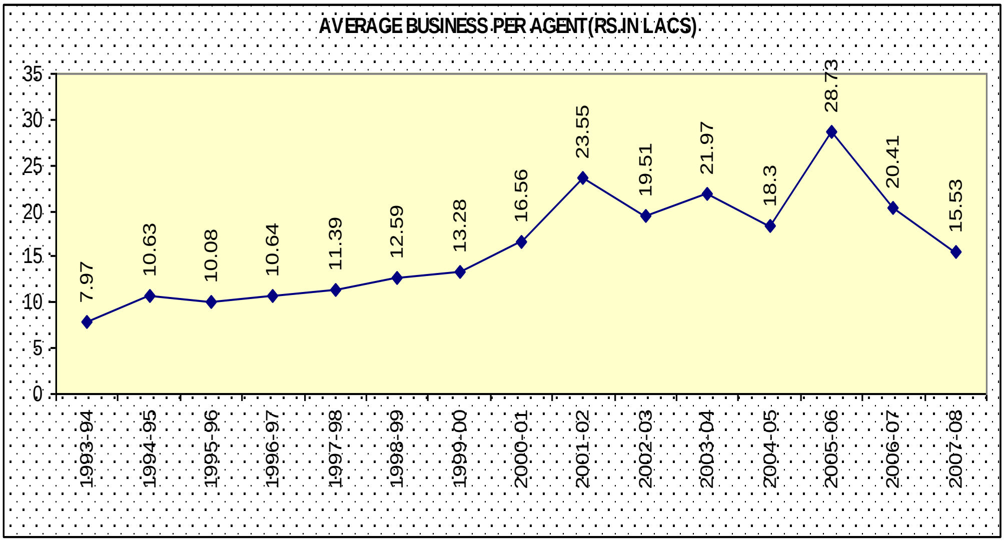


Table No: 4.37 - Trends in New Business per Active Agent

	R^2	D. F	F Value	Trend Coefficients			
				b_0	b_1	b_2	b_3
New business (Rs. in Lakhs)	0.885	11	28**	4499203	-2.E+06	628465	-28598
Total number of active agents	0.978	11	160**	576976	-60289	14305.5	-536.16
New business per active agent (Rs. in Lakhs) Y	0.797	11	14**	12.0026	-2.7945	0.6952	-0.0323

** Significant at 1% level

New business per active agent Y = 12.0026 – 2.7945 t +0.06952 t^2 -0 .0323 t^3

The Coefficient of determination R^2 indicates that the trend equations b1, b2 and b3 put together explain the variations of Y to the extent of 79.7 percent, which shows the adequacy of the model, fitted to forecast the trend values. The forecasted value for any 't' value-(year) can be obtained from the above trend equation. The above significant cubic trend equations indicates positive trend in the future years.

4.2(c) Number of Policies per Branch

The performance of the branches can be judged from the number of policies sold by them during a particular year by the branches. Thus, the productivity of the branches in a particular year is measured by dividing the total number of policies in a year by the total number of branches in that year. This indicates the average business done by each branch in terms of number of policies in different years.

Table No: 4.38 - Table Showing the Number of Policies per Branch

Year	Number of Policies	Total Number of Branches	Number of Policies per Branch
1993-94	10725633	2008	5341
1994-95	10874682	2021	5381
1995-96	11020825	2024	5445
1996-97	12268476	2024	6062
1997-98	13311294	2046	6506
1998-99	14843687	2048	7248
1999-00	16976782	2048	7248
2000-01	19656663	2048	9598
2001-02	22491304	2048	10982
2002-03	24268416	2048	11850
2003-04	26456320	2048	12918
2004-05	21817967	2048	10653
2005-06	29284800	2048	14299
2006-07	20910041	2048	10210
2007-08	17961363	2048	8770

	Min. Val.	Max. Val.	Mean	SD	C.V (%)	C.G.R (%)
Number of policies	10725633	29284800	18191217	5986907	32.91	6.66
Total number of branches	2008	2048	2040	13.55	0.66	0.12
Number of policies per Branch	5341	14299	8834	2925.129	33.11	6.58

Source: Annual Reports, 1993-94 to 2007-08

Table 4.38 shows the number of policies per branch for the years 1993-94 to 2007-08. The number of policies per branch ranges between 5341 to 14299 with a mean of 8834 and a coefficient of variation of 33.11 percent. The compounded growth rate of the same was 6.58 percent.

The performance of LIC in case of number of policies per branch was good till 2005-06 but towards the end years it declines. Notably the graph goes upward even after the entry of private insurers and this signifies that the decline was not due to competition in the insurance market.

Chart No: 4.19 - Chart Showing the Number of policies per Branch

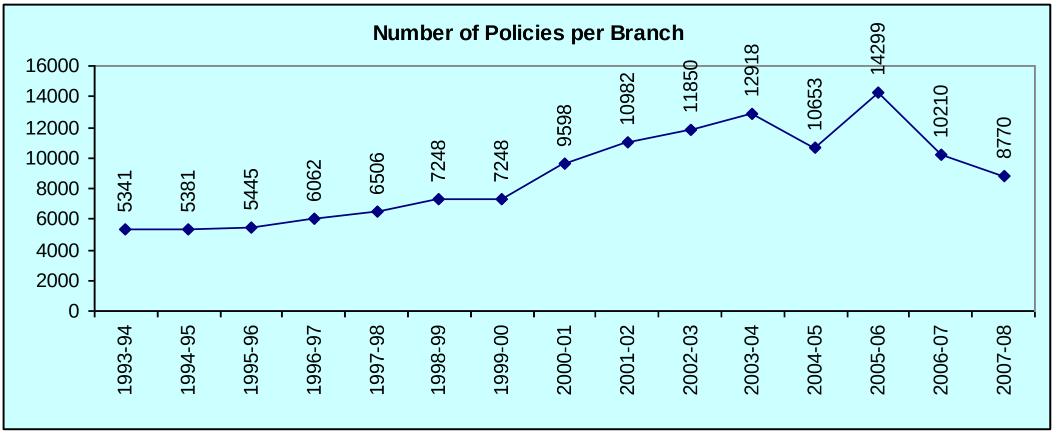


Table No: 4.38 (a) - Trends in Number of Policies Per Branch

	R^2	D. F	F Value	Trend Coefficients			
				b_0	b_1	b_2	b_3
New business (Rs. in Lakhs)	0.916	11	40**	1.4E+07	-3.E+06	807521	-38058
Total number of branches	0.927	11	46**	1993.6	14.5976	-1.2472	0.0343
New business / Branch(Rs. in Lakhs) Y	0.902	11	33**	7231.72	-1786.6	415.8	-19.248

** Significant at 1% level

New business per Branch Y = 7231.72 – 1786.6 t + 415.8 t^2 – 19.248 t^3

The Coefficient of determination R^2 indicates that the trend equations b1, b2 and b3 put together explain the variations of Y to the extent of 90.2 percent, which shows the adequacy of the model, fitted to forecast the trend values.

The forecasted value for any 't' value-(year) can be obtained from the above trend equation. The above significant cubic trend equations indicates positive trend in the future years.

4.2(d) Number of Policies per Active agent

An Insurance agent acts as a financial advisor in assessing the financial needs of his client and prepares a package of life insurance solution for him. It is only an insurance agent who is to make sure people have the coverage that is right for them at a price they can live with. He is expected to be professional in his approach so that whatever he does is customer focused. He cultivates long-term relationship with client and family. Hence, it is essential to measure the productivity of the agent.

The productivity of agents is calculated by dividing the total number of policies of a particular year by the number of agents in that year. The productivity for the period 1993-94 to 2007-08 is shown in the table 4.39

Table No: 4.39 - Table Showing Number of Policies per Active Agent

Year	Number of Policies	Number of Active Agent	Number of Policies Per Agent
1993-94	10725633	524427	20
1994-95	10874682	519504	21
1995-96	11020825	513897	21
1996-97	12268476	533133	23
1997-98	13311294	558517	24
1998-99	14843687	598217	22
1999-00	16976782	683190	25
2000-01	19656663	713064	26
2001-02	22491304	744003	30
2002-03	24268416	902199	27
2003-04	26456320	1003241	26
2004-05	21817967	980836	22
2005-06	29284800	987689	30
2006-07	20910041	1028256	20
2007-08	17961363	1117908	16

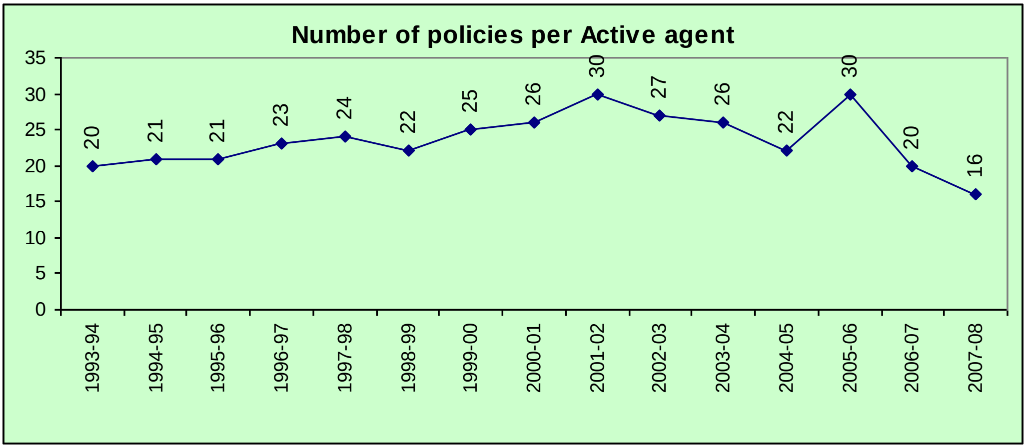
	Min. Val.	Max. Val.	Mean	SD	C.V (%)	C.G.R (%)
Number of policies	10725633	29284800	18191217	5986907	32.91	6.66
Number of active agents	5,13,897	1117908	760538	220478.2	28.99	6.55
Number of policies / active agent	16	30	24	3.870	16.45	0.21

Source: Annual Reports, 1993-94 to 2007-08

The number of policies per active agent ranges between 16 to 30 with a mean of 24 policies and a coefficient of variation of 16.45 percent. The compounded growth rate of number of policies per agent for the entire period of study was 0.21 percent.

The results show that the number of policies per agent increased steadily from 20 policies in 1993-94 to 24 policies in 1997-98. Again from 1999-2000, the number of policies per agent started increasing and reached 30 policies per agent in 2001-02.

Chart No: 4.20 - Chart Showing the Number of policies per Active Agent



From 2002-03 onwards there was a downfall in the productivity of agents as it reached 16 policies per agent in the year 2007-08. The graph of number of policies per agent goes down towards the end. This indicates poor performance of LIC in this front and hence there arise the need to train the agents to handle the problems linked with rapid changes in the market scenario.

