A STUDY ON FINANCIAL SOUNDNESS INDICATORS OF LIC INDIA – CARAMEL MODEL

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ABSTRACT

Insurance sector has grown tremendously after the liberalization of Indian economy and playing the vital role to form a social security. The present study made an attempt to know the Life Insurance Corporation of India financial soundness with the CARAMEL model ratios. The study has considered the secondary data from the period of 2015-16 to 2019-20 years. The study has framed two objectives by using the statistical methods. The relationship has been measured with the bivariate correlation between the CARAMEL ratios and profitability ratio of LIC and the result states that profitability is having the significant relationship with the CARAMEL ratios. The Robust least square method has been applied to know the impact of the CARAMEL ratios on the profitability and the study found that Capital adequate ratio is having the higher impact on growth of the LIC profitability. This paper is useful to the management of LIC, regulator, various insurance companies and academic research scholars.

Keywords: Asset Quality, Capital Adequacy, Earnings, LIC, Liquidity and Management.

INTRODUCTION

The backbone of risk management in the country is "**Insurance**". It facilitates individuals and organisations to minimise the risks impacting directly on insurance industry growth and development. In addition to solving customer concerns, improving efficiency in order to achieve sustainable growth is another major challenge faced by Indian insurers. Indian insurance industry faces significant challenges in reaching the willing consumers and serving them, attracting and retaining players, creativity in products and delivery etc. Private companies struggle to raise insurance awareness, build brand strengths, meet regulatory requirements, establish a broad distribution network and set up infrastructure to maintain sustainable growth. The life insurance market anticipates different customer segments with various requirements, which increases the value of a fresh and competitive dynamic. Consumers rate life insurance above any other investment option because it offers savings, tax benefits and tax protection conveniences. Life insurance products are highly popular with all investment choices in India and have great demand.

The insurance sector in India has seen dynamic changes, including the entry of a number of multinational life and general segment insurers. As of 2020, the life insurance market has 24 players compared to just four in FY02. With 72% market share in FY20, LIC continues to be the market leader, followed by SBI (5.1%), ICICI (4.9%) and HDFC (4.1%).

According to EY-ASSOCHAM's report, the insurance sector continues to be a rapidly growing market with a compound annual growth rate of 12% (CAGR). As of 18 Years old, India is the 11th largest insurance market in the world with a 10th overall life insurance premium. The Indian insurance industry currently provides insurance services to 24 life insurance companies and 33 non-life insurance companies. The Indian insurance industry is expected to rise to Rs 19, 56, 920 (USD 280 billion) by 2020 due to strong economic growth and increased disposable personal income in the country, as indicated by the Indian Brand Equity Foundation (IBEF). Gross insurance penetration in India amounted to 3.69 per cent in 2017, compared to 2.71 per cent in 2001. Indian gross premiums amounted to USD 58.5 billion and USD 24.3 billion in non-life insurance for FY19 to USD 82.8 billion in life insurance.

REVIEW OF LITERATURE

Josephat Lotto (2019), Researcher stated that Liquidity and Capital Adequacy of the Insurance companies has significantly related with it profitability and also state that Capital Adequacy and liquidity are not only increases financial stability by offering a greater capital reserve and the amount of liquidity required by the Insurance. The author synchronized that bank profitability and operating efficiency are related strongly and suggested that investing in financial technologies and branch networks, can increase their profitability and grow their market share to increase their operating performance.

Addis Alemayehu, Alubel Kassaw Belete (2019): The study focused on the operational efficiency of Private insurance companies and stated that state-owned companies exhibited better performance than private. Out of the seven ratios used in performance analysis, five ratios favour superior performance for state-owned companies compared to private. The study suggested that, in order to boost their performance and competitive advantage in the industry, Companies should concentrate on improving operating efficiency.

