Comparative Analysis of Profitability Position between Public and Private Sector Life Insurance Companies in India

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Abstract

The present study is to analyze and compare the profitability position of public and private life insurance companies in India over a period of five years from 2016 to 2020. To measure and compare the profitability operating expense ratio, investment income to premium ratio, investment yield, insurance margin and return on net worth have been used. In order to the test hypotheses and to conclude the statistical results T-Test has been used. Investment Income to Premium and Insurance Margin of Life Insurance Corporation of India significantly differs from those of private life insurance companies in India. However, there is no significant difference between public and private life insurance companies with reference to Incurred Claim Ratio, Combined Ratio and Investment Yield. This research can be used by insurance sectors to monitor the profitability position of their own as well as to take necessary measures to improve it.

Keywords: Profitability, Insurance, Public, Private, Ratio, Margin, Investment, Income,

1. Introduction

Insurance sector plays a vital role in the overall development of an economy. It makes an outstanding impact on nation building by mobilizing small savings. Insurance companies stimulate private sector savings in a variety of ways. All insurance contract, whether life or non-life (property and casualty) give rise to some form of private savings, the reason being the insurance premium are paid in advance by the customers while the claims and policy settlements are paid back to customers at a later date, after covering operating and marketing cost (Dickinson, 1998). A person can mitigate its losses by covering its risks through insurance policies because insurance provides financial help and reduce uncertainties of life. Insurance covers economic growth by expediting the recovery for claimants and beneficiaries. Insurance companies pay claims whenever there is a covered loss described in the insurance contract (Weisbart, 2018). Insurance manages risk effectively, therefore, peace of mind one can get by insuring (Hampanavar, 2020). Profitable business operation is necessary for any organization to grow in the long run. It is the profit that acts as a backbone for survival of every organization. Without earning profit growth and stability of a business cannot be expected (Tomar et al, 2019).

2. Literature Review

Dorofti C and Jakubic P (2015) conducted a study to investigate the link between the macroeconomic environment and insurers' profitability using cross-country European aggregate data. Their results showed that low interest rates along with limited economic growth, poor equity market performance and high inflation has a negative impact on insurance profitability. Lire and Tegegn (2016) conducted a study to analyze the determinants of profitability of private life insurance companies in Ethiopia over a period of eleven years from 2005 to 2015. The study concluded that private insurers' profitability was statistically affected by underwriting risk negatively and company size positively.

Ahmed G N and Prasetyo R P (2018) conducted a research to find the influence of premium income, underwriting income, risk-based capital, liquidity and growth on the profitability of non-life insurance industry of Indonesia over a period of five years from 2011 to 2014. They concluded that premium income, underwriting income and risk-based capital have positive and significant impact on profitability of insurance companies. Tomar et al (2019) conducted profitability analysis of leading five insurers operating in India over a period of five years from 2012 to 2016. The study found that there was significant difference among the companies with respect to incurred claim ratio, operating expense ratio, investment income to premium ratio.

Sellathurai and Ramasubbain (2019) conducted a study on profitability analysis of insurance companies. They used compound annual growth rate analysis to measure the growth of insurance companies and correlation analysis to investigate the relationship between companies' profitability ratios. They found that return on asset and gross margin were positively correlated. Patel and Patel (2021) conducted a research to measure the performance of LIC and other three private life insurance companies of India using the CARAMEL model during a period of seven years from 2013 to 2019. They found that there was no significant difference across the four companies with respect to total earnings and profitability ratios. Sumathy and Kalyani (2019) conducted a study on the financial performance of public and selected private sector life insurance companies in India. The study suggested that private life insurance companies should improve their profitability position in order to increase sale of policies.