Table No: 4. 40 - Trends in Number of Policies per Active Agent

	R^2	D. F	F Value	Trend Coefficients			
				b_0	b_1	b_2	b_3
Number of policies	0.916	11	40**	1.4E+07	-3.E+06	807521	-38058
Number of active agents	0.977	11	157**	581129	-62461	14441.3	-536.16
Number of policies per active agent Y	0.661	11	7.2**	21.3795	-1.1404	0.4128	-0.0238

** Significant at 1% level

Number of policies per active agent Y =21.3795 – 1.1404 t +0.4128 t^2 -0 .0238 t^3

The Coefficient of determination R^2 indicates that the trend equations b1, b2 and b3 put together explain the variations of Y to the extent of 66.1 percent, which shows the adequacy of the model, fitted to forecast the trend values. The forecasted value for any 't' value-(year) can be obtained from the above trend equation. The above significant cubic trend equations indicates positive trend in the future years.

4.2(e) Premium Income per Branch

An insurance premium is the actual amount of money charged by insurance companies for active coverage. The productivity of branches can be measured in terms of premium income received by all the branches during a particular year. It is calculated by dividing the total number of branches in that year. Table 4.41 shows the premium Income per branch for the years 1993-94 to 2007-08.

Table No: 4.41 - Table Showing Premium Income per Branch

Year	Premium Income (Rs. in Crores)	Number of Branches	Premium Income PER Branch (Rs in Crores)
1993-94	2507.73	2008	1.24
1994-95	2533.90	2021	1.25
1995-96	2813.63	2024	1.39
1996-97	3345.39	2024	1.65
1997-98	3841.12	2046	1.87
1998-99	4863.41	2048	2.37
1999-00	6008.28	2048	2.93
2000-01	8851.89	2048	4.32
2001-02	16009.44	2048	7.81
2002-03	12505.38	2048	6.10
2003-04	12540.00	2048	6.12
2004-05	11224.19	2048	5.48
2005-06	15157.76	2048	7.40
2006-07	11672.72	2048	5.70
2007-08	9871.89	2048	4.82

	Min. Val.	Max. Val.	Mean	SD	C.V (%)	C.G.R (%)
Premium income (Rs. in Crores)	2507.73	16009.44	8249.782	4804.62	58.24	14.71
Number of branches	2008	2048	2040	13.55	0.66	0.12
Premium income per branch (Rs. in Crores)	1.24	7.81	4.03	2.340	58.07	14.62

Source: Annual Reports, 1993-94 To 2007-08

The table 4.41 reveals the premium income per branch ranges between Rs.1.24 crores to Rs. 7.81 crores with a mean of Rs.4.03 crores and a coefficient of variation of 58.07 percent with a compounded growth at 14.62 percent.

The graph was consistent in chart 4.21 with steady raise till 2001-02 but afterwards it started to fluctuate. From 2002-03 onwards there was declining trend except in the year 2005-06 with Rs.7.4 crores. LIC has to concentrate to improve its performance in this front.

Chart No: 4. 21

Chart Showing the Premium Income per Branch (Rs. in crores)

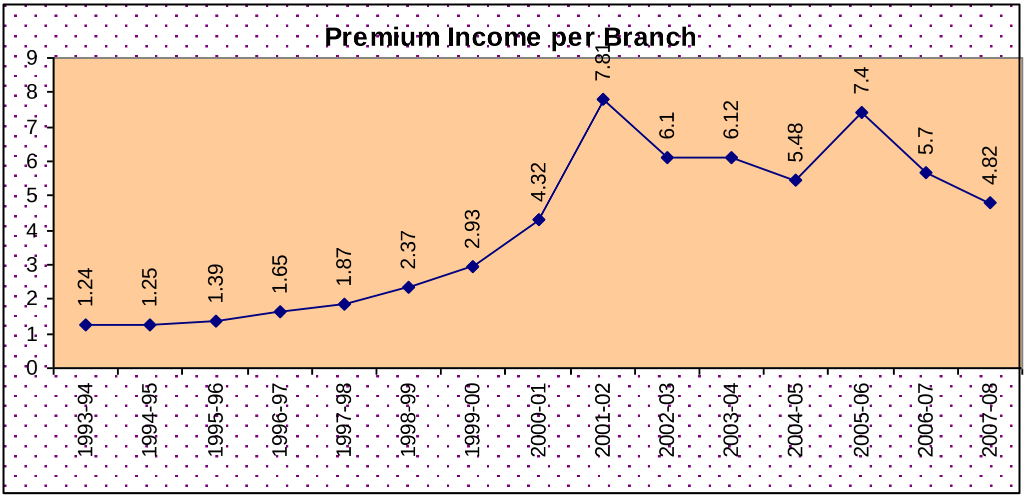


Table No: 4.42 - Trends in Premium Income per Branch

	R^2	D. F	F Value	Trend Coefficients			
				b_0	b_1	b_2	b_3
Premium income (Rs. in Crores)	0.878	11	26**	4644.42	-2290.9	575.532	- 26.713
Number of branches	0.927	11	46**	1993.60	14.5976	-1.2472	0.0343
Premium income / branch (Rs. in Crores) Y	0.877	11	26**	2.2926	-1.1245	0.2813	- 0.0130

** Significant at 1% level

Premium income per branch Y = 2.2926 – 1.1245 t +0 .2813 t^2 -0. 0130 t^3

The Coefficient of determination R^2 indicates that the trend equations b1, b2 and b3 put together explain the variations of Y to the extent of 87.7 percent which shows the adequacy of the model fitted to forecast the trend values. The forecasted value for any 't' value-(year) can be obtained from the above trend equation. The above significant cubic trend equations indicates positive trend in the future years.

4.2(f) Premium Income per Agent

Agents of insurance companies are not salaried employees and they are remunerated by payment of commission as specified under section 40A of the Insurance Act, 1938. Their performance is highly linked with premium they collect, which the consideration is paid by the policyholders in advance to the insurance company for an insurance contract. So the productivity of agents was calculated by dividing premium income in a particular year by the number of agents in that year. The premium income per agent for the study period is shown in the table 4.43

Table No: 4.43 - Table showing Premium Income per Agent

Year	Annual Premium Income (Rs. in lakhs)	Number of Agents	Premium Income per Agent (Rs. in lakhs)
1993-94	250773	524427	0.47
1994-95	253390	519504	0.48
1995-96	281363	513897	0.54
1996-97	334539	533133	0.62
1997-98	384112	558517	0.68
1998-99	486341	598217	0.81
1999-00	600828	683190	0.87
2000-01	885189	743064	1.19
2001-02	1600944	744003	2.15
2002-03	1250538	902199	1.38
2003-04	1254082	1003241	1.25
2004-05	1122419	980836	1.14
2005-06	1515776	987689	1.53
2006-07	1167272	1028256	1.13
2007-08	987189	1117908	0.88

	Min. Val.	Max. Val.	Mean	SD	C.V (%)	C.G.R (%)
Premium income (Rs. In Lakhs)	250773	1600944	824983.7	480467.3	58.24	14.71
Number of Agents	117908	1028256	695872	253706.1	36.46	0.72
Premium income/agent (Rs. in Lakhs)	0.47	2.15	1.507	1.953	129.5	14.02

Source: Annual Reports, 1993-94 to 2007-08

The premium income per agent ranges between Rs.0.47 lakhs to Rs.2.15 lakhs with a mean of Rs.1.507 lakhs and a coefficient of variation of 129.5 percent with a compounded growth rate of 14.02 percent. The performance of LIC in case of premium income per agent was improving steadily till 2001-02 and was declining from 2002-03 onwards because of the competition with private insurers.

Chart No: 4.22

Chart Showing the Premium Income per Agent (Rs. in lakhs)

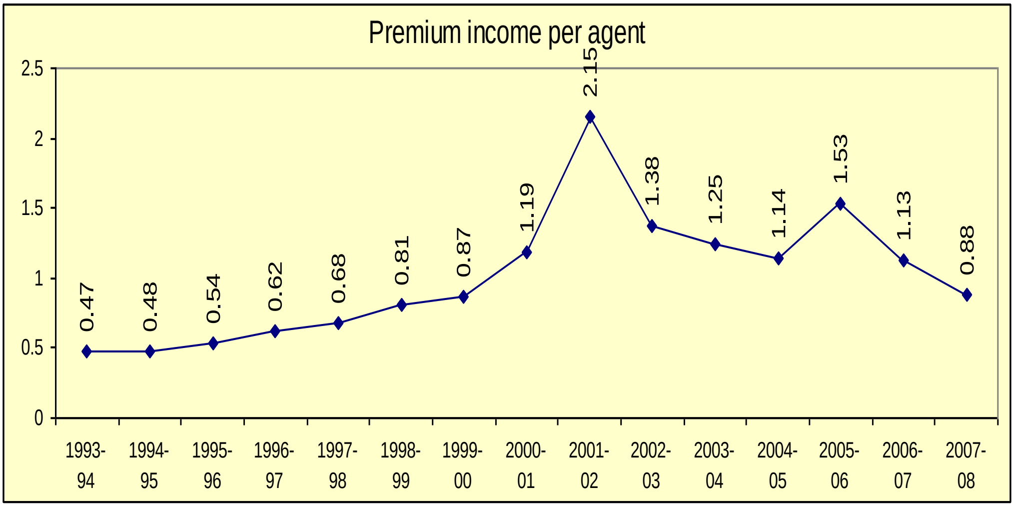


Table No: 4.44 - Trends in Premium Income Per Agent

	R^2	D. F	F Value	Trend Coefficients			
				b_0	b_1	b_2	b_3
Premium income (Rs. in lakhs)	0.878	11	26**	464457	-229102	57555.6	-2671.4
Number of Agents	0.700	11	8**	843642	-269984	52704.2	-2442.5
Premium income/agent (Rs. in lakhs) Y	0.626	11	6*	-1.4444	1.4385	-0.2410	0.0118

** Significant at 1% level

Premium income per agent $Y = -1.4444 + 1.4385\,t - 0.2410\,t^2 + 0.0118\,t^3$

The Coefficient of determination R^2 indicates that the trend equations b1, b2 and b3 put together explain the variations of Y to the extent of 62.2 percent, which shows the adequacy of the model, fitted to forecast the trend values. The forecasted value for any 't' value-(year) can be obtained from the above trend equation. The above significant cubic trend equations indicates positive trend in the future years.

4.2(g) Ratio of Expenses to Premium income

The productivity of LIC can be measured by dividing the ratio of expenses of its management to the premium income collected during a particular year. The following are the lists of management expenses made by LIC towards certain payments like commission to agents, salary and other benefits to employees. The figures depicting the ratio of various expenses to premium income was presented in the table No: 4.45.

