

INTERNATIONAL JOURNAL OF RESEARCH IN COMMERCE, IT & MANAGEMENT

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INVESTMENT STRATEGY OF LIC OF INDIA AND ITS IMPACT ON PROFITABILITY**T. NARAYANA GOWD****RESEARCH SCHOLAR****SREE KRISHNADEVARAYA INSTITUTE OF MANAGEMENT****SK. UNIVERSITY****ANANTAPUR****DR. C. BHANU KIRAN****ASSOCIATE PROFESSOR & PLACEMENT OFFICER****ANANTHA LAKSHMI INSTITUTE OF TECHNOLOGY & SCIENCES****ANANTAPUR****DR. CH. RAMAPRASADA RAO****PROFESSOR****SREE KRISHNA DEVARAYA INSTITUTE OF MANAGEMENT****SK. UNIVERSITY****ANANTAPUR****ABSTRACT**

In this research paper attempt has been made to study the overall performance of LIC of India and to study the investment strategy of LIC of India and its impact on profitability during the period 1998 to 2010-11. Exploratory Research design is used and required data is collected from annual reports of LIC and IRDA. The analyzed data reveals that the performance of LIC has improved as excess of income over outgo is in increasing trend. Private sector performance in terms of total premium earned, number of policies issued and market share is in increasing trend where as market share of LIC is in declining trend and net profit has been fluctuating during the study and except in total premium earned, total policies issued and claim settlement ratio. The investment of LIC is increased from 77.5 % in 1998 to 95.81 % in 2010-11 due to effective regulation of SEBI and increasing transparency and performance of Indian corporate securities. The multiple Regression analysis revealed that investment strategy of LIC has positive impact on its Profitability as R multiple Correlation Coefficients in case of sector wise investment (0.99) and instrument wise investment (0.98) is high. The Correlation between investment strategy of LIC and its profitability is significantly positive and also the impact of investment strategy of LIC has significantly positive on its profit earned. The Regression model is valid and best fit to the data as adjusted R^2 value being close to R^2 value.

KEYWORDS

Insurance, Investment strategy, Multiple Correlations, Multiple Regression, and Profitability.

INTRODUCTION

The nationalization of insurance business in the country resulted in the establishment of Life Insurance Corporation of India (LIC) in 1956 as a wholly – owned corporation of the government of India. India's life insurance market has grown rapidly over the past six years, with new business premiums growing at over 40% per year. The premium income of India's life insurance market is set to double by 2012 on better penetration and an higher incomes. Insurance penetration in India is currently about 4% of its GDP, much lower than the developed market level of 6-9%. The insurance sector is a colossal one and is growing at a speedy rate of 15-20%. Together with banking services, insurance services add about 7% to the country's GDP. A well-developed and evolved insurance sector is a boon for economic development as it provides long- term funds for infrastructure development at the same time strengthening the risk taking ability of the country.

India has 25 life insurers and the state owned Life Insurance Corp. of India dominates the Industry with over 70% market share, though private players have been growing aggressively. Considering the world's largest population and an annual growth rate of nearly 7 percent, India offers great opportunities for insurers. US based online insurance company ebix.com plans to enter to the Indian market following deregulation of its insurance sector. Indian life insurance Industry has recorded impressive progress after liberalization which not only creates the employment opportunities but also enhances the business activities in the economy. Financial statistics reported that the Indian life insurance industry is growing at rate of 15 to 20 % annually and new business premiums are growing over 40 % annually from the last six years, but its penetration is 4 % of India's GDP which is much lower than developed economies of 6 - 9 %. Therefore, studying the performance of life insurance industry of India is an important discussion for the regulators and policy makers to support the sector in achieving the excellence so that desirable economic fruits could be reaped from the help of the life insurance sector of India.

REVIEW OF LITERATURE

In the present section an attempt has been made to examine the review of literature related to the study.