3. Need for the Study

The main objective of life insurance is to cover any financial loss of a policyholder and therefore the safety of funds provided by the policyholders in the form of insurance premium is must. However, in order to provide safety, funds cannot be kept idle in the business because in order to run a business in the long run growth is also necessary. Growth of a business cannot be ensured with earning sufficient profit. Insurance sector had been in the public sector since its beginning with the formation of Life Insurance Corporation of India in September1956. It was realized by Malhotra Committee that the insurance penetration was slow in India as compared to other nations and hence, it made recommendation of allowing foreign life insurance companies to work in India preferably through joint ventures with Indian partners. Consequently, following the recommendations of Malholtra Committee Insurance Industry in India opened for foreign insurers in the year 2000.

When two decades have passed after the privatization of insurance industry, there is a need to check the growth and survival of the foreign life insurers in India. Their growth can be evaluated by comparing their profitability with the Indian Life Insurance Companies.

4. Statement of the Problem

Over a period of five years from 2016 to 2020, were the profitability of private life insurance companies be strengthened by minimizing the operating ratio as compared to the public sector life insurance company? Could the investment of private life insurers give more return as compared to Life Insurance Corporation of India?

5. Objectives of the Study

The Present study is to analyze and compare the profitability position of Public Life Insurance Company i.e. Life Insurance Corporation of India with that of Private Life Insurance Companies in India over a period of recent five years i.e. from 2016 to 2020.

6. Hypotheses

H1: There is no significant difference between Commission Expense Ratio of the Public and Private Life Insurers.
H2: There is no significant difference between Operating Expense Ratios of the Public and Private Life Insurers.
H3: There is no significant difference between the Incurred Claim Ratio of the Public and Private Life Insurers.
H4: There is no significant difference between the Combined Ratio of the Public and Private Life Insurers.
H5: There is no significant difference between Investment Income to Premium of the Public and Private Life Insurers.
H6: There is no significant difference between Investment Yield of the Public and Private Life Insurers.
H7: There is no significant difference between Insurance Margin of the Public and Private Life Insurance.
H8: There is no significant difference between Return on Net Worth of the Public and Private Life Insurers.

7. Research Methodology

7.1 Scope of the Study

The study belongs to all the life insurance companies operating in India by the end of March 31, 2020. There are 24 Life Insurance Companies operating in India by the end of March 31, 2020. One of them i.e. Life Insurance Corporation of India is under Public Sector and the rest twenty three companies are in Private Sector.

7.2 Population and Sample

The population under this research is twenty four life insurance companies operating in India. All the twenty four companies have been taken for the study.

7.3 Data Collection

The type of data used in this study is secondary in nature. Annual Reports published online by the Insurance Regulatory and Development Authority of India (IRDA) have been used to collect the required data.

7.4 Statistical Tools

Mean, Standard Deviation, Minimum and Maximum have been used as Descriptive Statistics. To find the equal or unequal variances between public and private life insurance companies, F-Test was used. In order to test the hypotheses T- Test has been applied at a significance level of 5% for critical values.

7.5 Variables and Their Measurement

Ratio Analysis is the most common tool to analyze a Financial Statement and its information. It is used to interpret the quantitative relationship between two variables of the financial statement. Ratio Analysis is defined as the systematic use of ratio to interpret the financial statements so that the strengths and weakness of a firm as well as its historical performance and current financial condition can be determined (Khan & Jain, 2009). Financial Ratios are used to make a holistic assessment of financial performance of an entity and help evaluate the entity's performance vis-à-vis its peers within industry (Care Ratings, 2016).

7.5.1 Commission Expense Ratio: In insurance, a certain percentage of premium produced is retained as compensation by insurance agents and brokers (IRMI). Commission Expense Ratio is the commission expenses expressed as a percentage of gross premium underwritten.

$$\text{Commission Expense Ratio} = \frac{Commission\ Expenses}{\text{Gross Premium Underwritten}}\ X\ 100$$

7.5.2 Operating Expense Ratio: The Operating Expense Ratio is important for analyzing the profitability of an organization. Operating Expense Ratio establishes a relationship between operating expenses of life insurance business and gross premium underwritten. A low operating expenses ratio is favorable, while a high one is unfavorable.