Table No: 4.45 - Table showing Ratio of Expenses to Premium Income

Year	Commission to Agents Etc.,	Salary and Other Benefits to Employees	Other Expenses of Management	Total Expense Ratio
1993-94	9.61	9.15	3.07	21.83
1994-95	9.23	9.30	2.86	21.39
1995-96	8.47	9.85	2.47	20.79
1996-97	8.87	9.96	2.60	21.43
1997-98	8.86	8.98	2.69	20.53
1998-99	8.78	9.06	2.64	20.48
1999-00	9.13	8.52	2.51	21.16
2000-01	9.52	8.18	2.19	19.89
2001-02	9.38	6.46	1.88	17.72
2002-03	9.15	6.07	2.31	17.53
2003-04	9.08	5.49	2.73	17.30
2004-05	8.32	4.60	3.38	16.29
2005-06	7.82	3.97	2.69	14.47
2006-07	7.18	3.19	2.35	12.72
2007-08	6.39	3.37	2.18	11.94

	Min. Val.	Max. Val.	Mean	SD	C.V (%)	C.G.R (%)
Commission to agents	6.39	9.61	8.653	0.903	10.439	-0.65
Salary and other benefits to employees	3.19	9.96	7.077	2.459	34.746	-6.95
Other expenses of management	1.88	3.38	2.570	0.373	14.531	-0.45
Total expenses	11.94	21.83	18.365	3.280	17.859	-2.97

Source: Annual Reports, 1993-94 to 2007-08

Besides the individual proportion of expenses, it is worth mentioning the total expenses ratio of LIC and its trend during the period of the study.

The ratio ranges between 11.94 to 21.83 with a mean of 18.365 and a coefficient of variation of 17.859 percent.

The overall expenses ratio shows a declining trend year after year starting from 21.83 percent in the initial year, gradually declined to 11.94 percent in the year 2007-08.

LIC strove hard to reduce its expenses ratio every year and this decrease reflects increase in the margins of LIC. The compounded growth rate of the overall expenses ratio was negative growth rate of 2.97 signifying better performance of LIC.

Table No: 4. 46 - Trends in Ratio of Expenses to Premium Income

	R^2	D. F	F Value	Trend Coefficients			
				b_0	b_1	b_2	b_3
Commission to agents Y1	0.896	9	25**	10.444	-1.014	0.1837	- 0.0094
Salary and other benefits to employees Y2	0.983	9	177**	8.2084	1.0099	- 0.1841	0.0063
Other expenses of management Y3	0.434	9	2.3	3.1364	- 0.1275	- 0.0060	0.0012
Total expenses Y4	0.946	9	52**	21.6233	- 0.0364	- 0.0129	- 0.0020

** Significant at 1% level

Commission to agents $Y1 = 10.444 - 1.014t + 0.1837\ t^2 - 0.0094\ t^3$

Salary and other benefits to employees $Y2 = 8.2084 + 1.0099\ t - 0.1841\ t^2 + 0.0063t^3$

Other expenses of management $Y3 = 3.1364 - 0.1275\ t - 0.0060\ t^2 + 0.0012t^3$

Total expenses $Y4 = 21.6233 - 0.0364\ t - 0.0129\ t^2 - 0.0020t^3$

The Coefficient of determination R^2 indicates that the trend equations b1, b2 and b3 put together explain the variations of Y1 to the extent of 89.6 percent, Y2 to the extent of 98.3 percent, Y3 to the extent of 43.3 percent, Y4 to the extent of 94.6 percent which shows the adequacy of the model fitted to forecast the trend values.

The forecasted value for any 't' value-(year) can be obtained from the above trend equation. The above significant cubic trend equations of ratio of expenses to total premium income indicates negative trend in the future years.

4.2(h) Complaints per Thousand Mean Number of Policies in Force

In a vast organisation like LIC, catering to the various needs and aspirations of millions of policyholders, grievances of customers do arise occasionally. In order to redress these grievances LIC has established an elaborate Grievance Rederessal Machinery. Grievance Redressal Officers have been designated at all levels of the Organisation say Branch, Divisional, Zonal and Central. Policyholders can personally contact these designated Officials and seek redressal of their grievances. The names of the Grievance Redressal Officers are displayed in the respective offices and are periodically published in the local newspapers.

The concept of Customer Relations Management (CRM) has been integrated in the grievance redressal mechanism by evolving a customer centric and proactive approach to the complaints of the policy holders. All the operating offices have complaint cells, which deal with Agents etc. Besides attending to complaints forwarded to them by other offices and government agencies. The complaints are generally disposed off within a month. For ensuring quick redressal of customer grievances the Corporation has introduced a customer friendly Complaint Management System through a Customer Portal on the website, where policy holder can directly register complaint/grievance and track its status.

The productivity of the corporation can be measured based on the complaints received by them during a particular year. So the ratio was calculated by dividing the total number of policies in force in that year. The ratio was calculated in terms of complaints per thousand mean number of policies in force and was shown in the table 4.47.

In order to measure the productivity of LIC, complaints per thousand mean number of policies in force was calculated. It ranges between 0.11 to 0.23 with a mean of 0.1058 and a coefficient of variation of 23.2 percent. This has shown a negative growth rate of 4.43 percent.

Table No: 4.47

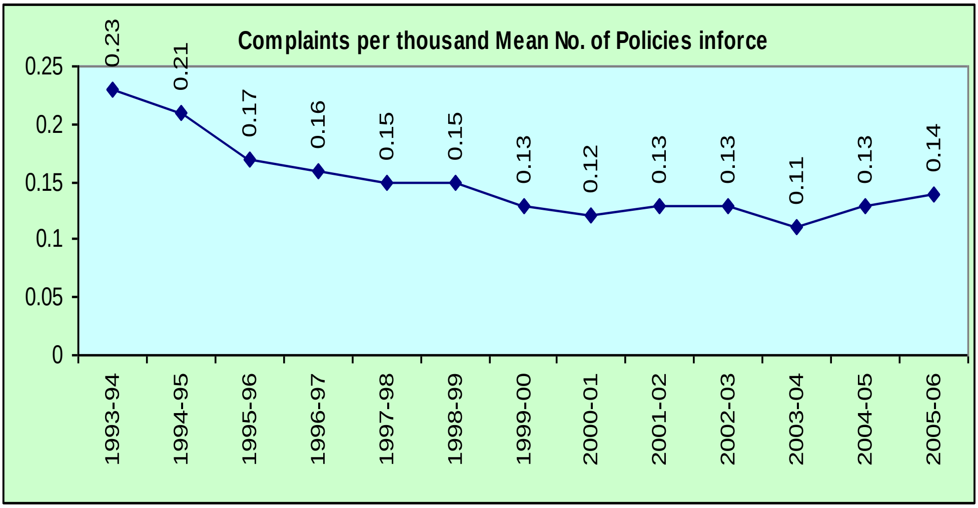
Complaints per Thousand Mean Number of Policies in Force

Year	Number of Complaints	Complaints per Thousand Mean Number of Policies In Force
1993-94	13730	0.23
1994-95	13149	0.21
1995-96	11999	0.17
1996-97	11869	0.16
1997-98	12694	0.15
1998-99	13239	0.15
1999-00	12832	0.13
2000-01	13121	0.12
2001-02	15561	0.13
2002-03	17431	0.13
2003-04	16232	0.11
2004-05	20782	0.13
2005-06	25624	0.14

	Min. Val.	Max. Val.	Mean	SD	C.V (%)	C.G.R (%)
Number of Complaints	11869	25624	15251	4017.89	26.3	4.95
Complaint per 1000 mean number of policies in force	0.11	0.23	0.15	0.035	23.2	-4.43

Source: Annual Reports, 1993-94 to 2007-08

Chart No: 4.23 - Chart Showing the Complaints per Thousand Mean Number of Policies in Force



This shows that the number of complaints was decreasing year by year as compared to the increase in the number of policies in force. It was 0.23 complaints per thousand mean number of policies in the initial years and gradually declined to 0.12 policies in the year 2000-01. LIC strove to maintain its ratio between 0.13 and 0.14 complaints per thousand mean number of policies during the later years.

Table No: 4. 48 - Trends in Number of Complaints

	R^2	D. F	F Value	Trend Coefficients			
				b_0	b_1	b_2	b_3
Number of Complaints	0.948	9	55**	13521.5	-119.35	-81.088	12.0463
Complaint per 1000 mean number of policies in force Y	0.952	9	59**	0.2587	-0.032	0.0022	-4.E-05

** Significant at 1% level

Complaint per thousand mean number of policies in force Y = 0.2587 – 0.032t +0 .0022 t^2 – 4.E – 05 t^3

The Coefficient of determination R^2 indicates that the trend equations b1, b2 and b3 put together explain the variations of Y to the extent of 95.2 percent, which shows the adequacy of the model fitted to forecast the trend values. The forecasted value for any 't' value-(year) can be obtained from the above trend equation. The above significant cubic trend equations of number of complaints indicates positive trend in the future years whereas complaints per 1000 mean number of policies in force indicates negative trend.

4.2 (i) Percentage of Outstanding claims to Total claims payable

The Corporation settles a large number of Death Claims every year. Only in case of fraudulent suppression of material information is the liability repudiated. This is to ensure that claims are not paid to fraudulent persons of the cost of honest policyholders. The number of Death Claims repudiated is, however, very small. Even in these cases, an opportunity is given to the claimant to make a representation for consideration by the Review Committees of the Zonal office and the Central Office. As a result of such review, depending on the merits of each case, appropriate decisions are taken. The Claims Review Committees of the Central and Zonal Offices have among their Members, a retired High Court/District Court Judge. This has helped providing transparency and confidence in the operations of LIC and has resulted in greater satisfaction among claimants, policyholders and public.

The percentage of claims outstanding at the end of the year to claims payable includes both claims intimated as well as outstanding during the year. The claims outstanding at the end were calculated both in terms of amount and in number. The data including death claims and maturity claims in total claims outstanding have been shown in table 4.49.