Arora (2002) highlighted that LIC was likely to face tough competition from private insurers having large established network and their trained intermediaries throughout India. Verma (2003) analyzed the various types of products offered by public sector giant and the new global players in the private sector. Sinha, Ram Pratap (2007) revealed that the public sector insurers dominates the private sector insurers in terms Of mean technical efficiency in constant returns to scale, while the private sector insurers have a slightly higher mean technical efficiency than the public sector insurers in variable returns to scale. Goswami (2007) examined that prior to privatization of insurance sector; Life Insurance Corporation (LIC) of India was the monopoly in the life insurance industry in India. In six years since the entry of private players in the insurance market, LIC has lost 29% market share to the private players, although both, market size and the insurance premium being collected, are on the rise.

Ray, Subhasis and Pathak (2006) opined that ever since the privatization of the insurance sector in India in 2000, the industries has been witnessing the birth of numerous private players, mostly joint ventures between foreign insurance giants and Indian diversified conglomerates and each one is trying to make an inroad into the huge untapped market. Bhattacharya (2005) advocated that banc assurance provided the best opportunities to tap the large potential in rural and semi urban areas as banks have a strong network of more than 40000 branches in these areas. He suggested that the insurers should focus on single premium policies, Unit Linked Insurance, Pension Market and Health Insurance.

Kumar and Taneja (2004) highlighted the opportunities and challenges before the insurance industry in India due to liberalization, globalization and privatization.

Jain (2004) revealed that waves of liberalization have done wonders to proper the insurance occupation to the status of a career with a bright future. The

average mindset, particularly of younger generation in India was very amenable to the changes to changes in insurance as an avenue where exhilarating opportunities are opened up in changed environment.

Goyal (2004) reviewed that private insurance companies had reason to celebrate with the lifting of the scrotal cap in the insurance sector to 49 percent in the Union Budget 2004-05, as against 26 % earlier. Rao (The Indian Insurance Industry The Road Ahead, 2000) analyzed that India is still an under developed insurance market, it has a huge catch-up potential. According to him even though there is strong potential for expansion of insurance into rural areas, Growth has so far remained slow. Considering that the bulk of the Indian population still resides in rural areas, it is imperative that the insurance industry's development should not miss this vast sector of the population.

INVESTMENT POLICY/STRATEGY OF LIC OF INDIA

Life insurance premiums are received in advance by the life insurance companies. These premiums should be judiciously invested until they are needed to pay claims and expenses. The income received from investment is paid in the form of dividends to policyholders, which reduces the cost of life insurance. Moreover, these premiums, if invested in infrastructure and social sectors, lead to higher economic growth of the country. In view of the above, IRDA has mandated the pattern of investments to be followed by the life insurance companies. It has also specified that every insurer carrying on the business of life insurance shall invest and at all times keep invested his controlled fund (other than funds relating to pension and general annuity business and unit linked life insurance business) in the following manner.

PATTERN INVESTMENTS SPECIFIED BY IRDA – LIFE INSURANCE

| Type Of Investment | Percentage |
|---|--------------------|
| (i) Government Securities | 25 % |
| (ii) Government Securities or Other Approved Securities (including (i) above) | Not less than 50 % |
| (iii) Approved investments as specified in schedule I | |
| (a) Infrastructure and social sector | Not less than 15 % |
| (b) Others to be governed by exposure norms | Not exceeding 35 % |
| (Investments in "Other than in Approved Investments" in no case can exceed 15 % of the fund) | |

APPROVED INVESTMENTS FOR LIFE BUSINESS

"Approved Investments" for the purposes of Section 27- A the Act shall be as follows.

(a) All approved investments specified in section 27A of the Act except

(i) Clause (b) of sub-section (1) section 27A of the Act.

(ii) first mortgages on immovable property situated in other country as situated in other country as stated in clause (m) of sub- section (1) of section 27 A of the Act.

(iii) Immovable property situated in other country as stated in clause (n) of sub-section (1) of section 27A of the Act.

In addition the IRDA has declared the following investments as approved under vide clause (s) of (1) 27A of the Act.

(b) All secured loans, deposits, debentures, bonds, other debt instruments, shares and preference shares rated as 'very strong' or more by a reputed and independent rating agency.(e.g. AA of Standard and Poor).