$$\text{Operating Expense Ratio} = \frac{Operating\ Expenses}{\text{Gross Premium Underwritten}}\ X\ 100$$

7.5.3 Incurred Claim Ratio: This ratio measures the relationship between total claims and gross premium underwritten. Total claims include death claims, maturity benefits, surrender value paid, withdrawals of policy and other claims.

$$\text{Incurred Claim Ratio} = \frac{\text{Total Claims}}{\text{Gross Premium Underwritten}}\ X\ 100$$

7.5.4 Combined Ratio: Combined Ratio is the ratio between the sum of commission expenses, operating expenses and total claims to gross premium underwritten.

$$\text{Combined Ratio} = \frac{Commission\ Expenses + Operating\ Expenses + Total\ Claims}{\text{Gross Premium Underwritten}}\ X\ 100$$

7.5.5 Investment Income to Premium: Investment income to premium is a ratio between Investment Income and Gross Premium Underwritten.

$$\text{Investment Income to Premium} = \frac{Investment\ Income}{\text{Gross Premium Underwritten}}\ X\ 100$$

7.5.6 Investment Yield: Investment Yield is a ratio between Investment Income and Total Investment of Life Insurers.

$$\text{Investment Yield} = \frac{Investment\ Income}{\text{Total Investment}}\ X\ 100$$

7.5.7 Insurance Margin: Until a policyholder makes a claim against their insurance policy, the insurer is able to invest their premium income to generate further returns. The insurer is allowed to keep the whole of the profits from these investments. Insurance margin is a ratio between Profit after Tax and Gross Premium Underwritten. Insurance Margin matters because it can tell investor a lot about the financial health of an insurer.

$$\text{Insurance Margin} = \frac{Profit\ after\ Tax}{\text{Gross Premium Underwritten}}\ X\ 100$$

7.5.8 Return on Net Worth: Return on Net Worth is also a profitability ratio that is from investors' point of view. It can be expressed as a ratio between profit after tax and total investment of life insurers.

$$\text{Return on Net Worth} = \frac{Profit\ after\ Tax}{\text{Total Investment}}\ X\ 100$$

8. Results and Discussion

It is evident from Table 1 that the average of commission expenses ratio of public life insurance company (LIC) is more (5.64%) as compared to private life insures (4.8%). This indicates that public life insurance company is paying more as percentage of their gross premium collection to its agents as against private life insurers. Higher payment of commission to its agents implies a sound profitability position of Life Insurance Corporation of India.

Private Life Insurance Companies have paid more operating expenses on an average as compared to Life Insurance Corporation of India. Mean of Operating Ratios for Private Life Insurance companies was 13.99% whereas it was 9.08% for LIC of India over a period of five years from 2016 to 2020. A higher operating ratio of private life insurance companies indicates an unfavorable profitability position. A low operating ratio shows operational efficiency of LIC of India.

Table 1 shows that average of incurred claim ratio of LIC of India is 62.29% as against 55.12%. The capacity of paying more amount as claimed by policyholders indicates sound financial and profitability position of LIC of India during the period. Combined Ratio of Life Insurance Corporation of India is higher (77.02%) on an average as compared to Private Life Insurance Companies (73.91%). A higher combined ratio of LIC of India could be due to payment of claims of the policyholders as it is clear from the higher Incurred Claim Ratio of LIC of India. It is evident from Table 1 that there is a huge difference between the average of Investment Income to Gross Premium Underwritten Ratio of the Public Life Insurance Company (LIC of India) and the Private Life Insurers. LIC of India has an average of 63.38 % of Gross Premium Underwritten as Income from its investment whereas it is only 29.74% in case of Private life insurance companies. It can be concluded that LIC of India has invested its premium income into more profitable avenues as compared to private life insurers. A higher percentage of Investment Income will lead to increase in an overall profitability position of public life insurance company. LIC of India scored 8.06% as an average of its investment yield as compared to 6.24% of private life insurers. A higher percentage of investment yield of LIC of India tells that the investment had been made cautiously to ensure greater profitability. However, profitability and safety goes against of each other, LIC could maintain its profitability along with ensuring the safety of the premium received. This can be concluded because the incurred claim ratio of LIC is also higher. Profit after tax as a percentage of gross premium underwritten for LIC of India is less (0.79%) as compared to private life insurance companies (3.96%). Moreover, profit after tax as a percentage of total investment of LIC of India is also less as it is only 0.1% as against 0.84% of private life insurers. It can be said that in terms of insurance margin and return on net worth private life insurance companies' positions are stronger as compared to public life insurance company i.e. Life Insurance Corporation of India.