Table No: 4.49 - Table Showing Percentage of Outstanding Claims to Total Claims Payable

Year	Percentage of Outstanding Claims to Total Claims Payable (In Percentage)	
	Percentage of Number of Claims	Percentage of Amount of Claims
1993-94	3.05	4.86
1994-95	3.47	5.26
1995-96	3.86	5.99
1996-97	3.13	5.32
1997-98	2.74	4.51
1998-99	2.96	4.39
1999-00	2.36	4.19
2000-01	1.67	3.58
2001-02	0.69	1.85
2002-03	0.23	1.11
2003-04	0.15	0.88
2004-05	0.14	0.80
2005-06	0.18	0.83
2006-07	0.15	0.68
2007-08	0.28	0.94

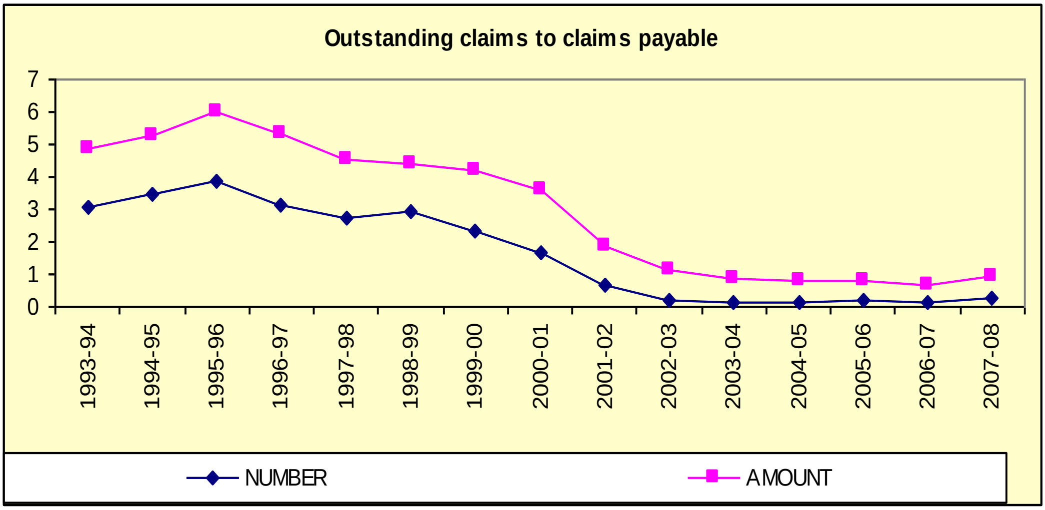
	Min. Val.	Max. Val.	Mean	SD	C.V (%)	C.G.R (%)
Number	0.14	3.86	1.67	1.4517	86.9	-26.96
Amount	0.68	5.99	3.01	2.0251	67.2	-17.76

Source: Annual Reports, 1993-94 to 2007-08

The table 4.49 reveals that the percentage of outstanding claims to total claims in terms of number ranges between 0.14 percent to 3.86 percent with a mean of 1.67 percent and a coefficient of variation of 86.9 percent and has shown a negative growth rate of 26.96 percent.

Chart No: 4.24

Chart showing the outstanding claims to total claims payable



The percentage of outstanding claims to total claims in terms of amount ranges between 0.68 to 5.99 with a mean of 3.01 and a coefficient of variation of 67.2 percent and has shown a negative growth rate of 17.76 percent.

Initially the graph of percentage of outstanding claims was in upward direction and was maximum in 1995-96 with 3.86% (number) and 5.99 % (in amount). From 1996-97 onwards it started declining showing the decrease in the number and amount of total outstanding claims to claims payable. In 2006-07 it reached its minimum percent of 0.15 (number) and 0.68(amount) of total claims payable. This shows the promptness and efficiency of the claim settlement operations of LIC.

Table No: 4.50 - Trends in Number of Outstanding Claims

	R^2	D. F	F Value	Trend Coefficients			
				b_0	b_1	b_2	b_3
Number of outstanding claims Y1	0.973	9	108**	2.2285	1.0208	-0.2171	0.0097
Outstanding claims (Amount) Y2	0.969	9	95**	3.6806	1.3843	-0.2824	0.0122

** Significant at 1% level

Number of outstanding claims Y1 = $2.2285 + 1.0208\ t - 0.2171\ t^2 + 0.0097 t^3$

Outstanding claims (Amount) Y2 = $3.6806 + 1.3843\ t - 0.2824\ t^2 + 0.0122\ t^3$

The Coefficient of determination R^2 indicates that the trend equations b1, b2 and b3 put together explain the variations of Y1 to the extent of 97.3 percent, Y2 to the extent of 96.9 percent, which shows the adequacy of the model fitted to forecast the trend values. The forecasted value for any 't' value-(year) can be obtained from the above trend equation. The above significant cubic trend equations of number of outstanding claims indicates negative trend in the future years.

4.2 (j) Members of various Agents' Club

In order to recognize agents who perform consistently year after year, clubs at five levels have been designated, namely Chairman, Zonal Manager, Divisional Manager, Branch Manager and Distinguished Agents. The membership in the respective clubs has been growing year after year, which is a healthy trend, as the qualifying standards demand consistency over a period of 4 years. (Annual report of LIC, year 2007-08). Table 4.51 gives a detailed number of members of various agents club.

The distinguished agent's club was constituted in 1999-2000 with a view to provide a privileged position at branch level. The membership of this club was decreasing year by year. From 1999-2000 to 2003-04, its number falls from 73,566 to 34,370. There has been a negative growth every year. The major downfall occurred in 2003-04 when the growth was 33.75 percent. But afterwards LIC strove to sustain its number that it gradually increased to 37864 and 47634 in the year 2006-07 and 2007-08 respectively. The number of members in distinguished club ranges between 26094 to 73566 with a mean of 50337 and a coefficient of variation of 36.27 percent and has shown a negative annual growth at 9.59 percent.

In case of Branch Manager's club, the number of members of this club was also fluctuating with ups and downs. The number ranges between 24242 to 61329 with a mean of 45697 and a coefficient of variation of 27.82 percent. Starting from 12.01 percent in the initial year it touched 14.53 in the year 2004-05 at a declining rate. It gradually shoot up to 9.2 percent in 2005-06 but could not maintain the level that it declined to 4.52 percent growth rate in the year 2007-08. The compounded growth rate of members of Branch manager's club was 6.53 percent.

The number of agents in case of Divisional Manager's Club has been increasing initially from 11.48 percent in 1993-1994 to 21.22 in the year 1997-98. Suddenly it declined to 18.31 and 18.08 in the next two consecutive years. From 2002-2003 onwards it gradually declined and touched 0.46 percent in the year 2003-04. It strived hard to increase its level to 7.93 percent but could not maintain that it again declined to negative rate of 0.58 percent in the year 2006-07. It was able to cope up with 11.08 percent in the year 2007-08 finally. Thus, the number of members in divisional managers club ranges between 7139 to 30609 with a mean of 19658 and a coefficient of variation of 44.74 percent and has shown an annual growth at 11.94 percent.

The same scene followed in Zonal Manager's Club too with some stability between 1997-1998 and 2003-04 with 22 and 24 percent growth rate. But afterwards it started to decline till 2005-06 and sustained its growth rate again to 10.6 percent in the year 2007-08. Hence, the number ranges between 2711 to 17792 with a mean of 9399 and a coefficient of variation of 57.89 percent and has shown an annual growth at 15.95 percent.

The most prestigious club among all the clubs is the chairman's club. The figures of this club was satisfactory. In 1993-94 there were only 3005 members, which increased to 21941 in 2007-08. In the initial years of the study period the rate of increase of members of this club was very high later on it started decreasing. In 2003-04, the rate of growth of number of members was 14.06 over the previous year and there after it started to decline till 2.11 to the lowest level in the year 2005-06.But then in 2007-08 LIC was able to recapture its position back with 12.03 percent. The number of members of Chairman's Club ranges between 3005 to 21941 with a mean of 11025 and a coefficient of variation of 62.45 percent and has shown an annual growth at 17.58 percent.

Overall, the members of various agents club was increasing till 1999-2000 but thereafter it started to decline and was negative in all the subsequent years till 2005-06. This was the impact of the entry of private insurers during these years.

Table No: 4.51 - Table showing the Members of various Agents' Club

Year	Chairman's Club		Zonal Manager's Club		Divisional Manager's Club		Branch Manager's Club		Distinguished Agent Club		Total	
	No.	Growth Rate	No.	Growth Rate	No.	Growth Rate	No.	Growth Rate	No.	Growth Rate	No.	Growth Rate
1993-94	3005	-	2711	-	7139	-	24242	-	-	-	37097	
1994-95	3142	4.56	3118	15.01	7959	11.48	27155	12.01	-	-	41374	11.5
1995-96	3424	8.97	3453	10.74	9008	13.18	29674	9.27	-	-	45559	10.11
1996-97	4056	18.45	3746	8.48	10216	13.41	33370	12.45	-	-	51388	12.79
1997-98	4935	21.67	4575	22.13	12384	21.22	37202	11.48	-	-	59096	14.99
1998-99	6191	25.45	5686	24.28	14652	18.31	41533	11.64	-	-	68062	15.17
1999-00	7841	26.65	7020	23.46	17303	18.08	44280	6.61	73566	-0.75	150010	120
2000-01	9847	25.58	8410	24.07	20860	20.55	49636	12.09	73009	-2.39	162062	8.03
2001-02	12159	23.48	10700	22.84	24209	16.05	55301	11.41	71260	-27.19	173629	7.13
2002-03	15145	24.55	13362	24.87	27601	14.01	60730	9.81	51884	-33.75	168722	-2.82
2003-04	17275	14.06	14610	9.34	27729	0.46	61329	0.98	34370	8.68	155343	-7.9
2004-05	18223	5.49	14853	1.66	29943	7.98	52417	-14.53	37353	-30.14	152838	-1.61
2005-06	18608	2.11	14863	0.07	27717	-7.43	57238	9.2	26094	45.11	144574	-5.41
2006-07	19585	5.25	16087	8.24	27555	-0.58	54450	-4.87	37864	25.8	155609	7.63
2007-08	21941	12.03	17792	10.6	30609	11.08	56910	4.52	47634		174963	12.44

	Min. Val.	Max. Val.	Mean	SD	C.V (%)	C.G.R (%)
Chairman's club	3005	21941	11025	6886.084	62.45	17.58
Zonal Manager's club	2711	17792	9399	5441.326	57.89	15.95
Divisional Manager's club	7139	30609	19659	8795.646	44.74	11.94
Branch Manager's club	24242	61329	45697	12714.25	27.82	6.53
Distinguished Agent club	26094	73566	50337	18261.66	36.27	-9.59

Source: Annual Reports, 1993-94 to 2007-08

Table No: 4. 52 - Trends in Members of Various Agent's Club

	R^2	D. F	F Value	Trend Coefficients			
				b_0	b_1	b_2	b_3
Chairman's club Y1	0.993	11	500**	4476.36	-1539.2	404.37	-15.172
Zonal Manager's club Y2	0.987	11	270**	3831.92	-1103.	317.667	-12.364
Divisional Manager's club Y3	0.982	11	202**	7719.82	-1021.2	526.779	-24.415
Branch Manager's club Y4	0.935	11	77**	22002.3	1424.47	501.974	-10.413
Distinguished Agent club Y5	0.827	6	14**	213060	-20558	-	40.8863

S ** Significant at 1% level

Chairman's club $Y1 = 44476.36 – 1539.2\ t + 404\ .37\ t^2 – 15.172\ t^3$

Zonal Manager's club $Y2 = 3831.92 – 1103\ t + 317\ .667\ t^2 – 12.364\ t^3$

Divisional Manager's club $Y3 = 7719.82 -1021.2t + 526.779\ t^2 – 24.415\ t^3$

Branch Manager's club $Y4 = 22002.3 + 1424.47\ t + 501.974\ t^2 -10.413\ t^3$

Distinguished Agent club $Y5 = 213060 – 20558\ t + 40.8863\ t^3$

The Coefficient of determination R^2 indicates that the trend equations b1, b2 and b3 put together explain the variations of Y1 to the extent of 99.3 percent, Y2 to the extent of 98.2 percent, Y3 to the extent of 98.2 percent, Y4 to the extent of 93.5 percent, Y5 to the extent of 82.7 percent which shows the adequacy of the model fitted to forecast the trend values. The forecasted value for any 't' value-(year) can be obtained from the above trend equation. The above significant cubic trend equations of members of clubs except distinguished agent club, indicate positive trend in the future years.