Ramanathan K (2014), “A Study on the Cost Control Efficiency of LIC of India” in his article has evaluated the cost control efficiency of LIC during the period 2002 to 2012 for 10 years. The analysis showed that during the first two years of the LIC report the cost was not decreased, but that revenue and expenditure were not substantial during the study period . The results of this analysis showed that. The study also determined the cost-effectiveness score of LIC in India using Data Envelope Analysis, and over the years LIC has achieved the highest level in relation to private insurance firms and maintained its consistency.

Gowda et al., (2013): The study focused on CAMEL analysis with respect to Insurance companies. The authors note that there is a substantial gap in the output of public and private Insurance companies and also stated that except for the capital adequacy ratio, with regard to the other parameters (quality of management, asset quality, earning potential, liquidity) are found to be negative related with the performance of insurance. The study concluded that except LIC, remaining insurance companies are not maintaining their financial health.

Kumari (2013): Researcher evaluated the financial performance of both the public and private life insurance companies. It found that premium income growth of public insurance companies is far better than private insurance companies and also stated that financial health condition of public insurance companies is better than private insurance companies. It also concluded that LIC in public insurance companies is dominating the private insurance and public insurance. It also synchronized that there was a substantial improvement in the overall market output of the Indian life insurance industries over study period (2007-08 to 2012-13).

Malik (2011): The study estimated the relationship of profitability and Internal factors of insurance companies in Pakistan. The results indicated that there was no relationship between profitability and age, but a substantial positive relationship with the size and amount of capital, and a substantially negative relationship with the loss ratio and leverage. The study concluded that Insurance companies in the country are need to privatized for the better claim settlement ratio.

Charumathi (2012): Researcher focused on the factors that evaluate the profitability of life insurers operating in India. It stated that positive effect is found on the profitability of life insurers by size and liquidity, but negatively affected by leverage, premium growth and equity capital. The study concluded that markets with large insurer sizes and unused economies of scale did not exist under heavy competition.

OBJECTIVE OF THE STUDY

1. To identify the relationship of CARAMEL and Profitability of LIC India.
2. To examine the effect of CARAMEL indicators on the Profitability of LIC India

HYPOTHESIS OF THE STUDY

$H0_1$: There is no relationship between the CARAMEL performances with the profitability of LIC India.

$H0_2$: CARAMEL ratios will not have impact on the profitability of LIC India.

SCOPE OF THE STUDY

The study has been emphasized on the financial soundness of Life Insurance Corporation of India. The study has considered the key ratio, which reflects the financial soundness of the organization. The study has considered the secondary data from the period of 2015-16 to 2019-20. The study has considered the following key ratios for the examination of financial health.

- Capital Adequacy Ratio
- Asset Quality Ratio
- Reinsurance and Accrual Ratio
- Management Ratio
- Earnings Ratio
- Liquidity Ratio

RESEARCH METHODOLOGY:

The present study has been conducted using secondary data of LIC of India. The required information and data have been collected from annual reports of LIC. The data for a period of 5 years from 2015-16 to 2019-20 was collected from annual reports of LIC available in the website www.licindia.in. The other required information has been gathered from various academic journals, literatures of LIC. The study is based on IMF-Background paper (2003) proposed by **Das, Davies and Podpiera** had recommended significant Financial Soundness Indicators (FSI's) for the financial institutions. The paper had presented a CARAMELS (Capital adequacy, Asset quality, Reinsurance and Actuarial issues, Management soundness, Earnings/Profitability, Liquidity and Sensitivity to market risk) Framework which includes a number of different ratios with the use of those quantitative factors that affect the financial position of the insurance business. For determining the CARAMEL indicators includes Capital Adequacy ratio, Asset Quality ratio, Reinsurance &Accruals Ratio, Management capacity ratio, Earning and Liquidity position ratio of the LIC. The study uses Bi-variate Correlation and Robust Least Square model to determine relationship between the CARAMEL indicators and profitability and Influence of CARAMEL indicators on Profitability ratio. Software E-Views 11 has been used for obtaining Relationship and regression results

TABULATION OF DATA & DISCUSSION

Objective 1: To identify the relationship of CARAMEL and Profitability of LIC.

