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Financial Performance Analysis of Selected Private Sector Life Insurers in India

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Abstract

Life Insurance is an integral part of financial system in India. After liberalization of the insurance sector private players in collaboration with foreign players have entered into the insurance market and these companies are offering services of insurance to the general public. So the household savings are directly invested in these private sector companies, therefore it becomes mandatory to test their solvency. Presently there are 24 life insurance companies in India out of these one is under public sector and rest are under private sector. Recently one private sector company Excide Life has been merged with HDFC Life Insurance Company Ltd. So it becomes essential to study the financial position of the rest of the companies and particularly those which are having lion's share of business. Therefore, to understand this concept five private sector companies have been selected to study on the basis of their share is first year business. It is found that there financial position is satisfactory and are earning profit. Further their financial position have been tested using CARAMEL Model and its' constituents have been tested using two tailed ANOVA.

Key words: Financial System, consequently, insurers, households, potential, safeguarding, institutions, highest.

1. Introduction

Past decades have witnessed the recessionary trend throughout the globe, some of countries situated in the Asia Pacific region suffered badly due to the cash crunch and balance of payment crises. Prices have gone up and people are starving to death even when the rest of the world is modernizing. Bangladesh and Pakistan, Sri Lanka and Nepal are the recent examples before the world in Asia Pacific Countries, whereas United Kingdom is also melting down in Europe. These trends have impacted the financial system and the insurance industry as well, global premium growth in life insurance sector have strongly bounced back by 4.5 percent in both advanced and emerging insurance markets. Life insurance premium in China contracted by 2.6 percent, due to weak trends in life savings and critical illness business; but advanced markets have been supported by a surge in asset values and labour market recovery that lifted demand for savings linked business but advanced Asia Pacific market shifts towards protection products. The growth of real premium in life and non-life sector in the advanced market has been 3.9 percent, emerging market 1.5 percent and Asia-Pacific 0.7 percent, whereas life insurance sector has remained 5.4 percent in advanced market, 1.5 percent in emerging market and 0.6 percent in Asia-Pacific region. The real premium growth in life insurance sector in India has witnessed 8.5 percent during 2021, which is higher than the life insurance sector growth rate depicted by the advanced, emerging and Asia-Pacific markets as well as the world's average growth rate in terms of real premium receipt. In global insurance business, India has been ranked tenth in 2021 with market share of 1.85 percent because total insurance premium has been increased by 13.46 percent in 2021 after adjustment of 7.8 percent inflation rate as compared to 9.04 percent of the global insurance premium, India has been ranked ninth in the world in terms of real premium growth in life sector with market share of 3.23 percent. Life insurance premium in India has increased by 13.46 percent in 2021 as compared to 9.91 percent of 2020 after adjustment of 4.5 percent inflation rate. The new business premium accounted for 45.46 percent of the total premium with a growth rate of 12.98 percent, Life Insurance Corporation of India continued to have a higher market share of 63.18 percent in new business and 60.65 percent in renewal business premium. Indian economy has opened the door for the development of insurance sector in India in 1999, when Insurance Regulatory Development Authority was established to regulate the insurance sector in India and to open the door for private and foreign players to establish insurance business in India, at present 23 private life insurance companies are working with almost 38.2 percent market share in 2021-22 financial year, however it is pertinent to mention here that one life insurance company Excide Life has now been merged with HDFC Life due to financial crises within the company. Due to the emergence of private and foreign companies in this sector there is need for evaluation of soundness and profitability due to the reasons, firstly, insurers are large investors in financial markets, secondly, insurers often have close links to banks and financial institutions, any adverse effect on life insurance companies will ultimately affect the banks too, and thirdly, insurers contribute to safeguarding and stability of households'savings by insuring their risks. In the early ears of establishment of these private insurance companies, they are mainly focusing on business expansion and distribution building, this process continued till 2010, but after 2010, these private companies are focusing on profitability or bottom line. Indian insurance industry is facing disadvantage of front loaded charges, this is making companies to report losses with new customer acquisition. The companies are emphasizing on reducing operating and other administration expenses in order to bring efficiency and to improve profitability; therefore, to understand the complete financial system of life insurance companies, this study will enrich the readers. The main objective of this study is to analyse the financial performance of selected private life insurance companiesusing selected parameters of CARAMEL Model.

2. Review of Literature

1. Greene & Segal (2004), conducted research on "Profitability and Economical Efficiency in the U.S. Life Insurance Industry", published in Journal of Productivity Analysis, in which they studied the relationship between cost inefficiency and sustainability in the US Life Insurance Industry. They concluded that an established and dynamic life insurance market can be the primary engine of sustainability and cost-effectiveness. The study indicates that cost inefficiency is significant in comparison to profits in the life insurance sector and that inefficiencies are adversely correlated with performance ratio including equity income.

2. Akotey, Sackey, Amoah & Manso (2013) examines in particular the main drivers of Ghana's life insurance industry's profitability. The annual financial statements of ten life insurance companies covering a period of 11 years (2000-2010) were sampled and analysed through panel regression. The results showed that while gross written premiums relate positively to the performance of profits by insurers, their relationship to investment income is negative. The findings also revealed that life insurers suffered considerable damages as a result of overtrading and price reductions.

3. Bawa & Chattha (2013), in their paper titled, "Financial Performance of Indian life Insurance Companies" published in Pacific Business Review International, they analysed the profitability using financial ratios and concluded that Public Sector LIC is the most liquid among all 17 life insurance companies. Sahara and SBI Life insurance are more solvency-friendly than other insurers.Bajaj Allianz and ICICI Prudential Return on Asset Measurements sound good.

4. Valeed A. Ansari and Wubshnet Fola (2014) in their paper titled, "Financial Soundness and Performance of Life Insurance Companies in India, published in International Journal of Research, concluded that financial soundness and performance is dependent on regulatory parameters and standards in India. The study further concluded that there was a significant difference between capital adequacy, asset quality, management efficiency, earnings and profitability and liquidity position in private and public life insurance.

5. Dar & Bhat (2015) in their research titled, "Financial Statements and Soundness of Selected Public and Private Life Insurance Companies", published in Pacific Business Review revealed that there are significant statistical variations in the capital adequacy, revenue, profitability and liquidity ratio in selected insurers of public and private life. The overall result revealed that private life insurers in spite of having greater capital adequacy lacking in terms of profitability.