As per Table 2, the calculated value of commission expense ratio (7.56) is greater than the critical value (2.306) at 0.05 level of significance, it is therefore, the null hypothesis (H1) is rejected. It can be interpreted that Commission Expense Ratio of Public Insurance Company differs significantly from Private Life Insurance Companies in India.

It can be found from Table 3 that the calculated T value of Operating Expense Ratio (7.87) is greater than the Tabulated Value (2.306) at 0.05 level of significance. It is therefore, null hypothesis (H2) is rejected. It can be interpreted that there is significant difference between the operating expense ratio of public insurance company and private insurance companies. The results of the current study support the findings of Tomar et al (2019) as they also found that there was significant difference between operating expenses ratios of public and private life insurance companies in India.

Table 4 depicts that the Calculated T Value of Incurred Claim Ratio is 1.57 which is less than the Tabulated Critical Value of 2.306 and hence the null hypothesis (H3) is accepted. It can be interpreted that there is no significant difference between the public life insurance company i.e. LIC of India and the private life insurance companies in terms of incurred claim ratio. The result of the current study is against the findings of Tomar et al (2019) who found significant difference between the incurred claim ratio of public and private life insurers in India.

It is evident from Table 5 that Tabulated Value of T Test is 0.7 which is less than that of Critical Value of 2.306. It means null hypothesis (H4) that there is no significant difference between the combined ratio of public life insurance company and private life insurance companies is accepted.

Table 6 represents the values calculated using T-Test assuming unequal variance for Investment Income to Premium Ratios of all life insurance companies. It is clear from the table that the calculated value is 3.23 whereas the critical value is 2.776. The calculated value being greater than the critical value leads to rejection of null hypothesis H5. It can further be interpreted that there is a significant difference between Investment Income to Premium of Public Life Insurance Company and that of Private Life Insurance Companies. The result of the current study is supporting the findings of Tomar et al (2019). Tomar et al also rejected the null hypothesis and concluded a significant difference among the life insurance companies in India with respect of Investment Income to Premium.

Table 7 shows the Investment Yield values based on Calculation of T – Test assuming unequal variance. It can be found from this table that the calculated T Value of Investment Yield (0.84) is less than the Tabulated Value (2.776). It is therefore, null hypothesis (H6) is accepted. It can be inferred here that there is no significant difference between investment yield of LIC of India and that of Private Life Insurance Companies.

It is evident from Table 8 that calculated value using T – Test assuming unequal variance for Insurance Margin (7.36) is greater than the Critical Value of 2.776 at 5% level of significance. It is therefore, null hypothesis (H7) is rejected. It can be interpreted that there is significant difference between insurance margin of public life insurance company and private life insurance companies.

It can be found from Table 9 that the calculated value of T-Test (10.3) is more than the tabulated value (2.776). It is therefore, null hypothesis (H8) is rejected. It can be interpreted that there is significant difference between Return on Net Worth of Public Life Insurance Company (LIC) and Private Life Insurance Companies.