(c) Deposits with banks (e.g., in current account, call deposits, notice deposits, term deposits, and certificates of deposits,etc.) and with Primary Dealers recognized by RBI included for the time being in the Second Schedule to the Reserve Bank of India Act,1934(2 of 1934).

(d) Commercial papers issued by a company having a 'very strong' or more rating by a reputed and independent rating agency (e.g. AA of standard and Poor).

(e) Investments in Venture Capital Funds of such companies / organizations which have a proven track record and have been rated very strong or more by a reputed and independent rating agency (e.g. AA of Standard Poor).

OBJECTIVES OF THE STUDY

1. To study the overall performance of LIC of India during the 2001-02 to 2010-11.
2. To measure the impact of the investment strategy of LIC on its Net Profit earned during the period 1998 to 2011.

HYPOTHESES

H_{01} : There is no significant correlation between the Investment strategy of LIC of India and its Net Profit.

H_{02} : There is no significant impact of the investment strategy of LIC on its Net Profit earned during the period 1998-2011.

RESEARCH METHODOLOGY

The research article is based upon exploratory research. Secondary sources of data have been collected for the study. The relevant and required data are collected from the IRDA reports, text books, national and international articles, RBI Bulletin (various issues) as well as annual reports of LIC.

STATISTICAL TECHNIQUES APPLIED

The statistical tools like Correlation, Multiple Regression Analysis & ANOVA are employed in this research for studying the overall performance of LIC of India and to measure the impact of the investment strategy of LIC of India on its Net Profit earned during the period 2003 to 2011. For the processing the data and estimating the results SPSS -17 and Excel have been used.

ANALYSIS OF THE STUDY

COEFFICIENT OF VARIATION

The consistency and reliability of the total life insurance premium underwritten by the LIC of India and Private Life Insurers is analyzed by the coefficient of variation.

TABLE 1: C.V FOR THE TOTAL LIFE INSURANCE PREMIUM (RS.IN CRORE)

| Year | Insurer | | Total | Growth over the Previous Year (%) |
|---------|-------------|---------------|-------------|-----------------------------------|
| | LIC | Private Total | | |
| 2001-02 | 49,821.91 | 272.55 | 50,094.46 | 43.54 |
| 2002-03 | 54,628.49 | 119.06 | 55,747.55 | 11.28 |
| 2003-04 | 63,533.43 | 3,120.33 | 66,653.75 | 19.56 |
| 2004-05 | 75,127.29 | 7,727.51 | 82,854.80 | 24.31 |
| 2005-06 | 90,792.22 | 15,083.54 | 1,05,875.76 | 27.78 |
| 2006-07 | 1,27,822.84 | 28,253.00 | 1,56,075.84 | 47.38 |
| 2007-08 | 1,49,789.99 | 51,561.42 | 2,01,351.41 | 29.01 |
| 2008-09 | 1,57,288.04 | 64,503.22 | 2,21,791.26 | 10.15 |
| 2009-10 | 1,86,077.31 | 79,373.06 | 2,65,450.37 | 19.69 |
| 2010-11 | 2,03,473.40 | 88,131.60 | 2,91,605.00 | 9.85 |
| Total | 1158354.92 | 339145.29 | 1497500.2 | ----- |
| Average | 115835.4920 | 33914.5290 | ----- | 24.25 |
| S.D | 56522.51574 | 34125.71018 | ----- | ----- |
| C.V | 48.80 | 100.62 | ----- | ----- |

Source: Computed data

The above analysis indicates that LIC of India is more consistent than Private life insurers as it is inferred that total life insurance premium underwritten by private life insurance companies during the period 2001 to 2011 experienced considerable variations of 100.62 % and only 48.80 % by LIC of India. The mean growth rate of life insurance industry over the study was 24.25 %.

GROWTH OF PREMIUM INCOME IN INDIAN LIFE INSURANCE INDUSTRY

Premium income is the second major source of income of life insurance industry. The table no 2 below reveals that total premium earned.