6. Parmasivan (2015), conducted a research on, "Comparative Analysis of Insurance Providers in India in the Public and Private Life Insurance Companies" published in Journal of Productivity Analysis, concluded that current ratio and debt equity ratio is estimated to measure the solvency ratio for financial efficiency. The analysis shows that LIC already dominates the market. The new commercial channels of promotion are used by private sector insurance providers in comparison to LIC. The sale of more plan-linked units allows private insurers to capture LIC market share. Private insurers are also better than LIC's solvency and lapse ratios. In comparison with private life insurance the service of death law suits was higher for LIC.

7. Bodla, Bodla &Tondon, (2017), in their research paper titled, "Profits of Life Insurance Firms in India (Public and Private)", published in Research Gate International Journal of Computing and Business Research, they analysed the seven factors net premium, investment income, underwriting income, asset return, combined ratio, solvency ratio and profit from 2007 to 2016. They concluded that among the private life insurers ICICI prudential, HDFC Standard and SBI Life were on the top with respect to gross premium receipt, while the IDBI Federal was among the bottom. They further concluded that the CAGR's underwriting revenue has decreased during the last five years among all the private life insurance companies.

3. Objectives of the Study

1. To compare financial performance ICICI Prudential Life Insurance Company Ltd, SBI Life Insurance Company Ltd, HDFC Standard Life Insurance Company Ltd, Bajaj Allianz Life Insurance Company Ltd and Max Life Insurance Ltd.
2. To make an intra comparison between selected private life insurers working in India.

4. Research Methodology

The period of present study is 2011-12 to 2021-22, the nature of data used is historical, which has been derived from the annual reports and financial statements of both public and selected private sector life insurance companies, after deriving required information and data from the annual reports different ratios have been calculated using accounting techniques, which are required to implement CARAMEL Model, the output of the CARAMEL's framework consists of ratios like Capital Adequacy, Reinsurance and actuarial, Management Soundness, Earning and Profitability, Liquidity and Sensitivity to market risk. These ratios have been tested with the help of Statistical technique like mean, standard deviation, F-Test and two tailed ANOVA at 01 percent level of significance and 99 percent level of confidence. The set of ratio is illustrated in the table 1 below:

Table 1, Ratios and Methodology

No.	Parameter	Ratio used	Methodology applied
1.	Capital Adequacy	Solvency ratio	(Net income after tax + Depreciation)/ Total liabilities inclusive of both short term and long term.
		Capital to Asset Ratio	Proportion of shareholders equity to the total asset of the company
		Capital to Reserves and Surplus	Ratio is the proportion of share capital to reserves and surplus.
2.	Reinsurance and Actuarial	Retention Ratio	Net Premium/Gross Premium
		Survival Ratio	Reserves and Surplus divided by Average of Net Premium of Three Years
3.	Management Soundness	Operational efficiency	Operating expenses divided by Gross Premium
		First Year Premium	First Year Premium divided by Gross Premium
4.	Earning and Profitability	Return on Equity	Profit after Tax to Equity
		Return on Assets	Profit after Tax to Total Assets
		Operating Expenses	Operating Expenses divided by Net Premium
5.	Liquidity	Current Ratio	Current Asset to Current Liability
		Current Asset	Current Asset to Total Asset
		Liquid Liability	Liquid Liability to Total Liability

5. Hypothesis

H_0 = There is no significant difference between financial indicator of selected companies with respect to Total Capital Adequacy Ratio, Reinsurance and Actuarial Issues, Management Soundness, Earning and Profitability and Liquidity.

H_1 = There is significant difference between financial indicator of selected companies with respect to Total Capital Adequacy, Reinsurance and Actuarial Issues, Management Soundness, Earning and Profitability and Liquidity.

6. Sampling Area

The universe of the life insurance in India is 23 private life insurance companies, it is difficult to study all the companies, keeping in view money and time constraints, however, on the basis of premium underwritten during the last three years five best life insurance companies have been selected for the present study, these companies are the best representative of the private life insurance business in India, The Companies listed in the table 2 below are having 26.09 percent share out of total 38.8 percent private sector share. On the basis of the average market share of the last three years, the companies listed below are having maximum market share. Hence, these companies have been selected for the purpose of present study.

Table 2,Top Five Companies in Terms of Market Share among Private Life Insurance Co.(in Cr.)

Life Insurer	2019-20	2020-21	2021-22	Average
SBI Life Insurance Co. Ltd.	40,634.73	50,254.17	58,759.64	49,882.85
HDFC Life Insurance Co. Ltd.	32,706.89	38,583.49	45,962.83	39,084.40
ICICI Prudential Life Insurance Co. Ltd.	33,430.70	35,732.82	37,457.99	35,540.50
Max Life Insurance Co. Ltd.	16,183.65	19,017.90	22,414.17	19,205.24
Bajaj Allianz Life Insurance Co. Ltd.	9,752.53	12,024.84	16,127.05	12,634.81

(Source: Annual Reports of IRDAI 2019-20 to 2021-22)

7. Significance of Study

Since the life insurance companies are actively attracting the domestic savings in the country, insurance density is increasing in India and the share of private sector is increasing on year on year basis; therefore, in the interest of investors at large, it is essentialto conduct this study measuring the soundness of the selected life insurance companies which have major share of private life insurance business in India, secondly life insurance penetration and density start decreasing from the year 2013-14 till 2018-19. Further, this study will help investors to understand financial efficacy of life insurance companies.

8. Data Analysis and Interpretation

Capital Adequacy Ratio

Capital Adequacy Ratio is the ratio of an insurance company in relation to its risk weighted assets and current liabilities. It has been decided by the regulatory authorities to prevent insurance companies from taking excess leverage and becoming insolvent in the process; according to the recent guidelines issued by RBI investments in the instruments issued by insurance companies, which are not deducted from capital of the investing insurance company, shall attract 100 percent risk weight for capital adequacy purpose.The Capital Adequacy Requirement isa measurements used for a company to demonstrate having sufficient capital at fund and company level. The Fund Solvency Requirement is applied to each fund whether participating or non-participating. To meet the FSR, an insurer must have sufficient financial resources in excess of TRR of each fund. For a non-participating fund the FR is simply the excess of assets over liabilities,for a participating fund, the FR is made up of 50 percent of the provision for future bonuses or non-guaranteed benefits, an insurer must have a CAR of at least 100 percent in India.