9. Findings

LIC is paying more commission to its agents as compared to the private life insurance companies in India. Paying more commission to agents will attract more professionals to seek job opportunity in the business of insurance sector and consequently there will be increase in the development of new life insurance policies. A higher operating expenses ratio of private life insurance companies shows inefficiency in operating their businesses. A high operating ratio of private life insurers would be an obstacle for improving profitability position. Besides, a higher percentage of investment income of LIC as compared to private life insurers shows a tactful investment policy of LIC. Investment in profitable securities without hampering the safety and security of policyholders' fund is a very crucial task of financial decision. LIC has been found effective and efficient in such decisions. However, profit after tax as a percentage of gross premium underwritten and also as a percentage of investment of private life insurance companies were more as against LIC of India. LIC should consider this fact also at the same time.

10. Conclusions and Scope for Further Research

A continuous increases in business is essential for growth of any business. For increase in business a strong motivation is required and that motivation is the sound profitability position. Private Life Insurance companies should try to increase their profitability and do more research in this field. This research is limited to only one dimension of a business i.e. profitability. However, a business has other dimensions as well such as solvency, liquidity and safety positions. These positions can be taken into consideration for establishing an overall comparison between public and private sectors life insurance companies.

References

Sellathurai, S., & Ramasubbian, H. (2019). A Study on Profitability Analysis of Insurance Company. International Journal of Current Advanced Research, 08, 05, 18530-18532. DOI: http://dx.doi.org/10.24327/ijcar.2019.18532.3544

Patel, K., & Patel, P. (2021). Performance of Selected Life Insurance Companies – Comparative Analysis. International Journal of Finance and Banking Research, 07, 02, 51-57.

Dorofti, C., & Jakabic, P. (2015). Insurance Sector Profitability and the Macro Economic Environment. Financial Stability Report. EIOPA. 56-71.

Sumathy, M., & Kalyani, V., (2019). Financial Performance of Public and Private Life Insurance Companies in India: A Comparative Study. International Journal of Advanced Scientific Research and Management, 04, 03, 156-164.

Siddhart, H., (2020). 2021 Best Life Insurance in India. [Online] Available: https://www.turtlemint.com/life-insurance/articles/top-insurance-companies-in-india/

Dickinson, G. (1998), The Economic Role of the Insurance Sector in the Risk Transfer – Capital Market Nexus. [Online] Available : https://www.jstor.org/stable/41952448?seq=3#metadata_info_tab_contents

Weisbart, S. (2018). How Insurance Drives Economic Growth. [Online] Available: chrome - extension://efaidnbmnnnibpcajpcglclefindmkaj/viewer.html?pdfurl=https%3A%2F%2Fwww.iii.org%2Fsites%2Fdefault%2Ffiles%2Fdocs%2Fpdf%2Finsurance-driver-econ-growth-053018.pdf&clen=802222&chunk=true

Tomar, Sainy & Gupta (2019). UNNAYAN: International Bulletin of Management and Economics. [Online] Available: chrome-extension://efaidnbmnnnibpcajpcglclefindmkaj/viewer.html?pdfurl=http%3A%2F%2Funnayan.ipsacademy.org%2Fv10pdf%2FChapter_30.pdf&clen=1515207&chunk=true

Ahmad, G. N., & Prasetyo, R. P. (2018). Profitability Analysis of Non-Life Insurance: Case in Indonesia Stock Exchange. International Conference on Islamic Finance, Economic and Business, KnE Social Sciences, 335-350. DOI: 10.18502/kss.v3i8.2518

Datta, S. (2012). Malholtra Recommendation. Frontline. [Online] Available: https://frontline.thehindu.com/cover-story/article30167985.ece.

Lire, S., & Tegegn, T. (2016). Determinants of Profitability in Private Insurance Companies in Ethiopia. Journal of Poverty, Investment and Development, 26, 85-92.

Financial Management. [Online] Available: https://efinancemanagement.com

Bishop, A., (2015). Insurance Margin – An Interesting Insurance Ratio. [Online] Available: https://riskheads.org/insurance-margin-an-interesting-insurance-ratio/

Annual Reports (2015-2020). Insurance Regulatory and Development Authority (IRDA). [Online] Available: https://www.irda.gov.in

Financial Ratios – Insurance Sector. Care Ratings. [Online] Available : chrome http://www.careratings.com/pdf/resources/Financial%20Ratios%20-%20Insurance%20Sector.pdf

Khan, M. Y., & Jain, P. K. (2009). Financial Management. (5th ed.). New Delhi. Tata McGraw-Hill, (Chapter 6).