Thus on the basis of foregoing analysis it may be concluded that the productivity of the corporation has been increasing steadily till 2001-02 and with slight disturbance during 2002-03 and 2003-04. This was the year when all the private players were active in the insurance market. Notably in 2004-05 LIC restored its position with great hikes in its growth rates.

Overall LIC has to improve its productivity especially in terms of new business per branch, per agent, number of policies per agent and premium income per branch. This indicates the urgency on the part of LIC to open up new branches in suburban and rural areas and offer suitable products to the customers and provide better customer services.

4.3 Investment Portfolio of LIC

Investment Portfolio Management

Investment is a commitment of money that is expected to generate additional money in future (ww.businessdictionary.com). In finance, an investment is a monetary asset purchased with the idea that the asset will provide income in the future or appreciate and be sold at a higher price.

An investor considering investment in securities is faced with the problem of choosing from among a large number of securities and how to allocate his funds over this group of securities. Again he is faced with problem of deciding which securities to hold and how much to invest in each. Investments are risky and as such investor has to be choosy and highly selective in making investments, so that risk taken is lowest possible while the returns are the highest feasible. The objective of portfolio management is thus minimisation of risk and maximisation of returns. The investor tries to choose the optimal portfolio taking into consideration the risk return characteristics of all possible portfolios. Thus, Portfolio management is a complex process which tries to make investment activity more rewarding and less risky.

Investment Policy of LIC

The aggregate funds of the LIC and their continuing turnover and growth are of great importance in the overall capital formation. In some sectors of the capital market, the influence of the investment policy of the LIC may be regarded as decisive. It is therefore important that consistent with policyholder's interest, the funds must be employed in the large economic and social interest of the country. This was one of the main objectives behind the policy of nationalisation of life insurance business in our country. The LIC has over the years, been investing a major part of its funds primarily in the socially oriented sector.

The primary aim of LIC is to spread the message of life insurance and while pursuing this objective, the premium from policyholders are received which are in the nature of trust funds invested and administered in the best interest of policyholders as per guidelines of the regulator, IRDA. The investments of the corporation's fund are governed by section 27A of the Insurance act 1938, subsequent guidelines/instructions issued there under by the government of India from time to time and IRDA by way of regulations. As per the prescribed investment pattern approved by the IRDA, the norms for the investment of the controlled funds of LIC are as follows:

- Not less than 50% is invested in government securities or other approved investments.
- Not less than 15% is invested in infrastructural and social sector investments.
- Not exceeding 20% in others to be governed by exposure prudential norms.
- Not exceeding 15% is invested in investments other than approved investments

The LIC provides funds to industries in three forms:

1. Direct lending to industry
2. Purchase of shares debentures in the stock market
3. Subscription to the shares and bonds of financial institutions

LIC helps small scale and medium scale industries by granting loans for setting up of cooperative industrial estates. The Corporation also makes investment in the corporate sector in the form of long, medium and short – term loans. Apart from granting loans to companies, LIC also finances private industrial projects by directly subscribing to their shares and debentures. Securities are purchased by LIC in the new Issues market and secondary market. Till 1964 the LIC was the single largest buyer and holder of corporate securities in India. By the mid –eighties it was regulated to the second place and UTI emerged on the top.

LIC finances industry indirectly by investing in the shares and bonds of state level financial institutions and All India Financial Institutions like IDBI, IFCI, ICICI etc. The Corporation also provides financial assistance to State Electricity Board/Power Corporation for power generation by way of loans/subscription to bonds. The corporation's investment of Rs.702200 crores up to 31st March , 2008 in the power sector makes the Corporation the largest single contributing factor in the progress of electrification schemes in the country.

Since 1997-98, the Corporation finances infrastructure projects pertaining to ports, roads and airports. Now the LIC can also finance private sector in infrastructure projects. All these make a distinct contribution towards growth in industrialisation and generation of skilled and unskilled employment opportunities in the country. Thus, LIC touches life enriching the nation by providing financial assistance of projects associated with power, water supply, transport, housing development, infrastructure development and industrial growth.

In order to evaluate the investment portfolio of LIC the analysis has been made on the basis of the following variables:

4.3 (a) Loans advanced to various Developmental activities:

It has been the constant endeavour of the Corporation to provide security to as many people as possible and to channelise the savings mobilised for the welfare of the people at large. To meet this end, the Corporation has been promoting social welfare through investments in infrastructure and social sector, which includes:

- ❖ Projects/schemes for generation and transmission of power
- ❖ Housing sector
- ❖ Water supply and sewerage projects/schemes
- ❖ Development of roads, bridges & road transport

The data related to the loans advanced for the different years has been gathered and shown in the form of a table in order to make proper analysis as well as comparison of various years regarding the amount of loans advanced to various developmental activities like Electricity, Housing, Water supply and sewerage, Transport, Industrial Development. The details of the development activities for which loans are advanced by LIC have been presented in following table.

Developmental Activities of LIC

Development Activities	**Details**
Electricity	State Electricity Boards/Electric power corporations
Housing	State government for housing schemes LIC Housing Finance Ltd Apex Cooperative Housing Finance societies Housing and Urban Development National Housing Bank
Water supply and sewerage	Municipal Committees /water Supply and sewerage Boards Zilla Parishads for Rural Piped water supply schemes Irrigation
Transport	State Road Transport Corporation
Industrial Development	Joint Stock Companies

Table 4.53 gives a detailed information regarding the loans advanced for various developmental activities.

It can be seen from the table that the total amount of loans advanced for various developmental activities showed increasing trend from 1993-94 to 1999-2000. The amount of loans advanced was Rs.2124.88 crores in 1993-94, which reached to Rs.3929.98 crores in 1999-2000. But in 2002, IRDA issued new regulations for investment, which lead to a huge increase in the amount of loans advanced to various authorities. Thus, in 2002-03 the amount of loans was Rs.7852.24 crores and it touched Rs.17297.18 crores in 2006-07 and with slight decline of Rs.16765 crores in 2007-08.

Table No: 4.53 - Table Showing Loans Advanced to Various Developmental Activities

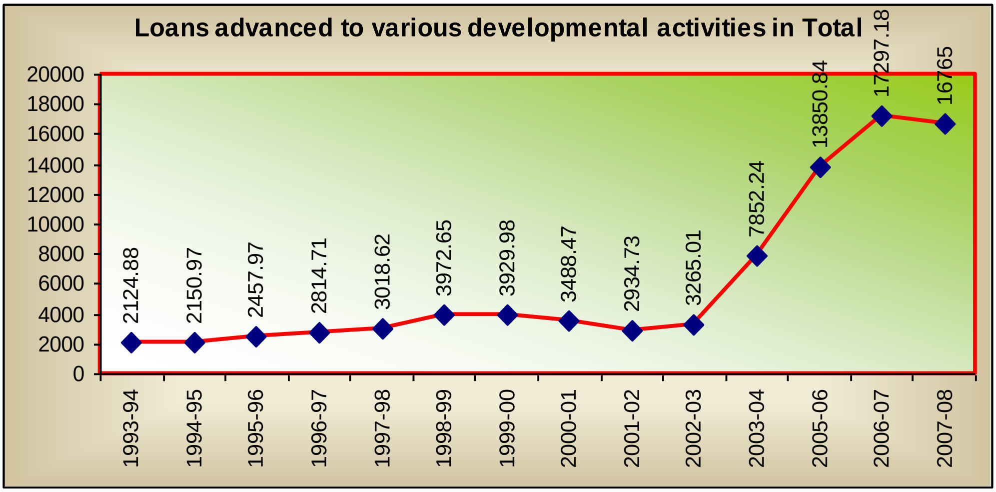
Year	Electricity		Housing		Water Supply & Sewage		Transport		Industrial Development		Total
	(Rs. in Crores)	% Share	(Rs. in Crores)	% Share	(Rs. in Crores)	% Share	(Rs. in Crores)	% Share	(Rs. in Crores)	% Share	
1993-94	651.36	30.65	955.6	44.97	140.31	6.6	30.58	1.44	347.03	16.33	2124.88
1994-95	846.54	39.35	721.85	33.55	137.86	6.4	34.29	1.59	410.43	19.08	2150.97
1995-96	704.50	28.66	937.65	38.14	128.17	5.21	70.16	2.85	617.49	25.12	2457.97
1996-97	676.34	24.02	1146.17	40.72	146.86	5.21	62.94	2.23	782.40	27.80	2814.71
1997-98	965.10	31.97	1180.15	39.09	236	7.81	11.75	0.38	625.62	20.70	3018.62
1998-99	1479.23	37.23	1769.56	44.54	243.96	6.14	119.24	3.00	360.66	9.07	3972.65
1999-00	1366.11	34.76	1651.1	42.01	488.52	12.43	65.29	1.66	358.96	9.13	3929.98
2000-01	470.82	13.5	2113.31	60.57	526.82	15.1	48.05	1.37	329.47	9.44	3488.47
2001-02	1045.46	35.62	1056.25	35.99	342.87	11.68	108.84	3.70	381.31	13.00	2934.73
2002-03	1060.93	32.49	890.07	27.26	570.33	17.46	465.00	14.21	278.68	8.53	3265.01
2003-04	297.00	3.78	749.81	9.54	2511.22	32	15.00	0.19	4279.21	54.50	7852.24
2005-06	8471.90	61.17	493.6	3.56	26.16	0.19	128.00	0.92	760.81	5.49	13850.84
2006-07	9615.25	55.59	1962.91	11.35	65.34	0.38	601.82	3.48	3045.86	17.61	17297.18
2007-08	7022.00	41.88	465	2.77	14	0.08	45.00	0.27	5749.00	34.29	16765.00

Loans advanced to	Min. Val.	Max. Val.	Mean	SD	C.V (%)	C.G.R (%)
Electricity (Rs. in Crores)	297	9615.25	2603.79	3169.84	121.74	18.14
Housing (Rs. in Crores)	465	2113.31	1114.31	526.949	47.29	-2.77
Water supply & sewerage (Rs. in Crores)	14	2511.22	456.47	651.720	142.773	-4.02
Transport (Rs. in Crores)	11.75	601.82	125.16	171.326	136.88	10.27
Industrial development (Rs. in Crores)	278.68	5749	1389.79	1708.392	122.924	16.48

Source: Annual Reports, 1993-94 to 2007-08

Considering the percentage share of each development activity to the total loan amount, housing holds the major share of the loans advanced throughout from 1993-94 to 2000-01 except in the year 1994-95. The second major share goes to electricity, followed by industrial development and water supply and sewerage. Thus the least share given by transportation. This followed till 2000-2001.