Solvency Ratio

The Solvency Ratio is mainly applied to insurance companies, non-banking financial institutions and banking companies to assess the ability to honour the claims. It is a metric that indicate how well the company can cover both its short term and long term outstanding financial obligations, in other words it is the insurers' ability to honour claims and refers to excess of assets over liabilities maintained prudently. If it is below 20 percent, it indicates an increased likelihood of default, as it measures actual cash flow rather than net income, not all of which may be readily available to a company to meet obligations. It is best employed in comparison with similar firms within the same industry, as certain industry tends to be significantly more debt-heavy than others. The Insurance Regulatory and Development Authority of India issued guideline regarding standard solvency ratio which is 1.5 and the standard capital to be employed to start Life Insurance Company is one billion in India.

Table3, Solvency Ratios of Selected Life Insurance Companies

Year/ Company	ICICI Prudential life	SBI Life	HDFC Life	Bajaj Allianz Life	Max Life
2011-12	3.71	5.34	1.88	5.15	5.34
2012-13	3.96	2.15	2.17	6.34	2.07
2013-14	3.72	2.28	1.94	7.34	4.85
2014-15	3.37	2.16	1.96	7.61	4.25
2015-16	3.20	2.12	1.98	7.93	3.43
2016-17	2.81	2.04	1.92	5.82	3.09
2017-18	2.52	2.06	1.92	5.92	2.75
2018-19	2.52	2.06	1.92	5.92	2.75
2019-20	1.94	1.95	1.84	7.45	2.07
2020-21	2.17	2.15	2.01	6.66	2.02
2021-22	2.04	2.05	1.76	5.81	2.01

(Source: Annual Reports of IRDAI 2011-12 to 2021-22)

Bajaj Allianz is maintaining the higher solvency ratio as compared to other selected life insurers and found to be very financial strong company as compared to other as its' solvency ratio was 5.15 in 2011-12 and 5.81 in 2021-22. During the study period the mean solvency ratio of the company remained 6.54, which is considered as very strong. HDFC Standard Life Insurance Company maintained an average solvency ratio of 1.94, the company maintained greater than mean in the accounting year 2012-13 and 2020-21 only, rest of the study period the ratio remained less than mean. The mean ratio of ICICI Prudential Life Insurance was 2.91, the company maintained this ratio 2011-12 to 2015-16 greater than mean and rest of the study period it remained less than the mean. However, company maintained solvency ratio greater than standard ratio throughout the study period. Max life has also maintained higher solvency ratio in the early period of study and thereafter it start decreasing. SBI Life average solvency ratio remained 2.4 and throughout the study period it remained near to average except the year 2011-12 when it was noted 5.34.

Capital to Assets Ratio

This ratio is calculated to assess whether the company is able to cover its' asset from the available capital, it is expressed in percentage and shed light on the company's financial status. Under this ratio capital is measured as total capital and reserves as reported in the balance sheet, sometimes debts which need not to pay are also included in the capital while calculating this ratio with the total assets or other terms total of balance sheet.

Table 4, Capital to Assets Ratio of Selected Life Insurance Companies

Year/ Company	ICICI Prudential life	SBI Life	HDFC Life	Bajaj Allianz Life	Max Life
2011-12	6.89	4.60	6.57	9.13	12.75
2012-13	6.90	5.16	5.34	12.23	10.37
2013-14	6.22	5.67	4.33	14.95	8.64
2014-15	5.32	5.59	3.85	15.47	6.55

2015-16	5.19	5.86	4.27	17.20	5.62
2016-17	5.26	5.60	4.21	17.16	5.61
2017-18	4.98	5.52	4.49	17.67	5.08
2018-19	4.42	5.30	4.53	16.69	4.34
2019-20	4.73	5.38	5.35	17.07	3.69
2020-21	4.27	0.47	4.99	14.42	3.30
2021-22	3.83	0.43	7.59	12.73	2.95

(Source: Calculated from Annual Reports for the Year 2011-12 to 2021-22)

Capital to Total Assets ratio indicates the proportion of capital in the total assets portfolio of the companies, growth in the assets of the business indicates how efficiently the capital has been invested to create assets. Lower ratio may be preferred to higher one, as higher ratio indicates high reliance on capital and inefficient use of capital to create assets, whereas lower ratio indicates the greater assets base of the company.All the Companies are having satisfactory ratio, Bajaj Allianz is having higher ratio and it's reliance for paying out liabilities is on capital. Max Life, SBI Life and ICICI Prudential companies are increasing their vast assets base; therefore the ratio is at minimum during the last two year of the study. The Life Insurance Companies should have certain amount of capital; otherwise they could never reach greater risk taking or borrowing. The higher Capital Adequacy requirement by the regulator leads to decreasing competition in life insurance sector.

Capital to Reserves Ratio

Insurance companies create reserves on the basis of estimate of losses and to cover potential liabilities arisen from claims made on polices, they underwritten; it is a practice to maintain high value of reserves. The acceptability limit of this ratio is 200 percent or more by regulators. This ratio may vary from year to year and high ratio is not a sign that an insurer is about to or may become insolvent. However lower ratio is good for the health of shareholders, it means company is able to meet its liabilities out of the created reserves and surpluses, whereas higher ratio indicates dependence on capital for payment of liabilities.

Table 5, Capital to Reserves Ratio of Selected Life Insurance Companies

Year/ Company	ICICI Prudential life	SBI Life	HDFC Life	Bajaj Allianz Life	Max Life
2011-12	42.98	89.37	11	4	506.16
2012-13	40.90	59.42	10	3	1051.23
2013-14	40.23	43.36	11	3	956.48
2014-15	37.32	33.62	30	2	1406.30
2015-16	36.80	27.10	58	2	1826.52
2016-17	28.86	22.40	92	2	324.93
2017-18	26.34	18.09	136	2	245.98
2018-19	25.59	15.21	180	2	227.86
2019-20	24.83	12.92	237	2	292.91
2020-21	18.69	8.25	327	1	176.19
2021-22	23.41	9.60	633	1	150.25

(Source: Annual Reports from 2011-12 to 2021-22)

From the above table, it is observed that Max Life is having ratio more than 200 percent from financial year 2011-12 to 2019-20, it is improving a little during the financial year 2020-21 and 2021-22; in case of HDFC Standard Life Insurance Company,this ratio is increasing, reserves of HDFC Life are decreasing, therefore, this ratio is increasing, this implies that company is using its reserves to payoff claims, this further implies that claims in the company are increasing. Bajaj Allianz Life Insurance Company is having lower ratio to all other companies, this implies higher reserves are maintained by the company and it is meeting out its claims out of reserves, it is equal to capital in 2021-22 and improved throughout the study period from 4 to 1. All other companies are maintaining the ratio within the satisfactory limit.In life insurance reserves and surpluses are created to cover their liabilities and reflect the insurer's financial obligation with respect to the insurance policies it has issued. Higher ratio indicates that company is dependent on capital for meeting liabilities and lower ratio means company is able to cover financial obligations out of reserves.