TABLE 2: MARKET SHARE OF LIFE INSURANCE COMPANIES IN TERMS OF TOTAL PREMIUM UNDERWRITTEN (%)

| Year | Insurers | | | | Total | |
|---------|----------------------------|------------------|------------------------------|------------------|-----------------------------|--------------------|
| | LIC of India | | Private Insurers | | Total Premium (Rs In crore) | Total market share |
| Year | Total Premium(Rs.in crore) | Market Share (%) | Total Premium (Rs.In crore) | Market Share (%) | | |
| 2000-01 | 34890.02 | 99.98 | 6.45 | 0.02 | 34898.47 | 100 |
| 2001-02 | 49,821.91 | 99.46 | 272.55 | 0.54 | 50,094.46 | 100 |
| 2002-03 | 54,628.49 | 97.99 | 119.06 | 2.01 | 55,747.55 | 100 |
| 2003-04 | 63,533.43 | 95.29 | 3,120.33 | 4.71 | 66,653.75 | 100 |
| 2004-05 | 75,127.29 | 90.67 | 7,727.51 | 9.33 | 82,854.80 | 100 |
| 2005-06 | 90,792.22 | 85.75 | 15,083.54 | 14.25 | 1,05,875.76 | 100 |
| 2006-07 | 1,27,822.84 | 81.92 | 28,253.00 | 18.08 | 1,56,075.84 | 100 |
| 2007-08 | 1,49,789.99 | 74.39 | 51,561.42 | 25.61 | 2,01,351.41 | 100 |
| 2008-09 | 1,57,288.04 | 70.92 | 64,503.22 | 29.08 | 2,21,791.26 | 100 |
| 2009-10 | 1,86,077.31 | 70.10 | 79,373.06 | 29.90 | 2,65,450.37 | 100 |
| 2010-11 | 2,03,473.40 | 69.78 | 88,131.60 | 30.22 | 2,91,605.00 | 100 |

Source: Compiled from various Annual Reports of IRDA from 2000-01 to 2010-11.

The above table reveals that Even though the LIC of India is the industry leader but its market share is in decreasing trend during the study period from 2000 to 2011 .The share of LIC premium and Private sector premium as well as market share is in increasing trend during the study period.

NEW POLICES UNDERWRITTEN BY LIFE INSURANCE COMPANIES

Under writing is the process through which insurers select what risks to insure and decide how much premium to charge for accepting those risks. In order to measure the consistency and reliability of the new policies underwritten by the LIC of India and Private Life Insurance companies, it is evaluated through coefficient of variation (C.V).During 2010-11, life insurers issued 482 lakh policies (76.91% of total policies issued) and the private life insurers issued 111 lakh policies (23.09 %).While L IC suffered a decline of 4.70% in the number of new policies issued against the previous year, the private sector insurers reported a significant decline of 22.61% in the number of new policies issued. Overall, the industry witnessed a 9.53% decline in the number of new policies issued.

TABLE 3: COEFFICIENT OF VARIATION (C.V) FOR THE NO. OF POLICIES UNDER WRITTEN BY LIFE INSURERS

| Year | LIC of India | Private Insurers total | Total Policies | Growth over the Previous Year (%) |
|---------------|--------------|------------------------|----------------|-----------------------------------|
| 2002-03 | 24545580 | 825094 | 25370674 | ----- |
| 2003-04 | 26968069 | 1658847 | 28626916 | 12.83 |
| 2004-05 | 23978123 | 2233075 | 26211198 | -08.44 |
| 2005-06 | 31590707 | 3871410 | 35462117 | 35.29 |
| 2006-07 | 38229292 | 7922274 | 46151566 | 30.14 |
| 2007-08 | 37612599 | 13261558 | 50874157 | 10.23 |
| 2008-09 | 35912667 | 15010710 | 50923377 | 0.10 |
| 2009-10 | 38862567 | 14362000 | 53224667 | 4.52 |
| 2010-11 | 37038000 | 11114000 | 48152000 | -9.53 |
| Total(lacs) | 2947.39 | 702.59 | 3649.97 | ---- |
| Average(lacs) | 327.4878 | 78.07 | ----- | ----- |
| S.D(lacs) | 61.08 | 57.95 | ----- | ----- |
| C.V | 18.65 | 74.23 | ----- | ----- |

Source: Computed Data from various IRDA Annual Reports

The above table indicates the fact that the new policies underwritten by Private Life Insurers during the period 2002 -2011 experienced considerable variations of 74.23 % and only 18.65 % by LIC of India. The coefficient of variation percent for LIC of India is less than the coefficient of variation percent for Private life insurers. Hence it is concluded that LIC of India is more consistent than private life insurance companies.