Chart No: 4.25 - Chart Showing the Loans advanced to various Developmental activities (Rs. in Crores)



As the new regulations were issued in 2002 by IRDA, LIC made a change in the amount of loans advanced to various development activities. Hence, in this year 2003-04 huge amount of loan was provided to irrigation as well as for the Industrial Development and that amounts to 54.5 percent. Water supply and sewerage has 32 percent, housing has 9.54 percent share, Electricity has 3.78 percent share and the least share goes to transport 0.19 percent. But that was also not sustained that in the following years Electricity took up the majority share followed by industrial development, Housing, Transport and the least share by Water supply and sewerage.

Thus, the figures can be summarized as the loans advanced to electricity ranges between Rs.297 crores to Rs.9615.25 crores with a mean of Rs.2603.79 crores and a coefficient of variation of 121.74 percent. This has shown a growth at 18.14 percent. The loans advanced to housing ranges between Rs.465 crores to Rs.2113.31 crores with a mean of Rs.1114.31 crores and a coefficient of variation of 47.29 percent. This has shown a negative growth at 2.77 percent.

The loans advanced to transport ranges between Rs.11.75 crores to Rs.601.82 crores with a mean of Rs.125.164 crores and a coefficient of variation of 136.88 percent. This has shown a growth at 10.27 percent.

The loans advanced to electricity ranges between Rs. 278.68 crores to Rs.5749 crores with a mean of Rs.1389.79 crores and a coefficient of variation of 122.924 percent. This has shown a negative growth at 16.48 percent.

Overall it can be concluded that there was huge increase in the total amount of loan advanced for various development activities after the issue of new investment regulations by IRDA in 2002.

Table No: 4. 54 - Trends in Loans Advanced to Various Developmental Activities

	R^2	D. F	F Value	Trend Coefficients			
				b_0	b_1	b_2	b_3
Electricity Y1	0.788	11	13.7**	897.031	58.887	-52.366	5.796
Housing Y2	0.245	11	1.2	139.672	525.291	-64.067	2.154
Water supply & sewerage Y3	0.409	11	2.5	690.606	-487.68	99.046	-4.709
Transport Y4	0.192	11	0.9	72.302	-29.506	6.450	-0.255
Industrial development Y5	0.648	11	6.76*	154.92	269.582	-59.948	4.202

** Significant at 1% level

Electricity $Y1 = 897.031 + 58.887\ t - 52.366\ t^2 + 5.796\ t^3$

Housing $Y2 = 139.672 + 525.291\ t - 64.067\ t^2 + 2.154\ t^3$

Water supply & sewerage $Y3 = 690.606 - 487.68\ t + 99.046\ t^2 - 4.709\ t^3$

Transport $Y4 = 72.302 - 29.506\ t + 6.450\ t^2 - 0.255\ t^3$

Industrial development $Y5 = 154.92 + 269.582\ t - 59.948\ t^2 + 4.202\ t^3$

The Coefficient of determination R^2 indicates that the trend equations b1, b2 and b3 put together explain the variations of Y1 to the extent of 78.8 percent, Y2 to the extent of 24.5 percent, Y3 to the extent of 40.9 percent, Y4 to the extent of 19.2 percent, Y5 to the extent of 64.8 percent which shows the adequacy of the model fitted to forecast the trend values. The forecasted value for any ‘t’ value-(year) can be obtained from the above trend equation. The above significant cubic trend equations indicates positive trend in the future years.

4.3 (b) Composition of Investments as per IRDA Guidelines

The investment of the Corporation funds is governed by section 27A of the insurance act, 1938. Subsequent guidelines were issued there after by the Government of India and IRDA by way of regulations. The analysis has been done in order to see the investment pattern of LIC as per IRDA regulations. The controlled funds are divided into four prescribed categories of investments, ie, 1) Government Securities or other approved investments, 2) Infrastructure and social investments, 3) investments in corporate sector ,and 4) other approved investments. The percentage of amount of investments in each category has been calculated for the period 1992-93 to 2007-08. Table 4.55 depicts the composition of investments of LIC for the different years.

The table 4.55 reveals the investment pattern of controlled funds of LIC. As per the regulations approved by IRDA, there must be minimum 50 percent investment in government securities or other approved investments. It was clear from table that from 1993-94 to 2007-08 there has been more than 50 percent of investment of the corporation in this sector. The percentage of Government securities ranges between 50.87 to 57.87 with a mean of 54.089 and a coefficient of variation of 3.91 percent and has shown a growth at 0.47 percent.

As per IRDA Guidelines the investment in infrastructure and social sector should not be less than 15 percent of total investments. Looking at the figures of this category, it was concluded that LIC has failed on this front. In the initial years of study from 1993-94 to 1996-97, the investments in this category were more than 15 percent, which satisfies the condition. But from 1997-98 onwards the percentage has been decreasing year-by-year. It deceased from 14.52 to 11.79 percent. It again starts rising in 2002-03 slightly to 12.05 percent but faced heavy decline in the year 2007-08 and the percentage comes down to 7.02. Thus the percentage of investment in infrastructure and social sector ranges between 7.02 to 20 with a mean of 14.38 and a coefficient of variation of 17.398 percent and has shown a negative growth rate at 3.11 percent.

Table No: 4.55 - Table Showing the Composition of Investments as per IRDA Guidelines

Year	Govt. Securities or Other Approved Investments	Infrastructure and Social Investments	Investments Governed by Prudential Norms or Investment in Corporation Sector	Other Than Approved Investments	Total
1993-94	50.87	20	14.46	14.67	100
1994-95	51.76	18.29	15.33	14.62	100
1995-96	52.49	16.7	16.39	14.42	100
1996-97	53.90	15.37	16.39	13.8	100
1997-98	54.23	14.52	17.18	14.07	100
1998-99	54.35	14.31	18.02	13.32	100
1999-00	54.78	13.82	18.43	12.97	100
2000-01	54.19	12.91	19.74	13.16	100
2001-02	54.32	11.79	19.77	12.12	100
2002-03	57.87	12.05	16.9	13.18	100
2003-04	57.60	12.45	30.49	5.45	100
2004-05	50.91	12.14	29.86	7.09	100
2005-06	55.66	12.23	25.42	6.67	100
2006-07	54.32	14.69	24.59	6.39	100
2007-08	59.21	7.02	27.92	5.85	100

Investments	Min. Val.	Max. Val.	Mean	SD	C.V (%)	C.G.R (%)
Government securities	50.87	59.21	54.09	2.116	3.91	.47
Infrastructure & social investment	7.02	20	14.38	2.501	17.398	-3.11
Investments governed by prudential norms	14.46	30.49	20.21	5.260	26.02	5.06
Other than improved investments	5.45	14.57	11.57	3.476	30.05	-6.98

Source: Annual Reports, 1993-94 to 2007-08

Under the investments governed by prudential norms, the requirement is not to exceed 20 percent of total investments. From 1993-94 till 2002-03 LIC was able to keep up its limit but there after from 2003-04 till 2007-08 LIC crossed its 20 percent limit. Thus, the percentage of investments to be governed by prudential norms ranges between 14.46 to 30.49 with a mean of 20.21 and a coefficient of variation of 26.02 percent and has shown a growth of 5.06 percent.

IRDA has put a ceiling on the other than approved investments as not more than 15 percent of the controlled funds are to be invested. The investment of the Corporation in this category was kept below 15 percent throughout the study period. The percentage of other than approved investments ranges between 5.45 to 14.57 with a mean of 11.56 and a coefficient of variation of 30.05 percent and has shown a negative growth at 6.98 percent.

Table No: 4. 56 - Trends in Composition of Investments As Per IRDA Guidelines

	R^2	D. F	F Value	Trend Coefficients			
				b_0	b_1	b_2	b_3
Government securities Y1	0.448	10	2.71	49.876	1.057	-0.0417	-0.0009
Infrastructure & social investment Y2	0.965	10	90.9**	21.088	-1.446	0.0224	0.0032
Investments governed by prudential norms Y3	0.698	10	7.7**	16.826	-4.4963	0.3566	-0.0143
Other than improved investments Y4	0.833	10	16.6**	13.656	0.7272	-0.1396	0.0033

** Significant at 1% level

Government securities $Y1 = 49.876 + 1.057\, t - 0.0417\, t^2 - 0.0009\, t^3$

Infrastructure & social investment $Y2 = 21.088 – 1.446\, t + 0.0224\, t^2 + 0.0032\, t^3$

Investments governed by prudential norms $Y3 = 16.826 – 4.4963\, t + 0.3566\, t^2 - 0.0143\, t^3$

Other than improved investments $Y4 = 13.656 + 0.7272\ t - 0.1396\ t^2 + 0.0033\ t^3$

The Coefficient of determination R^2 indicates that the trend equations b1, b2 and b3 put together explain the variations of Y1 to the extent of 44.8 percent, Y2 to the extent of 96.5 percent, Y3 to the extent of 69.8 percent, Y4 to the extent of 83.3 percent, which shows the adequacy of the model fitted to forecast the trend values. The forecasted value for any 't' value-(year) can be obtained from the above trend equation. The above significant cubic trend equations indicates positive trend in the future years.

Thus on the whole the performance of the corporation has been satisfactory but there was need to invest more controlled funds in infrastructure and social sector as it leads to the growth of the economy and generation of employment opportunities. Secondly, LIC should control the increase in investments in the corporate sector as it was higher than the prescribed guidelines.

LIC's contribution towards Five year plans:

At this instance, it is worth mentioning that in the matter of utilization of people's savings for national development, LIC's contribution towards five year plans was tremendous year after year and was given in the following table 4.57.