Asset Quality Ratio

The risk of the life insurers originates from the balance sheet, basically the quality of assets the company is maintaining. Asset Quality is one of the most important determinants of the overall financial condition of Insurance Company. The primary factor affecting overall asset quality is the quality of the loan portfolio and the credit administration program. It is calculated as the ratio of overdue loans divided by total gross loans and allowance for loan losses divided by total gross loans, it is also calculated as non-performing loan and real estate owned and other processed assets of the borrower to total assets. AQR is regarded as a crucial financial ratio that assesses the health of policy firms by considering the quality of assets acquired by an insurance company. Higher the Asset Quality Ratio greater is the risk. Lower volume of this ratio is considered as good.

Table 6, Asset Quality Ratio of Selected Life Insurance Companies

Year/Company	ICICI Prudential life	SBI Life	HDFC Life	Bajaj Allianz Life	Max Life
2011-12	0.1	0.005	1.15	0.5	0
2012-13	0.3	0.004	0.93	0.6	0
2013-14	0.2	0.004	0.85	0.7	0
2014-15	0.4	0.31	0.60	0.7	0
2015-16	0.4	0.45	0.54	0.8	0.3
2016-17	0.7	0.57	0.33	0.9	0.3
2017-18	0.6	0.47	0.25	0.8	0.5
2018-19	0.7	0.38	0.29	1.0	0.9
2019-20	0.8	0.46	0.42	1.3	1.40
2020-21	0.7	0.48	0.53	1.1	1.61
2021-22	0.7	0.42	0.74	1.0	1.56

(Source: Annual Reports of companies from 2011-12 to 2020-21)

The higher AQR symbolises that there are non-performing assets as well as prices of real estate assets held by the company are decreasing. From observation of the above table all of the companies are having lower AQR even zero in initial period of study and thereafter start increasing, so it is concluded that non-performing assets of all the life insurance companies are increasing. Max life has controlled the AQR in the initial period of study, but increased rapidly in the late period of study.

Management Soundness

It is very crucial to measure the financial soundness of any insurance company, there are many factors to measure financial soundness, like efficiency in expenses, exposure to control expenses, better sales management etc, but to measure the financial soundness of the insurance companies IMF has suggested two parameters firstly first year premium to gross premium to measure the efficiency of the employees working in operation department and second the operational expenses as compared with business brought in by the management.

First Year Premium Ratio

First year premium ratio indicates amount of new business carried on by the company, this ratio directly reflects the efficiency in the operation of the company. The higher ratio indicates, more efficiency and lower ratio means company is unable to carry new business or issue new policies during the year. Further, the issue of long term policies means better survival of the company in the long run.

Table 8,First Year to Gross Premium Ratio of Selected Life Insurance Companies

Year/Company	ICICI Prudential life	SBI Life	HDFC Life	Bajaj Allianz Life	Max Life
2011-12	26.00	16.70	29.42	24.74	24.27
2012-13	30.91	25.05	27.49	28.61	23.04
2013-14	26.43	27.91	19.53	27.36	24.56
2014-15	29.88	25.89	19.74	24.95	23.55
2015-16	25.70	29.25	20.21	23.63	22.60
2016-17	28.38	29.54	18.37	32.36	24.48
2017-18	27.18	32.10	20.11	22.58	25.73
2018-19	22.56	27.45	17.33	22.92	26.87
2019-20	19.47	24.19	18.48	21.67	25.20
2020-21	14.52	20.57	17.78	20.46	25.37
2021-22	15.93	22.02	18.18	22.67	23.64

(Source: Annual Reports from 2011-12 to 2021-22)

The above table reveals that the first year premium to gross premium, in case of Bajaj Allianz life first year premium ratio ranges between 20.46 and 28.61 percent over the period of study, but showing 22.67 percent in 2021-22 and depicting growth over the previous year, it shows highest ratio of 32.36 percent in 2016-17. All the Companies are gaining in terms of first year premium during the initial period of study but showing down trend after 2016-17. Life Insurance business had started decreasing from the year 2014-15 on an average basis and started increasing from the year 2019-20. It is concluded that in the case of selling new policies, private life insurance companies are gaining.

Operation Efficiency Ratio

Operation efficiency is measured by dividing the operating expenses related to insurance business to gross premium underwritten during the year; however, operating expenses are mostly incurred to bring new business for the company. The higher it is considered as adverse and lower it is considered as better. The regulators have allowed it equal to the 100 percent of the first year premium from the year 2018-19; however, there were no regulations for measuring this efficiency prior to 2015-16.

Table 9,Operation Efficiency Ratio of Selected Life Insurance Companies

Year/Company	ICICI Prudential life	SBI Life	HDFC Life	Bajaj Allianz Life	Max Life
2011-12	14.32	7.80	12.51	18.79	19.63
2012-13	15.06	11.01	10.79	23.22	18.51
2013-14	15.50	10.28	10.69	14.31	17.38
2014-15	12.79	9.15	10.09	20.30	15.20
2015-16	11.69	9.21	11.57	20.45	13.56
2016-17	12.43	7.83	12.38	18.61	14.76
2017-18	9.60	6.78	13.52	21.41	13.76
2018-19	10.48	6.34	13.14	22.11	14.13
2019-20	10.48	5.94	13.24	21.29	15.39
2020-21	9.37	4.80	12.03	16.36	15.09
2021-22	11.66	5.06	12.36	17.61	14.32

(Source: Annual Reports 2011-12 to 2021-22)

SBI Life is maintaining lower operational efficiency ratio, it means their management is more efficient as compared to other insurers, all other companies are also showing downwards trends. The new business premium for life insurers has grown at a CAGR of 13 percent over financial year 2014-22 led by the financialisation of savings and new product launches. The average growth of life insurance is 12.93 percent in 2021-22 comprising 22.74 percent of private life insurers. Bajaj Allianz Life is incurring more operating expenses to sell new policies, operating expenses to first year premium ratio ranges between 70 to 80 percent, which is higher than any other company.