TABLE 4: NET PROFIT AND GROWTH TREND OF NET PROFIT EARNED BY LIC OF INDIA

| Year | Net Profit (Rs.in Cr.) | Growth Trend (%) | Annual Growth Rate (%) |
|---------|------------------------|------------------|------------------------|
| 2002-03 | 496.97 | 100.00 | --- |
| 2003-04 | 551.81 | 111.03 | 11.03 |
| 2004-05 | 708.37 | 142.54 | 28.37 |
| 2005-06 | 631.58 | 127.09 | -10.84 |
| 2006-07 | 773.62 | 155.67 | 22.49 |
| 2007-08 | 844.63 | 169.96 | 9.18 |
| 2008-09 | 957.35 | 192.64 | 13.35 |
| 2009-10 | 1060.72 | 213.44 | 10.79 |
| 2010-11 | 1,172.0 | 235.83 | 10.49 |

Source: For calculating trend 2002-03 is taken as base year.

The above indicates that Net Profit has been in increasing from 2005-06 to 2010-11. The growth trend in Net Profit from 2002-03 to 2010-11 except in 2006-07 where as the annual growth rate in net profit has been in fluctuating trend from 2003 to 2010-11.

TABLE 5: OVERALL EXPENSES RATIO AND INTEREST REALIZED RATIO OF LIC OF INDIA

| Year | Commission ratio | Overall expenses Ratio | Ratio of interest earned on mean life insurance fund (Yield on Investment in %) |
|---------|------------------|------------------------|---|
| 2002-03 | 7.95 | 13.90 | 6.21 |
| 2003-04 | 6.12 | 12.06 | 7.13 |
| 2004-05 | 8.32 | 16.30 | 9.93 |
| 2005-06 | 7.82 | 14.48 | 8.72 |
| 2006-07 | 7.18 | 12.72 | 8.21 |
| 2007-08 | 6.42 | 11.94 | 7.83 |
| 2008-09 | 6.39 | 12.45 | 7.71 |
| 2009-10 | 6.52 | 13.10 | 7.59 |
| 2010-11 | 6.56 | 14.89 | 7.39 |

Source: Calculated from the annual reports of LIC of India.

The success of any organization to a large extent depends upon reducing expenditure and LIC is no exception. Table above represents the Expense ratio and Interest earned on Mean life fund of LIC during the period under the study. The overall expense ratio has in increasing trend from 2007-08 to 2010-11. The commission ratio was in decreasing trend from 2004-05 to 2008-09 and from 2008-09 on words is in increasing trend.

The rate of interest realized on mean life fund has declined continuously from 9.93 percent in 2004-05 to 2010-11. In short, the expense ratio has increased while the rate of interest realized on mean life fund has declined, which is alarming. In this regard, it is suggested to the LIC management to control the unproductive expenditure. It is also suggested to the LIC to change its investment portfolio in such a way that the rate of interest on mean life fund is increased.

TABLE 6: INVESTMENT MADE BY LIC OF INDIA (Rs. In Crore)