Table No: 4.57

Table showing LIC's contribution towards Five year Plans

Five year plan	Year	Contributions (Rs. in Crores)
II	1956-1961	184
III	1961-1966	285
IV	1969-1974	1530
V	1974-1979	2942
VI	1980-1985	7140
VII	1985-1990	12,969
VIII	1992-1997	56,097
IX	1997-2002	1,70,929
X	2002-2007	3,94,779
XI	2007-2009	2,18,510

The above table 4.57 has shown the continuous contribution by LIC towards five-year plans.

Chapter V - Summary of Findings, Suggestions and Conclusion

Introduction:

In view of the changes the Indian Insurance Sector has undergone during the post liberalization period, this study was conducted to measure the performance, productivity and portfolio management of public life insurance sector in India. The summary of the findings of the study are discussed below:

5.1 Findings:

5.1.1 Performance of LIC:

Performance of LIC was evaluated by measuring the growth of significant variables annual premium, number of policies and sum assured. These are the key performance indicators defined by IRDA.

- **Premium:** Premium of LIC has shown a steady growth rate of 4.61 percent in new business outside India, 14.72 percent in new business inside India, 19.11 percent in business in force in India and 8 percent in business in force outside India. An overall increase in growth rate of 24.90 percent has been observed up to 2002-03 after which a decline and fluctuating trend was observed in all the key performance indicators. This is mainly due to the entry of private players.

- **Number of policies:** LIC has shown a steady growth rate of 6.70 percent in new business inside India, 9.30 percent in business in force in India, 1.89 percent in business in force outside India, 2.80 percent in rural business and 18.18 percent in share of rural business to total business. An overall increase in growth rate of 9.61 percent has been observed up to 2002-03 after which a decline and fluctuating trend was observed in all the key performance indicators. This is mainly due to the entry of private players.

- **Sum Assured:** LIC has shown a steady growth rate of 14.10 percent in new business inside India, 15.81 percent in business in force in India, 5.74 percent in business in force outside India, 8.31 percent in rural business and 14.59 percent in share of rural business to total business. An overall increase in growth rate of 19 percent has been observed up to 2002-03 after which a decline and fluctuating trend was observed in all the above said key performance indicators. This is mainly due to the entry of private players.

- The growth rate of new business of LIC under group insurance has been inconsistent with negative growth rate of 3.43 percent of number of schemes, 6.66 percent of number of members and 13.42 percent of total annuity. During the year 2004-05 and 2005-06 a drastic downfall has been observed.

- The quantum of business in force of LIC under superannuation scheme was increasing but the growth rate has been fluctuating and showed a declining trend which is observed to be inconsistent. LIC has showed a growth rate of 4.14 percent in number of schemes, 13.06 percent in number of members and 16.21 percent in total annuity.

- The average growth rate of number of active agents is 6.63 percent. There was inconsistency and decline in the growth rate of the agents after the entry of private insurers but the number of agents kept on increasing year after year with upward trend.

- The major portion of income of LIC comes from the renewal premium followed by income from investments and first year premium. LIC has shown consistent performance with a growth rate of 0.03 percent in renewal premium, 16.73 percent in miscellaneous income. A downfall has been observed in first year premium with a negative growth rate of 0.45 percent and single premium with a negative growth rate of 1.74 percent.

- The performance in average sum assured per policy was commendable with steady growth rate of 7.11 percent, except in the years 2002-03 and 2003-04. LIC gradually regained its position in the consecutive years.

- The performance of LIC in terms of ratio of first insurance to total insurance completed is good and has showed a growth rate of 3.55 percent in the case of number of policies and 2.51 percent in the case of sum assured

- The growth rate in the life fund ranges between 20 to 22 percent has been constant throughout the study period.

- The settlement of claims has shown a steady increase from 1993-94 till 2007-08 with a growth rate of 11.17 percent in terms of number of claims and 16.97 percent in terms of amount of claim.

- LIC has shown a consistent percentage of lapsation of policies ranging from 4.9 to 6.3 percent thorough out the study period.

- Cubic Trend analysis has revealed a positive future trend for all the following determinants: New business in India, new business out of India, business in force in India, business in force out of India, new rural business, share of rural business to total business, new group business, business in force under super annuation scheme, growth in active agents, composition of income, average sum assured per policy, ratio of first insurance to total business, life insurance fund and claims settled during the year

- It is clear from the Factor Analysis and Varimax rotation that majority of the income of LIC was utilized in the form of claims by maturity, management expenses, surrenders, Government share of valuation surplus and excess of income over outgo. This is followed by Claims by death, Annuities, Salary and other benefits to employees. Inter Correlation Matrix and Multiple Regression analysis has revealed:

- In new business in India, correlation coefficients between the independent variables (number of policies and sum assured) and dependent variable (annual premium income) were significant at one percent level. This indicated strong relationship between the variables considered. The multiple regression model indicated that out of the two variables sum assured has significantly contributed to the premium income.

- In new business out of India, only the independent variable (sum assured) was positively correlated indicating that the relationship is more influencing between sum assured and premium income. The multiple regression model indicated that out of the two variables sum assured has significantly contributed to the premium income.

- In business in force in India, correlation coefficients between the independent variables (number of policies and sum assured) and dependent variable (annual premium income) were significant at one percent level. This indicated all the variables were influencing one another. The multiple regression model indicated that out of the two variables number of policies has significantly contributed to the premium income

- In business in force out of India, correlation coefficients between the independent variables (number of policies and sum assured) and dependent variable (annual premium income) were significant at one percent level. The multiple regression model indicated that out of the two variables, sum assured has significantly contributed to the premium income.

- In case of premium income, the multiple regression model indicated that sum assured, number of active agents and loans advanced significantly contribute to premium income. Thus to improve the premium income, LIC has to largely depend on sum assured, number of active agents and loans advanced.

- In case of Life fund, the annual premium, number of policies, sum assured, number of active agents and loans advanced were identified as significant determinants. The multiple regression model indicates that number of policies and number of active agents significantly contributes to the life fund. Thus, LIC has to concentrate on the number of policies and number of active agents to increase the flow of life fund.

▪ Path Coefficient Analysis has revealed that among the five explanatory variables annual premium, number of policies, sum assured, number of active agents and loans advances, three explanatory variables namely sum assured, number of active agents and loans advances has shown higher positive direct effect on life fund. The variable sum assured also has higher positive indirect effect on Life fund through Number of active agents.

Similarly, the variable number of active agents has positive indirect effect on the life fund through Sum assured. The variable loan advances has higher positive indirect effect on the life fund through number of active agents. Hence, the three explanatory variables, sum assured, number of active agents and loan advances were substantially important as they contribute to life fund.

5.1.2 Analysis of Productivity of LIC

- LIC has attained a growth rate of 13.89 percent in new business per branch and 7.18 percent in new business per active agents. There was downfall from 2002-03 onwards.

- The number of policies per branch showed a growth rate of 6.58 percent. The performance of LIC was good till 2005-06 but towards the end years it declined. Notably the number of policies increases even after the entry of private insurers and this signifies that the decline was not due to competition in the insurance market.

- The number of policies per active agent showed a growth rate of 0.21 percent but decreases in the later years of 2006-07 and 2007-08.

- The premium income per branch of LIC showed a growth at 14.62 percent. The growth was consistent with steady raise till 2001-02 but afterwards it started to fluctuate.

- The premium income per agent showed a growth rate of 14.02 percent. The performance of LIC was improving steadily till 2001-02 and was fluctuating from 2002-03 onwards.

- LIC strove hard to reduce its expenses ratio every year and the decrease was reflected with a negative growth rate of 2.97 percent.

- Complaints per thousand mean number of policies in force reveals that the ratio was decreasing year by year indicating that the increase in the number of complaints was less as compared to the increase in the number of policies in force with a negative growth rate of 4.43 percent.

- The percentage of outstanding claims to total claims payable of LIC in terms of number showed a negative growth rate of 26.96 percent and in terms of amount with a negative growth rate of 17.76 percent. LIC has shown promptness and efficiency in the claim settlement operations.

- The members of various agents club of LIC kept on increasing till 1999-2000 but thereafter it started to decline in all the subsequent years till 2005-06. This has shown a negative growth rate of 9.59 percent in distinguished club, 6.53 percent in branch managers club, 44.74 percent in divisional mangers club, 15.95 percent in zonal managers club and 17.58 percent in chairman’s club.

It may be concluded that the productivity of the LIC has been increasing steadily till 2001-02 and with slight disturbance during 2002-03 and 2003-04. This was the year when all the private players were active in the insurance market. Notably in 2004-05, LIC restored its position with great hikes in its growth rates. On the whole LIC has to improve its productivity especially in terms of new business per branch, per agent, number of policies per agent and premium income per branch and LIC has to be appreciated in its productivity in terms of operating expenses ratio, complaints per thousand mean number of policies in force and percentage of outstanding claims to total claims.

5.1.3 Analysis of Investment Portfolio of LIC

- Loans advanced to various developmental activities reveals that among the percentage share of each development activity, housing holds the major share of the loans with a negative growth rate of 2.77 percent, followed by electricity with 18.14 percent, industrial development with 4.202 percent and water supply and sewerage with a negative growth rate of 4.709 percent. The least share was given by transport with a negative growth rate of 0.255 percent. A huge increase in the total amount of loan advanced for various development activities after the issue of new investment regulations by IRDA in 2002 has been observed.

- Composition of Investments as per IRDA guidelines reveals that the investment of the corporation in government securities has shown a growth rate of 0.47 percent, investment in infrastructure and social sector with a negative growth rate of 3.11 percent, investments to be governed by prudential norms with 5.06 percent and other than approved investments again with a negative growth rate of was 6.98 percent

Thus, on the whole the performance of the corporation has been satisfactory but there is a need to invest more controlled funds in infrastructure and social sector as it leads to the growth of the economy and generation of employment opportunities. Secondly, LIC should also control its exposure in investments in the corporate sector, as it was higher than the prescribed guidelines.

5. 2 Suggestions

Insurance is the outcome of man’s constant search for security and finding out ways and means of ameliorating the hardships arising out of calamities. The Indian insurance industry has come a full circle from being an open competitive market to complete nationalization and then back to a liberalized market. First, of all the reasons for privatization of Indian insurance industry was to promote wider competition, wider choice of products, lower price of insurance covers, better customer services, improved use of information technology, better management, increased efficiency and to provide operational autonomy.

Having undertaken the study and analyzed the performance of public life insurance industry in India, the researcher identified certain areas of backlogs and deficits in the sectors especially in the years of liberalization, which has been listed below:

➢ **To improve performance and productivity:**

As productivity is the heart of the firm's performance and it reflects the real value of the firm it has to be given due consideration. The problem of low performance and productivity identified are both external and beyond the control of the company: like changes in tax laws, availability and emergence of alternative investment options, customer specific features etc. But some are well within the control of the company and are internal like:

1. Product redesign and choices, redesigning marketing and distribution strategies, incentive framework, supervision and control.