Reinsurance and Actuarial Efficiency

Retention Ratio

The retention ratio is the difference of gross premium and reinsurance ceded divided by gross premium, in other words, it is the proportion of earnings kept back by the insurance company for investment in the business, earnings of the company can be used for a number of purposes such as pay the profit to the shareholders as dividend, reinvest in the business for growth, it help investors to determine how much money a company is keeping to reinvest for the growth of the company's operation and what is the rate of reinvestment, a company which is not retaining the earnings has an increased likelihood of taking additional debt or issuing new equity to finance growth. In insurance sector retention mean keeping the premium and risk at their own destiny.

Table 10,Retention Ratio of Selected Life Insurance Companies

Year/Company	ICICI Prudential Life	SBI Life	HDFC Life	Bajaj Allianz Life	Max Life
2011-12	99.30	99.60	99.49	98.22	99.97
2012-13	99.64	99.72	99.43	98.10	99.00
2013-14	99.33	99.24	99.25	98.56	99.00
2014-15	99.11	99.32	99.43	98.84	99.00
2015-16	98.83	98.99	99.18	98.89	99.00
2016-17	99.05	99.23	99.12	99.00	99.00
2017-18	99.14	98.99	99.18	99.19	99.00
2018-19	98.90	99.70	99.10	99.40	98.92
2019-20	98.30	99.24	98.52	99.20	98.73
2020-21	97.90	99.03	98.80	99.20	98.53
2021-22	97.00	99.44	98.70	99.10	98.02

(Source: Calculated from Annual Reports of companies from 2011-12 to 2021-22)

Table 10 reveals that during the initial period of study all the sample companies are retaining the majority of the risk at their own destiny, but in the later period of study, it is found that HDFC Life, ICICI Prudential and Max Life have slightly diverted their risk on reinsurers,it mean SBI Life and Bajaj Allianz Life Insurance companies are more financial strong company and they can bear more risk and less dependent on reinsurance. SBI Life Insurance Company is less risk bearing company as compared to other sample companies and Life Insurance Corporation of India is greater risk bearing company followed by Bajaj Allianz Life Insurance Company Ltd.

Survival Ratio

The survival ratio indicates the adequacy of technical reserves to the average net premium of last three years; it indicates the long term business taking capacity of the company or shifts in business composition. The higher ratio will reflect better the technical reserves. Net premium means premium left after deducting the reinsurance premium paid to reinsurers, reserves mean undistributed profit transfer to reserves for future contingencies. Higher ratio applies that companies is able to pay of the claims arise due to issue of policies. From the table no. 11, it is observed that Bajaj Allianz is having higher survival ratio followed by ICICI Prudential Life Insurance Company Ltd, SBI Life Insurance Company Ltd and HDFC standard Life Insurance Company Ltd. as compared with other private companies. Max Life is having lower survival ratio. All other companies are having satisfactory survival ratio for the long term.

Table 11: Survival Ratio of Selected Life Insurance Companies

Year/ Company	ICICI Prudential life	SBI Life	HDFC Life	Bajaj Allianz Life	Max Life
2011-12	21.55	9.31	2.17	36.02	3.24
2012-13	24.18	13.88	1.96	59.08	2.98
2013-14	26.89	20.28	1.96	85.61	3.03
2014-15	28.16	26.38	4.71	106.66	1.87
2015-16	25.14	28.46	8.13	127.84	1.29
2016-17	26.49	27.28	10.99	139.51	6.34
2017-18	22.79	26.23	13.96	139.71	7.27
2018-19	20.20	24.56	15.25	134.75	6.74
2019-20	18.45	23.61	16.97	120.56	4.59
2020-21	23.42	22.18	20.00	112.42	6.65
2021-22	21.37	21.04	34.66	88.29	6.76

(Source: Annual Reports 2011-12 to 2021-22)

The highest survival ratio of Bajaj Allianz is 139.71 during the financial year 2017-18 and the lowest 36.02 in 2011-12. Although Max Life in having reserves greater than the average net premium received but having lower as compared with the other sample company in the present study.

Earning and Profitability

These ratios are used to assess a business's ability to generate earnings relative to its revenues, these ratios are used to measure the efficiency of the business organisation, that is how efficiently, the company is using its' assets to generate income. The higher value of profitability ratios is considered as most efficient, these ratios give best results, when used inter-industry and intra-industry.

Operating Expense Ratio

Table 12: Showing Operating Expense Ratio of Selected Life Insurance Companies

Year/ Company	ICICI Prudential life	SBI Life	HDFC Life	Bajaj Allianz Life	Max Life
2011-12	17.83	7.83	11.5	18.918	21.50
2012-13	17.31	10.28	10.8	23.413	19.40
2013-14	16.28	9.15	10.7	14.480	17.54
2014-15	12.92	9.20	10.2	20.532	15.32
2015-16	11.79	9.30	11.6	20.675	13.67
2016-17	12.55	7.90	12.6	18.798	14.90
2017-18	9.69	6.59	13.5	17.614	12.90
2018-19	7.57	6.34	13.10	22.290	13.20
2019-20	10.65	5.94	13.19	21.419	14.48
2020-21	7.69	4.80	12.00	16.500	14.20
2021-22	10.13	5.06	12.30	17.834	13.5

(Source: Annual Reports of the concerned company from 2011-12 to 2021-22)

The Operating Expenses can be defined as all recurring business expense of life insurer incurred in normal business operations but does not include commission paid to advisors, the operating expenses means all expenses incurred by an insurer under generally accepted accounting principle (GAAP), that in any way related to the operation of the insurance company or company business, it includes employee remuneration and welfare, travel, conveyance, vehicle running, training of employees, rent, rates, taxes, repair, printing, stationery, communication, legal charges, professional charges, medical fees, auditor fees, advertisement and publicity of insurance products etc. All these expenses are recurring in nature and some are direct expenses whereas others are indirect, which are linked to sourcing of new business and other indirect expenses which are incurred as fixed expense irrespective of new customer acquisition. The Insurance Regulatory and Development Authority of India issued guidelines regulating the Operating Expenses, these guidelines are known as expense regulation 2016 vide which actual expense to allowable expense is up to 120 percent till 2017-18 and further brought down to 100 percent in 2018-19. These guidelines have demarcated expense ratio on the bases the product mix and also the type of premium. According to these guidelines an insurer is allowed to incur up to 80 percent of the first year premium and 15 percent of renewal premium in a policy of ten years vintage.