| Year (march end) | Sector-wise | | | | Instrument wise of which | | Total (2 to 5) Or (6 to 7) |
|------------------|-------------|----------|--------|--------------|---------------------------|---------|-----------------------------|
| | Public | Private | Joint | Co-operative | Stock exchange Securities | Loans | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| 2003 | 219596.7 | 29406.8 | 684.5 | 2082.3 | 222449.3 | 27539.8 | 251770.3 |
| 2004 | 271778.5 | 51923.6 | 959.6 | 2079.5 | 297566 | 31800.4 | 326741.2 |
| 2005 | 322021.8 | 68484.5 | 1270.2 | 1408.2 | 355634.7 | 37529.5 | 393184.6 |
| 2006 | 378807.2 | 105148.1 | 1915.5 | 1356.5 | 450557.2 | 37135.3 | 487227.2 |
| 2007 | 433810.3 | 84294 | 75.2 | 3555.1 | 480426.8 | 41307.8 | 521734.6 |
| 2008 | 503388.4 | 128467.8 | 73.7 | 3817.6 | 590466.6 | 45281 | 635747.5 |
| 2009 | 572050.3 | 187140.8 | 71.7 | 3628.9 | 715710.4 | 47181.4 | 762891.7 |
| 2010 | 678374.5 | 236134.7 | 70.9 | 3336.5 | 872061.7 | 45854.9 | 917916.5 |
| 2011 | 775992.5 | 265798.3 | 82.1 | 3666.6 | 1001755 | 43784.2 | 1045539 |

Source: Life Insurance Corporation of India.

INVESTMENT STRATEGY OF LIC

TABLE NO 7: CORRELATION MATRIX FOR SECTOR SPECIFIC INVESTMENT STRATEGY

| Particulars | PS | PVS | JS | COS | NPr |
|-------------|---------|---------|----------|--------|-----|
| PS | 1 | | | | |
| PVS | 0.983** | 1 | | | |
| JS | -0.622 | -0.535 | 1 | | |
| COS | 0.733** | 0.638 | -0.946** | 1 | |
| NPr | 0.986** | 0.963** | -0.656 | 0.735* | 1 |

Source: SPSS & ** Correlation is significant at 0.01 level of significance (2-tailed) & * Correlation is significant at 0.05 level of significant (two-tailed).

The above table is the result of spss which indicates that there exists correlation between Net Profit of LIC(NPr) and its investment towards PS (Public Sector),NPr and PVS (Private Sector), NPr and COS(Cooperative Sector) is positive and significant at 1 percent and 5 percent level of significance except negative and not significant correlation between NPr and JS (Joint Sector) .

TABLE NO 8 : CORRELATION MATRIX FOR INVESTMENT STRATEGY(LOANS & STOCKEXCHANGE SECURITIES)

| Particulars | St | L | NPr |
|-------------|---------|---------|-----|
| St | 1 | | |
| L | 0.827** | 1 | |
| NPr | 0.981** | 0.866** | 1 |

Source: SPSS & ** Correlation is significant at 0.01 level of significance (2-tailed).

The above table indicates that there exists correlation ship between Net Profit of LIC (NPr) and its investment policy towards St (Stock exchange securities) and L (Loans) is positive and significant at 1percent level of significance.

MULTIPLE REGRESSION ANALYSIS

IMPACT OF INVESTMENT STRATEGY (SECTOR SPECIFIC) OF LIC ON ITS PROFITABILITY

TABLE NO 9 : MODEL SUMMARY

| model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
|-------|-------------------|----------|-------------------|----------------------------|
| 1 | .993 ^a | .985 | .970 | 39.57336 |

Source : SPSS & a. Predictors: (Constant), Cos, PVS, JS, PS.

TABLE NO 9.1 : ANOVA

| Model 1 | Sum of Squares | df | Mean Square | F | Sig. |
|------------|----------------|----|-------------|--------|--------|
| Regression | 417727.322 | 4 | 104431.831 | 66.685 | 0.001a |
| Residual | 6264.203 | 4 | 1566.051 | | |
| Total | 423991.526 | 8 | | | |

a) Predictors : (Constant),Cos ,PVS,JS,PS, b) Dependent Variable : Npr

F table value for $v_1=4, v_2=4$ degrees of freedom at 0.05 & 0.01level of significance =6.38 & 15.97, F-cal value = 66.68 > F-table value (6.38) at 5 percent level of significance and F-cal =66.68 > F-table of 15.97 at 0.01 level of significance.

We can reject null hypothesis .we have to accept H_a (alternative) .Therefore, There is significant evidence of statistical correlation as well as the impact of investment strategy of LIC (Sector Specific) on its Profitability is positive and significant.