Table 1 : Descriptive Statistics

Ratios	Insurers	Mean	SD	MIN	MAX
Commission Expense Ratio	Public (LIC)	5.64	0.17	5.4	5.82
	Private	4.8	0.18	4.64	5.04
Operating Expenses Ratio	Public (LIC)	9.08	0.49	8.52	9.64
	Private	13.99	1.3	12.86	16.01
Incurred Claim Ratio	Public (LIC)	62.29	8.27	53.63	73.86
	Private	55.12	5.96	47.12	61.25
Combined Ratio	Public (LIC)	77.02	8.13	67.97	88.24
	Private	73.91	7.04	64.92	82.00
Investment Income to Premium	Public (LIC)	63.38	2.63	59.38	66.26
	Private	29.74	23.11	-1.6	58.64
Investment Yield	Public (LIC)	8.06	0.29	7.71	8.46
	Private	6.24	4.81	-0.38	11.95
Insurance Margin	Public (LIC)	0.79	0.09	0.72	0.95
	Private	3.96	0.96	2.59	4.87
Return on Net Worth	Public (LIC)	0.1	0.01	0.09	0.13
	Private	0.84	0.16	0.61	0.99

Table 2: Commission Expense Ratio - T Test (Assuming Equal Variance) Two Tail

Insurers	Mean	Variance	df	T Stat	Critical Value	P Value	Conclusion
Public (LIC)	5.644	0.03					
Private	4.802	0.032	8	7.56	2.306	6.63E-05	Reject

Table 3: Operating Expense Ratio - T Test (Assuming Equal Variance) Two Tail

Insurers	Mean	Variance	df	T Stat	Critical Value	P Value	Conclusion
Public (LIC)	9.078	0.241					
Private	13.986	1.702	8	-7.87	2.306	0.000489	Reject

Table 4: Incurred Claim Ratio - T Test (Assuming equal Variance) Two Tail

Insurers	Mean	Variance	df	T Stat	Critical Value	P Value	Conclusion
Public (LIC)	0.622	0.007					
Private	0.551	0.004	8	1.57	2.306	0.154	Accept

Table 5: Combined Ratio - T Test (Assuming Equal Variance) Two Tail

Insurers	Mean	Variance	df	T Stat	Critical Value	P Value	Conclusion
Public (LIC)	77.322	64.589					
Private	73.988	48.641	8	0.7	2.306	0.503	Accept

Table 6: Investment Income to Premium - T Test (Assuming Unequal Variance) Two Tail

Insurers	Mean	Variance	df	T Stat	Critical Value	P Value	Conclusion
Public (LIC)	63.376	6.899					
Private	29.742	534.257	8	3.23	2.776	0.032	Reject

Table 7: Investment Yield - T Test (Assuming Unequal Variance) Two Tail

Insurers	Mean	Variance	df	T Stat	Critical Value	P Value	Conclusion
Public (LIC)	8.061	0.081					
Private	6.241	23.161	8	0.84	2.776	0.446	Accept

Table 8: Insurance Margin - T Test (Assuming Unequal Variance) Two Tail

Insurers	Mean	Variance	df	T Stat	Critical Value	P Value	Conclusion
Public (LIC)	0.794	0.008					
Private	3.961	0.917	8	-7.36	2.776	0.00181	Reject

Table 9: Return on Net Worth - T Test (Assuming Unequal Variance) Two Tail

Insurers	Mean	Variance	df	T Stat	Critical Value	P Value	Conclusion
Public (LIC)	0.101	0.000197					
Private	0.843	0.0256	8	-10.3	2.776	0.000496	Reject