This objective made an attempt to identify the relationship of CARAMEL performance and Profitability of LIC for the period of 5 years (i.e., 2015-16 to 2019-20). Bivariate correlation is the statistical tool used to identify the relationship between them. Following is the hypothesis framed to justify the objective

Null Hypothesis: There is no relationship between the CARAMEL indicators with the profitability of LIC.

Alternative Hypothesis: There is no relationship between the CARAMEL indicators with the profitability of LIC.

Table -1: Correlation with respect to CARAMEL and Profitability

Correlations								
		Profitability Ratio	Capital adequacy	Asset quality	Reinsurance & Accruals	Management Capability	Earnings Profitability	Liquidity
Profitability ratio	Pearson Correlation	1						
	N	5						
Capital Adequacy	Pearson Correlation	0.855	1					
	N	5	5					

Asset Quality	Pearson Correlation	0.633	0.465	1				
	N	5	5	5				
Reinsurance & Accruals	Pearson Correlation	0.374	-0.071	-0.162	1			
	N	5	5	5	5			
Management Capability	Pearson Correlation	0.500	-0.091	-0.844	0.467	1		
	N	5	5	5	5	5		
Earnings	Pearson Correlation	0.497	-0.173	-0.055	-0.603	-0.404	1	
	N	5	5	5	5	5	5	
Liquidity	Pearson Correlation	0.338	-0.177	-0.598	-0.660	0.337	0.337	
	N	5	5	5	5	5	5	5

*Significant level at 0.05

Source: LIC Annual Reports

The table shows the correlation between the performance of the CARAMEL indicators and the profitability of LIC. The result is that the C-Capital Adequacy Ratio and the A-Asset Quality Ratio are found to be positive and strongly correlated with the 'r' values of 0.855 and 0.633. It states that there is a moderate and positive relationship with RA-Reinsurance & Accruals with Profitability ratio. Similarly, the M – Management Capacity indicator is found to be moderately and positively correlated. E –Earnings indicator is found to be moderately correlated with the LICs' profitability ratio. L-Liquidity indicators are also observed to be moderately correlated with 0.338. Since the p-value of the CARAMEL indicators is less than 0.05, which indicates that the study rejected the Null Hypothesis and accepted the Alternative Hypothesis, i.e. there is a significant relationship between the CARAMEL indicators and the LIC profitability ratio.

Objective 2: To examine the effect of CARAMEL indicators on the Profitability of LIC India

This objective attempted to determine the effect of the CARAMEL indicators on the LIC profitability ratio. Robust least square is used to know the effect of an independent variable on the Dependent variable. In this case, the independent variable acts as CARAMEL and the dependent variable as the profitability ratio (Return on Asset ratio). The study performed Unit root test (It is test used to stationarized the series data) by using ADF method. Since the indicators are found to be stationarity at the normal level and the Robust least square is used for these data, the hypothesis is framed to justify the objective and the result as follows.

Table -2: Impact of CARAMEL on Profitability of LIC India

Dependent Variable: Profitability				
Method: Robust Least Squares				
Sample: 2016 - 2020				
Included observations: 5				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	1.193706	1.393507	2.566199	0.0033
Capital adequacy	1.170265	0.059627	2.855487	0.0048
Asset Quality	0.462025	1.032846	1.415531	0.0119
Reinsurance & Accruals	0.863249	0.144238	0.127978	0.0263
Management Capability	0.359196	0.450107	0.353686	0.0047
Earnings Profitability	0.517461	0.017608	0.991678	0.0345