TABLE NO 9.2 : COEFFICIENTS

| Model | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. |
|--------------|-----------------------------|------------|---------------------------|--------|------|
| | B | Std. Error | Beta | | |
| 1 (Constant) | 451.804 | 160.672 | | 2.812 | .048 |
| PS | .002 | .001 | 1.489 | 2.819 | .048 |
| PVS | -.001 | .001 | -.417 | -.909 | .415 |
| JS | -.126 | .070 | -.371 | -1.806 | .145 |
| Cos | -.099 | .060 | -.442 | -1.649 | .175 |

Source: SPSS.

Table no 6 reveals the investment strategy of LIC. The above tables 9, 9.1 and 9.2 are results of multiple regression analysis. The regression model used in this analysis is as follows. $NP = \beta_0 + \beta_1PS + \beta_2PVS + \beta_3JS + \beta_4COS$, where = $\beta_0, \beta_1, \beta_2, \beta_3$ and β_4 are the parameters of NP line to be estimated. The pooled regression results of the model used to find out the impact of investment made in various sectors by LIC on NP .In the pooled regression NP (Net Profit earned by LIC) is used as dependent variable and selected sectorial investment made by LIC (Public Sector (PS), Private Sector (PVS), Joint Sector (JS) and Cooperative Sector (COS) are all the independent variables taken together and the impact of these independent variables on the Net Profit of the company. The correlation coefficient for all independent variables are PS (0.98^{**}), PVS (0.96^{**}), JS (-0.656) & COS (0.735^{*}) from these figures it is found that Public, Private Sector and Cooperative Sector are positively correlated and significant statistically with Net Profit earned of the LIC and remaining Joint Sector has statistically significant negative correlation with Net Profit earned of LIC. The multiple correlation co-efficient of NP on PS, PVS, JS, and Cos is 0.993, it reveals that Net Profit earning of LIC is highly influenced by its sectorial investment It is also evident from the R² value that the independent variables (various sectors investment) contribute to 98.5 percent of the variation in the Net Profit (dependent variable).Hence, it is inferred that sectorial investment of LIC have significant impact on its Net Profit earned. Also, Adjusted R squared attempts to correct R squared to more closely reflect the goodness of fit of the model in the population. Both R squared and Adjusted R squared must be close each other high for better model fit. In our study, it has been found that we have R square value more than 0.5 and adjusted R square value being close to R square value. This proves that data is fit to be used and the model that has been chosen for it is equally fit.

IMPACT OF INVESTMENT STRATEGY (IN TERMS OF STOCK EXCHANGE SECURITIES AND LOANS) OF LIC ON ITS NET PROFIT

TABLE 10: MODEL SUMMARY

| Model | R | R ² | Adj.R ² | Std. Error of the Estimate |
|-------|--------------------|----------------|--------------------|----------------------------|
| 1 | 0.986 ^a | 0.972 | 0.963 | 44.328 |

Source: SPSS & a. Predictors: (Constant) L, St.

TABLE 10.1: ANOVA

| Model 1 | Sum of Squares | df | Mean Square | F | Sig. |
|------------|----------------|----|-------------|---------|-------------------|
| Regression | 412201.327 | 2 | 206100.663 | 104.884 | .000 ^a |
| Residual | 11790.199 | 6 | 1965.033 | | |
| Total | 423991.526 | 8 | | | |

a): Predictors : (Constant), L, St. b) Dependent Variable: NPR.

F table value for $v_1=2, v_2=6$ degrees of freedom at 0.05 & 0.01level of significance =5.14 & 10.92, F-cal value = 104.88 > F-table value at 5 percent level of significance and F-cal =104.88 > F-table of 10.92 at 0.01 level of significance.

We can reject null hypothesis .we have to accept H_a (alternative) .Therefore, There is significant evidence of statistical correlation as well as the impact of investment strategy of LIC (stock exchange securities and loan instrument) on its Profitability is positive and significant.

TABLE NO 10.2: COEFFICIENTS

| Model | Un Standardized Coefficients | | Standardized Coefficients | t | Sig. |
|------------|------------------------------|-----------|---------------------------|-------|-------|
| | B | Std.Error | Beta | | |
| 1 Constant | 161.641 | 120.841 | | 1.338 | 0.229 |
| St | .001 | .000 | 0.838 | 6.927 | 0.000 |
| L | 0.006 | 0.004 | 0.173 | 1.431 | 0.202 |

Source: SPSS.