The above table revealed that all the selected companies are having operating expenses ratio more than the industry except SBI life and HDFC life insurance companies, when SBI life is found is more efficiently working in terms of expense ratio, it is having lower expense ratio to industry. The worst affected in this terms is Bajaj Allianz during the initial period of study, but they are continuously making efforts to improve their expense ratio. On analysis of the annual reports of these companies it is found that in the early years of the start of the operation and establishment of offices and distribution channels they have incurred more expenses, therefore, the operating expenses ratio is higher for these companies. ICICI Prudential Life Insurance Company has improved during the late period of the study i.e. 2018-19, 2020-21 and 2021-22, their operating expense ratio is lower than the industry. Max life is having more operating expenses as compared to industry. So it is concluded that SBI Life Insurance Company is performing well in maintaining their operating expenses.

Return on Equity

It is the capacity of the company to earn profit on shareholders equity; the ratio can rise due to higher net income being generated by using the vast range of assets available with the company. The ratio can be further raised by using the debt base for financing the assets or operation of the company. Less equity and more profit will raise the ROE ratio.

Table 13, Return on Equity of the Selected Life Insurance Companies

Year/Company	ICICI Prudential Life	SBI Life	HDFC Life	Bajaj Allianz Life	Max Life
2011-12	27.95	25.80	12.26	36.42	20.86
2012-13	29.17	23.04	20.48	27.43	19.88
2013-14	31.45	22.14	32.77	17.45	20.29
2014-15	31.02	20.30	30.31	12.98	20.16
2015-16	31.00	18.11	25.91	11.52	21.70
2016-17	26.25	17.19	23.24	9.87	26.30
2017-18	23.52	17.61	23.35	7.77	19.55
2018-19	16.16	17.51	22.58	5.20	20.15
2019-20	14.78	16.26	19.05	4.62	20.96
2020-21	10.48	13.99	15.75	5.41	17.39
2021-22	8.29	12.96	7.80	2.97	12.11

(Source:Annual Report of Companies from 2011-12 to 2021-22)

On analysis of table 13, it is observed that ROE of Bajaj Allianz, HDFC Life, ICICI Prudential, Max Life and SBI Life has decreased during the period of study from 36.42 percent to 2.97 percent of Bajaj, 12.26 to 7.8 percent in case of HDFC Life, 27.96 to 8.29 in case of ICICI Prudential life, 20.86 to 12.11 percent in case of SBI Life and 25.80 to 12.96 in case of Max Life; however, ROE of Life Insurance Corporation of India did not change significantly.

Return on Assets

This ratio depicts that how a company is using its' assets to generate profit, it applies that the more assets the insurance company has amassed, more policy sales and potential profits the company may generate. The economies of scale help lower down the costs and improve the margins, returns may grow faster rate than assets;it will ultimately result to increasing Return on Asset.

Table 14, Return on Asset of Selected Life Insurance Companies

Year/ Company	ICICI Prudential Life	SBI Life	HDFC Life	Bajaj Allianz Life	Max Life
2011-12	1.9271	1.1525	0.81	3.324	2.6595
2012-13	2.0114	1.8395	1.09	3.353	2.0620
2013-14	1.9556	1.2208	1.42	2.609	1.7535
2014-15	1.6498	1.1068	1.17	2.009	1.3206
2015-16	1.6092	1.1068	1.11	1.981	1.2202
2016-17	1.3799	1.0666	0.98	1.693	1.4752
2017-18	1.1701	0.9624	1.05	1.373	0.9922
2018-19	0.7144	0.9280	1.02	0.867	0.8751
2019-20	0.6987	0.8748	1.02	0.788	0.7734
2020-21	0.4478	0.6539	0.79	0.780	0.5733
2021-22	0.3174	0.5612	0.59	0.378	0.3572

(Source: Compiled from Annual Reports from 2011-12 to 2021-22)

Table 14 reveals that return on asset in case of selected private life insurance companies have been decreased during the period of study. All the companies earned higher rate of return during the initial period of study particularly Bajaj Allianz Life which earned higher than other, but it started decreasing after 2013-14 in case of all companies, this is an indicative of the slowdown in the life insurance sector, this fact is in correlation with insurance penetration and density, which has decreased after 2013-14.

Liquidity Ratio

Liquidity is very critical part of the business. It is required for a business to meet its short term obligations. A higher liquidity ratio represents that the company is highly rich in cash. Higher liquidity ratios determine how quickly a company can convert the assets and use them for meeting the dues that have arisen. The higher the ratio, the easier is the ability to clear the debts and avoid defaulting on payments. This is a very important criterion that creditors check before offering short term loans to the business and also the prospective customers of life insurance should check before buying an insurance policy. An organisation which is unable to clear dues results in creating impact on the creditworthiness and also affects credit rating of the company.

Liquid Assets to Liquid Liability

The LA: LL ratio represent the extent to which a business is enable to pay its' short-term obligation with its most liquid assets. In other words it is a measure of the capability of business's current liability that can be met out of cash and liquid assets. It is also known as acid test ratio. Any business having negative ratio narrate that its' financial strength is not good and the said business is likely to struggle financial crisis, whereas one with positive value means likely to survive. It also means that the company has ability to raise cash quickly when needed. It is a useful indicator of a company's resilience. Further creditors and investors use the quick ratio to determine whether a particular company is a suitable option for funding or for investment. It enables investors and creditors in understanding the readiness of a company to face any financial unexpected crisis. If cash flow becomes a concern, it is a crucial indicator of the company's capacity to meet short term obligations.

Table 15, LiquidAsset to Liquid Liability Ratio of Selected Life Insurance Companies

Year/ Company	ICICI Prudential life	SBI Life	HDFC Life	Bajaj Allianz Life	Max Life
2011-12	0.53522	2.415	0.8527	0.81065	0.6233
2012-13	0.64844	2.550	0.7644	1.03695	1.0585
2013-14	0.58726	2.503	0.9655	1.10684	0.8965
2014-15	0.69069	2.361	0.8860	0.86441	0.9778
2015-16	0.67025	2.004	0.7360	0.93199	0.9497
2016-17	1.00912	2.059	0.7769	1.12300	1.0405
2017-18	0.78722	2.004	0.7572	1.13855	1.3143
2018-19	0.91043	2.059	0.7887	1.54477	1.1186
2019-20	1.15253	1.778	0.8654	1.25036	1.3102
2020-21	1.04495	1.687	0.7635	1.06000	1.0217
2021-22	0.93436	1.484	0.8402	0.85653	0.9724

(Source: Compiled from Annual Report from 2011-12 to 2021-22)

From Table 15, it concluded that SBI Life is showing sound liquid health during the study period Bajaj Allianz is maintaining this ratio. ICICI Prudential have lower quick ratio. Max Life is satisfactory in this connection. If this ratio is more than 1, it is considered as very strong, it means company is able to payoff its all liabilities even out of liquid assets in a very short span of time without touching long term investment or assets.