Liquidity	0.639278	0.092681	0.423803	0.0003
R-squared	0.731034	Mean dependent var		15.743
Adjusted R-squared	0.641378	S.D. dependent var		1.518435
S.E. of regression	0.909316	Akaike info criterion		2.936925
Sum squared resid	2.480564	Schwarz criterion		2.7807
Log likelihood	5.342313	Hannan-Quinn criter.		2.517633
F-statistic	8.153808	Durbin-Watson stat		2.525363
Prob(F-statistic)	0.024816			

Source: LIC Annual Reports

The table illustrated the model summary of the regression for the Life Insurance Companies for the period of 5 years (2015-16 to 2019-20). It signifies the influence of independent variable (CARAMEL indicators) on Dependent variable (Return on Assets). The value of adjusted r-square is 0.6413 which is above the recommended level and probability value of the model is less than 0.05 which indicates that CARAMEL indicators have significant impact on the profitability of LICs. It found that C-Capital Adequacy, A- Asset Quality, RA- Reinsurance & Accruals, M- Management Capability, E-Earning and L- Liquidity position of LIC are found to be positively influenced on its profitability.

Here, the regression coefficient of Capital Adequacy is 1.17 indicates that when the C-Capital Adequacy is increase by 1 percent will rose the Profitability by 1.17%. It means the LIC is financially sound to make their payment on time. Regression coefficient of A- Assets Quality at 0.462 signifies that when Asset Quality of the LIC is rise by 1% will increase its profitability by 4.6 %. Similarly, RA (Reinsurance & Accruals) and M (Management Capacity) is observed to be influenced by 8.63 % and 3.59 % respectively. The regression coefficient of E- Earning at 0.51 indicates that when the Earning of LIC is increase by 1% will raise it profitability by 5.1 %. The coefficient value of L-Liquidity is 0.63, it means the LICs liquidity position is considered to be satisfactory and results in better financial condition of the firms. Hence, p-value for the indicators is less than 0.05 which rejected the null hypothesis. The study agreed with view point of **Rakesh (2015) & Chaudhary (2011)** that "LIC India is successfully creating value to its policyholders. The study stated that during the period there was no major change in the performance of the LIC. It can be said that the performance is consistent and maintained good market value for its products. As many private insurance companies are establishing its business, competition is certainly set to increase and LIC has to make efforts to retain its top position.

FINDING OF THE STUDY

1. It reveals that Capital Adequacy and Asset Quality of the LIC is found to be positively correlated with the profitability ratio.
2. According to **Charumathi (2012),** Reinsurance ratio and Liquidity ratio had shown negative relationship with the Return of Assets of LIC, but in this study the CARAMEL indicators had shown significant positive relationship with the Profitability ratio.
3. It stated that CARAMEL indicators of LIC is found to be positively influenced on the profitability, which means increase in CARAMEL indicators by one percent will increase the Profitability of LIC by 1.17, 0.46, 0.86, 0.35, 0.51, 0.63 units respectively.
4. The study stated with the **Rakesh (2015)** that during the period there was no major change in the performance of the LIC. It further signifies that "the performance is consistent and maintained good market value for its products".

CONCLUSION OF THE STUDY

The study examined the financial soundness of the Life insurance Corporation of India by considering the CARAMEL model. The study has considered the secondary data from the period of 2015-16 to 2019-20 years. In the study CARAMEL ratios were considered as independent variables and Profitability ratio as dependent variable. The study measured the relationship between the key ratios with the profitability ratio and the result stated that all the ratios are observed to be having significant relation. The study examined the impact of CARAMEL on the profitability ratio with the Robust Least Square method and the result reveals that Capital adequacy having the significant effect on the growth of the profitability ratio of LIC India.

FURTHER RESEARCH SCOPE

The present study mainly focused on the financial soundness of the Life Insurance Corporation of India for the period of 2015-16 to 2019-20. Therefore, the study suggests to do further research to know the financial soundness comparison between the LIC and other private insurance companies. The study also recommends to eexamine the customers' perception on the claims management between the public and private sector insurance companies.

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