Table no 6 indicate the investment strategy of LIC. Tables 10, 10.1 and 10.2 are results of multiple regression analysis. The regression model used in this analysis is as follows. $NP = \beta_0 + \beta_1St + \beta_2L$ where = β_0, β_1 & β_2 are the parameters of NP line to be estimated. The pooled regression results of the model used to find out the impact of investment made in various instruments by LIC on NP .In the pooled regression NP (Net Profit earned by LIC) is used as dependent variable and

selected sectorial investment made by LIC (Public Sector (PS), Private Sector (PVS), Joint Sector (JS) and Cooperative Sector (COS) are all the independent variables taken together and the impact of these independent variables on the Net Profit of the company. The correlation coefficient for all independent variables are PS (0.98**), PVS (0.96**), JS (-0.656) & COS (0.735*) from these figures it is found that Public, Private Sector and Cooperative Sector are positively correlated with Net Profit earned of the LIC and remaining Joint Sector has negative correlation with Net Profit earned of LIC. The multiple correlation coefficient of Stock Exchange Securities and Loan is 0.986, it reveals that Net Profit is highly influenced by investible instruments of LIC. It is also evident from the R² value that the independent variables (investible instruments) contribute to 97.2 percent of the variation in the Net Profit. Hence, it is inferred that investible instruments of LIC have significant impact on its Net Profit earned. Also, Adjusted R squared attempts to correct R squared to more closely reflect the goodness of fit of the model in the population. Both R squared and Adjusted R squared must be close each other high for better model fit. In our study, it has been found that we have R square value more than 0.5 and adjusted R square value being close to R square value. This proves that data is fit to be used and the model that has been chosen for it is equally fit.

CONCLUSIONS AND SUGGESTIONS

The study reveals that the operating efficiency of LIC has improved as excess of income over outgo is in increasing trend. There is huge change in the investment strategy of LIC. Private sector performance in terms of total premium earned, number of policies issued and market share is in increasing trend where as LIC market share is in declining trend, net profit has been fluctuating during the study and except in total premium earned, total policies issued and claim settlement ratio. The investment of LIC is increased from 77.5 % in 1998 to 95.81 % in 2010-11 due to effective regulation of SEBI and increasing transparency and performance of Indian corporate securities. The multiple Regression analysis revealed that investment strategy of LIC has significantly positive impact on its Profitability as R multiple Correlation Coefficients in case of sector wise investment (0.99) and instrument wise investment (0.98) is high. The Regression model is valid and best fit to the data as adjusted R² value being close to R² value.

It was analyzed that the total business of LIC is an increasing trend. Total investment of LIC enhanced from Rs.93600crore in 1998 to Rs.1045539 crore in 2011. Proportion of premium collected by LIC out of total premium collected by life insurance industry is declined from 99.46 % in 2001-02 to 69.78 % in 2010-11. It indicates the enhancing competition from private sector insurers. ICICI Prudential is becoming leader in private sector insurers by taking over a lot of business of LIC due to aggressive strategies, innovative product range a, strong branch network and efficient work force. The claim settlement ratio of LIC is very high and it is more than private sector. Private sector claim settlement ratio is in increasing trend. Indian insurance industry density and penetration is low when compared with emerging markets in the world. India is the second most populous country in the world. The rural market in India has vast potential. Therefore; there is a lot of scope for development in the life insurance industry where private sector will be a challenge in the front of LIC.

Even though the investment strategy of LIC has significantly positive impact on its Net Profit earned at same time its average investment yield is fluctuating. Therefore, we can suggest to the LIC to modify its investment strategy so that to optimize its average yield of investment without violating regulatory norms. This research results are useful to the policy makers, researchers, insurers, consultants, bankers, policy holders, corporate agents and other agents who connected with the insurance industry in comprehensively analyzing the impact of investment strategy or portfolio strategy of insurers on their profitability.

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