Current Assets to Total Assets

Table 16, Liquid Asset to Liquid Liability to Selected Companies

Year/ Company	ICICI Prudential life	SBI Life	HDFC Life	Bajaj Allianz Life	Max Life
2011-12	0.013177	0.06815	0.03838	0.024708	0.04795
2012-13	0.017584	0.06542	0.02914	0.042885	0.06495
2013-14	0.014451	0.06873	0.02842	0.046457	0.04769
2014-15	0.015024	0.06143	0.02722	0.038133	0.04252
2015-16	0.014384	0.06213	0.02538	0.034939	0.04342
2016-17	0.023478	0.05737	0.03251	0.051589	0.04006
2017-18	0.019614	0.05519	0.03324	0.053140	0.04409
2018-19	0.020925	0.04644	0.03232	0.053558	0.04013
2019-20	0.025136	0.03581	0.03386	0.046708	0.03809
2020-21	0.018249	0.03212	0.02868	0.028845	0.03231
2021-22	0.020518	0.02839	0.02563	0.028854	0.03340

(Source: Compiled from Annual Report from 2011-12 to 2021-22)

All the companies are having positive ratio, this implies that all the insurance companies are able to make payment of their short term obligations out of current assets. However, the insurance companies have not determined and standard ratio in this connection but in general accounting the ideal ratio in this connection is 1:1. LIC has poor LA:LL ratio as compared to other private sector companies.

Liquid Liability to Total Liability

This ratio reflects the short term liability in comparison to long term liability, lower the ratio beneficial for the life insurer is, on the contrary higher ratio reflect higher pay outs in short term.

Table 17: LL to TL Ratio of Selected Life Insurance Company

Year/ Company	ICICI Prudential life	SBI Life	HDFC Life	Bajaj Allianz Life	Max Life
2011-12	0.0246	0.0501	0.0450	0.03048	0.000077
2012-13	0.0271	0.0538	0.0381	0.04136	0.000061
2013-14	0.0246	0.0275	0.0294	0.04197	0.000053
2014-15	0.0218	0.0260	0.0307	0.04411	0.000043
2015-16	0.0215	0.0335	0.0345	0.03749	0.000046
2016-17	0.0233	0.0304	0.0418	0.04594	0.000039
2017-18	0.0249	0.0301	0.0439	0.04667	0.000034
2018-19	0.0230	0.0261	0.0410	0.03467	0.000036
2019-20	0.0218	0.0186	0.0391	0.03736	0.000029
2020-21	0.0175	0.0171	0.0376	0.02721	0.000032
2021-22	0.0220	0.0170	0.0305	0.03369	0.000034

(Source: Annual Reports 2011-12 to 2021-22)

Analysis of the above table revealed that Bajaj Allianz and HDFC Life have higher ratio, it means
These two companies are having greater short term liability in comparison to other companies. Max Life has lower ratio, it means company is not required to pay more funds in the short run. The Ratio of all other companies is satisfactory.

Table 18, Univariate Test of Group Differences Time Period and Insurance Company

Ratio	Indicator Ratio	Source of Variation	Sum of Square	D.F.	Mean Sum of Square	F-Ratio	T-Value
Capital Adequacy Ratio	Solvency	Companies	146.54	4	36.63	23.75	3.83
		Time	12.84	10	1.28	0.83	2.8
		Residual/Error	24.68	16	1.54		
	Capital to Assets	Companies	846.07	4	211.52	17.58	3.83
		Time	40.60	10	4.06	0.34	2.8
		Residual Error	192.49	16	12.03		
	Asset Quality	Companies	1.62	4	0.40	1.49	3.83
		Time	2.35	10	0.24	0.86	2.8
		Residual/Error	4.35	16	0.27		
Management Soundness	Operational Efficiency	Companies	855.91	4	213.98	16.50	3.83
		Time	117.36	10	11.74	0.90	2.8
		Residual Error	207.56	16	12.97		
	First Year Premium to Gross Premium	Company	160.89	4	40.22	160.89	3.83
		Time	280.35	10	28.04	280.35	2.8
		Residual	518.84	16	32.43	518.84	
Reinsurance and Actuarial Efficiency	Retention Ratio	Companies	2.03	4	0.51	0.99	3.83
		Time	3.26	10	0.33	0.64	2.8
		Residual Error	8.19	16	0.51		
	Survival Ratio	Companies	72425.14	4	18106.29	31.99	3.83
		Time	4035.84	10	403.58	0.71	2.8
		Residual Error	9056.62	16	566.04		
Earning and Profitability	Return on Equity	Companies	631.29	4	157.82	2.01	3.83
		Time	1414.40	10	141.44	1.80	2.8
		Residual Error	1257.97	16	78.62		
	Return on Assets	Companies	3.79	4	0.95	2.43	3.83
		Time	14.54	10	1.45	3.74	2.8
		Residual Error	6.23	16	0.39		
	Operating Expense	Companies	864.28	4	216.07	22.78	3.83
		Time	60.37	10	6.04	0.64	2.8
		Residual Error	151.73	16	9.48		
Liquidity	Liquid Asset to Liquid Liability	Companies	12.24	4	3.06	23.63	3.83
		Time	0.41	10	0.04	0.32	2.8
		Residual Error	2.07	16	0.13		
	Current Asset to Current Liabilities	Companies	0.01	4	0.00	10.24	3.83
		Time	0.00	10	0.00	0.75	2.8
		Residual Error	0.00	16	0.00		
	Liquid Liability to Total Assets	Companies	107.79	4	26.95	28.29	3.83
		Time	7.29	10	0.73	0.77	2.8
		Residual Error	15.24	16	0.95		

(Source Author's Calculations)

Capital Adequacy

While determining the capital adequacy of any company three ratios namely solvency, capital to assets and asset quality ratio is taken together. In terms of solvency all the companies are maintaining ratio more than the statutory limit, but during ANOVA analysis the calculated value of F is found greater than the T-Value i.e. 23.75>3.83 ($P>P_{01}$), this implies that all the selected companies differ significantly, hence the H_0 is rejected, but in terms of time period calculated value of P is less than the T value i.e. 0.83<2.8 ($P<P_{01}$) at 1 percent level of significance, hence H_0 is accepted and it is concluded that there is no significant difference between the companies over the time period of the study.