2. Misselling on larger scale can be avoided by professional education to insurance agents and advisors, like imparting syllabus oriented training, continuous skill upgradation programmes, designing standardized compensation strategies,

3. Channel optimization and strengthening with additions like corporate agents, broker firms, bancassurance and even through cyber marketing,

4. Imparting customer education by way of service camps, awareness programmes etc. ,

5. Introducing service delivery initiatives like availing web services for premium payment, document submission, receiving cell phone alerts, access to company database through toll free numbers etc.

All these if given due consideration would increase the performance of the company, increase the public image and in turn the value of the firm.

➢ **Re-organized Channels of distribution:**

The liberalization has helped to create a number of new channels of distribution of insurance products. The private sector has been using alternate channels like, corporate agents, brokers, direct sale etc. Bancassurance has been very successful with private sector securing 21 percent of new premiums through this channel. The successful experience with the bancassurance is coming under strain with major banks deciding to enter the insurance business promoting their own companies. The SEBI has also noticed cases of misselling of insurance products by the banks. What impact this can have has to be seriously analysed and taken care by both the private and public sector insurance companies.

Now days the online insurance plans are flooding the market with four insurance companies launching these plans with the hope of eliminating the cost of the intermediaries and making the product cheaper. It is said that for the same sum assured online term plans will work out at least ten percent cheaper than those sold through intermediaries. Companies do not have to pay commission to agents and distributors. In addition, they can save on expenses such as branch cost. But all these are recent entries into the market and hence their efficiency has to be proved yet.

- **Prospects for Growth:**

The major source for insurance business has been the Indian middle class. The middle class is growing and estimated to be nearly 200 million now. The economic growth has benefited them and these sections have increasing levels of disposable incomes. The demography is also in favor of the insurance industry. The estimates suggest that 54 percent of the Indian population is below the age of 25 years and these are potential future customers.

The size of Indian population makes it hugely attractive market. There is no doubt that the benefits of growth of Indian economy have not benefited all the sections of the population. The Tendulkar Committee has put the figure of those below poverty level at nearly 40 percent of the population. It is to be noted that as per Arjun Sengupta MP's report, 70 percent of population have income of below Rs.20 per day. A large number of these people live in rural India. There is a serious talk of inclusive growth now. If the government seriously takes measures to improve the life and purchasing capacity of these people, then rural India would provide huge opportunity for growth for the insurance business.

India is a country where there is no social security. Nearly 90 percent of the work force in the country is employed in the unorganized sector. This section needs insurance as a security against various risks. With intense competition, it is natural that the companies would target the most profitable business ignoring this vast section, which is not capable of purchasing big-ticket insurance policies. Driven by the intense competition, even the public sector seems to be flattering in reaching the most deprived and needy sections of the population. Therefore, there is need for the government and regulator IRDA to force the insurance companies to come out with products that meet these requirements.

- **Control over Lapsation rate :**

The first and foremost reason for a policyholder to prefer not to stick to his commitments is a possible disillusionment. Several policyholders realize after the contract has been concluded that their requirement have not been taken care of by the terms of the policy and hence they tend to discontinue further payment of premiums. It is common knowledge that a satisfied client would continue to stay with the insurer for the entire period of contract.

This lapsation brings huge loss to the insured by way of interruption in coverage of risk and for the insurer, hampering expected cash flows and in turn affects the profitability and growth of the concern hence to be taken care.

- **Improve Solvency Ratio:**

The solvency of the company corresponds to the ability to pay claims. An insurer is insolvent if its assets are not adequate or cannot be disposed of in time to pay the claims arising. But nowadays many Indian life insurers suffer from inadequate solvency margin. Five out of twenty-one private life insurers in the country have suffered a dip of below 1.5 percent in the solvency ratio, a key indicator of the financial health of a company. Even LIC suffered inadequacy in the years 2004 and 2005 but corrected in 2008. In this context of economic slowdown, insurers need to monitor their solvency ratios constantly.

5.3 Conclusion

The structure of the Indian insurance industry has undergone a drastic change since liberalization in the insurance sector. For almost four decades LIC has been the sole player with virtual monopoly in the life insurance sector. But after liberalization and with the advent of Malhotra Committee, IRDA was formed and the insurance market was open for the private players with foreign partnerships too. With the entry of so many companies in this sector, it becomes essential now to analyze whether LIC is progressing better in terms of their performance, productivity and investment portfolio and the impact of privatization.

The study reveals the overall performance of LIC in the areas of productivity, performance and investment along with the impact of the entry of private insurers. Thereby it has been identified that the performance of LIC was good and satisfactory in the following core areas:

- **Providing efficient service:**

Efficient service is the sum total of a number of factors. Admittedly, the most sensitive area of servicing is claim settlement. As already mentioned insurance is a promise given to meet the risk in a given contingency with the premium there for being paid in advance and usually over a long period. If this area is not taken care of, nothing else matters to the policyholder. It is precisely in this area, LIC stands head and shoulder above the erstwhile private insurers as well as the foreign companies. The contract of insurance is a promise and the ultimate delivery of service of an insurance product is the honoring of that promise. The public sector scores over the private sector in this aspect. The IRDA has expressed concern over the delay in settlement of claims by the private insurers as also the high level of repudiation. In addition, the cost of claims will increase with the extension of time because the insurer may be asked to pay the interest on the unpaid insurance amount because of the delay. Hence, the private entities have to work towards improving their performance as in the matter of service to the policy holders, many private insurance companies systematically postpone or avoid payment of claim until of course forced by legal means. And the success of claim management mainly depends on the satisfaction of the customers and the customers are attracted to an insurance company by its state of art of claim service.

➢ **Coverage of economically depressed classes:**

LIC has to be appreciated for undertaking projects to economically depressed and socially purposive. Some of the socially oriented investments schemes of LIC includes: electricity, water supply and sewerage, housing and state transport etc. Besides people belonging to weaker sections such as beedi workers, fishermen, hamals, handicraft artisans, handloom weavers, papad workers, primary milk producers, rickshaw pullers, tendu leaf collectors, toddy tappers etc have been covered under social security group schemes. All this for the economic upliftment is found missing under private entities where their aim being only profit maximization and not socially responsible and hence to be taken care.

➢ **Spread the message of insurance to remote rural areas:**

There could be no doubt that the business of life insurance has spread faster and far wide in the past one decade. But the coverage of business into the remote rural areas by the private entities has shown a backlog which was to the best attained by LIC. Private players go in for the cream of business in already developed urban areas with higher profit potential and neglect the rural customers. Hence, there arises the need for the private companies to concentrate on balanced regional coverage of business by improving new rural business and percentage of rural business to total business.

➢ **Control over Lapsation rate :**

The first and foremost reason for a policy holder to prefer not to stick to his commitments is a possible disillusionment. Several policyholders realize after the contract has been concluded that their requirement have not been taken care of by the terms of the policy and hence they tend to discontinue further payment of premiums. It is common knowledge that a satisfied client would continue to stay with the insurer for the entire period of contract. This lapsation brings huge loss to the insured by way of interruption in coverage of risk and for the insurer, hampering expected cash flows and in turn affects the profitability and growth of the concern. According to IRDA the lapsation ratio was meager in case of LIC, but for private players it ranged from as high as 80 percent in certain companies and hence to be taken care.

- **To provide creditworthiness, building of trust and security for savings of the people:**

The insurance industry to its core had to build trust in the minds of policyholders that their hard earned money is more secure in the hands of insurance companies than in other means of investments. Hence, they should be free from all the maladies such as undercutting of premiums, unscrupulous management, falsification of reports, questionable investment, poor claims settlement, high rate of expenses and managerial privileges, misuse of insurance funds for private gains etc. Presently the global financial meltdown has shaken the insurance industry in the developed world and in March 2009, the US giant, AIG American International Group, reported loss and had to be bailed out by US Government by treasury injection of $182.3 billion. In return for that financial support, the U.S government received an 80 percent equity stake in AIG. It is to be noted AIG is a partner of Tata AIG insurance company operating in India. At that time Tata AIG Life insurance company had to assure the Indian people by stating that US financial crisis does not have any immediate material impact on TATA AIG Life as the company is 74 percent owned by Tata Sons and 26 percent by AIG.

In addition, the practice of private players winding up operations all of a sudden and changing their profiles by entering into new partnerships and joint ventures would lessen the trustworthiness and feeling of security for savings of the people. In 2005, Reliance Life Insurance Company Ltd, a subsidiary of Reliance Capital Ltd acquired AMP Life Assurance Company Ltd**, which** was originally commenced with a joint venture between AMP Australia and Sanmar Group of India. AMP ltd is one of the world's leading financial services provider with a customer base of over 9 million and Sanmar Group is among the largest industrial group with turnover of around Rs.10 billion flourishing business in PVC / Chlorochemicals, speciality chemicals, shipping and engineering. AMP Sanmar handed over 90 branches, 900 staff and 9000 agents to Reliance life all of a sudden and quitted the vast potential Indian insurance industry.

Today life insurance is widely accepted as one of the most financial instruments in an individual's portfolio that provides an assurance of security with attractive returns to protect customers' money and life. Hence, When LIC was able to build trust among the policyholders through its efficient service; the private players have to work towards gaining and building trust and should be free from all the evils mentioned earlier.

- **To mobilize people's savings for National Development:**

In the matter of utilization of people's savings for national development, LIC's achievement is unmatched. LIC's contribution towards five-year plans was tremendous year after year.

Its contribution to the Government's exchequer has been steadily increasing in way of dividend and tax collection. The Eleventh Five year plan (2007-2012) had targeted infrastructure investment of 9 percent of the GDP. Hence, IRDA has to advise the companies to have proper mix of the policies so that long-term funds are generated for infrastructure investments and people's savings can be effectively utilized for national development. Hence, the private insurance companies with foreign partnerships can think and work in this direction too.

However, LIC has to change its strategies to meet the challenges and more emphasis has to be laid on marketing so that private players are not able to make a dent in its market and lure away the prospective buyers.

The determinants discussed in the study though not exhaustive, gives an idea as to which specific areas are to be given emphasize to make the performance of the life insurance companies in India better. The researcher deems this effort a small step which would pave the way for a better insight into the most intriguing and interesting concept, "Performance analysis of Life insurance Corporation of India in the post liberalization period".

5.4 Scope for Further Research:

There is still scope for further research in the evaluation of the performance of the Indian life insurance sector in:

✓ Promotion of insurance in rural areas and investigating ways for increasing business

✓ Corporate Governance: Monitoring the functions of life insurance companies and studying the reasons for collapse of the life insurance companies globally, namely, AIG of US.

✓ Promotion of insurance in social sector

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