During ANOVA analysis of Capital to Asset Ratio it is found that the calculated value of F is found greater than the T-Value i.e. 17.58>3.83 ($P>P_{01}$), this implies that all the selected companies differ significantly in terms of Capital to Assets Ratio, hence the H_0 is rejected, but in terms of time period calculated value of P is less than the T value i.e. 0.34<2.8 ($P<P_{01}$) at 1 percent level of significance, hence H_0 is accepted and it is concluded that there is no significant difference arose in this ratio over the time period of the study.

When the Asset Quality of selected companies were checked it is found that calculated value of P is less than the T both intercompany and over the time period value i.e. 0.4<2.8 ($P<P_{01}$) and 0.24<2.8 ($P<P_{01}$) at 1 percent level of significance, hence H_0 is accepted and it is concluded that there is no significant difference between the companies over the Asset Quality and further this ratio almost remain constant during the time span of the study.This signifies that companies are having lower non-performing assets.

Management Soundness

Management soundness is measured by two ratios namely operational efficiency and first year premium to gross premium ratio, the lower operational efficiency ratio is found better for the company, whereas higher first year premium is taken better for the company. While making analysis of these two ratios it is found that calculated value of F is greater than the T value between the companies i.e. 16.5>3.83 ($P>P_{01}$) for operational efficiency ratio and 160.89>3.83 ($P>P_{01}$) for first year premium to gross premium ratio, but over time period of the study the operational efficiency do not differ significantly because 0.9<2.8 ($P<P_{01}$), whereas in terms of first year premium to gross premium ratio differ significantly over the time period of study 280.35>3.83 ($P>P_{01}$), this implies that there is difference between the companies in their performance on year on year basis over the time period.

Reinsurance and Actuarial Efficiency

This efficiency ratio is measured in terms of retention ratio and survival ratio, when a company maintains higher retention ratio, this implies that company is able to bear the risk at its own destiny whereas the higher survival ratio reflects its soundness and chances of long term survival. During ANOVA analysis it is found that in terms of retention ratio all the selected companies do not differ significantly both in case of intercompany and time period wise analysis because 0.51<2.8 ($P<P_{01}$) in case of intercompany and 0.33<2.8 ($P<P_{01}$) in case of time period, hence H_0 accepted, but in case of survival the companies differ significantly because 31.99>3.83 ($P>P_{01}$) with each other and over the time period they do not differ significantly as 0.71<2.8 ($P<P_{01}$).

Earning and Profitability

Earning and Profitability is determined with a combination of three ratios namely return on equity, return on assets and operating expense ratio. While making analysis with the statistical tool it is found that ROE neither differ significantly between companies nor over the time period of study because 2.01<3.83 ($P<P_{01}$) between the Companies, 1.80<2.8 ($P<P_{01}$)ROE over the time period, hence H_0 is accepted; ROA do not differ significantly between the companies because calculated value of F is less than the T value i.e. 2.43<2.8 ($P<P_{01}$) between the companies therefore hence H_0 is accepted but in terms of this ratio differ significantly over the time period of study because calculated value of F is greater than the T value i.e. 3.74>2.8 ($P>P_{01}$), hence H_0 is rejected. Further in case of operating expenses the calculated value of F is greater than the T value between the companies i.e. 22.78>2.8 ($P>P_{01}$) hence H_0 is rejected and calculated value of F is less than the T value over the time period of study i.e 0.64<2.8 ($P<P_{01}$) hence H_0 is accepted, This implies that there is difference in the operating expenses between the companies no differences over the time period of study, higher operating expenses impact the profitability of the company, they need to reduce their operating expenses.

Liquidity

This ratio is the combination of three ratios namely Liquid Asset to Liquid Liabilities, Current Asset to Current Liabilities and Liquid Liability to Total Asset. These ratios are reflective that in the short run companies are able to meet their obligations. All the selected companies differ significantly with each other in terms of all the three ratios, because the calculated value of F in case of all the three ratios is greater than the T value i.e 23.63>3.83 ($P>P_{01}$) LA to LL, 10.24>3.83 ($P>P_{01}$) CA to CL and 10.24>3.83 ($P>P_{01}$), hence for intercompany analysis H_1 is accepted in case of all the three ratios, but over the time period of study calculated value of F is found less than the T value in case of LA to LL i.e 0.32< 2.8 and for CA to CL 0.75 <2.8 ($P<P_{01}$) and 0.77<2.8 for LL to TA, hence H_0 is accepted.

9. Findings

1. While making the analysis of the Capital Adequacy of the selected companies, it is found that HDFC is having its solvency ratio just above the statutory limit, whereas Bajaj Allianz Life and ICICI Prudential Life are maintaining excellent and very good respectively, all other are maintaining good solvency ratio. It means all the companies are financially sound companies. During ANOVA testing it is found that in case of solvency ratio, the companies differ significantly, but over the time period

there is no significant difference; Capital to Assets ratio of all the companies are decreasing except Bajaj Allianz Life, HDFC Life during the study period, it means companies are increasing their asset base during 2011-12 to 2021-22. On the other hand the companies differ significantly with respect to this ratio but not differ significantly over the time period of study; while analysing Capital to Reserves ratio it is found that Bajaj Allianz is having good reserves, while Max Life is having less reserves as compared to capital, whereas HDFC Life, ICICI Prudential Life and SBI Life are improving it significantly; it is further found that there is significant difference in the value of Capital to Reserves during 2011-12 to 2021-22 in all the companies but there is no significant difference between the companies with respect to this ratio over the time period. Bajaj Allianz Life, HDFC Life and ICICI Prudentialare more financially sound companies as compared to other private and public companies.

2. While analysing the Asset Quality Ratio, it is found that all private life insurance companies are good in maintaining AQR; further, it is found that there is no significant difference between the companies as well as over the time period from 2011-12 to 2021-22, further it is found that SBI life, ICICI Prudential, Max Life and HDFC life are having good quality assets.
3. Management Soundness is depicted in terms of new business as well as operational efficiency of life insurers; in terms of first year premium on new business, while on an average basis share of selected private players have increased till the year 2014-15 and thereafter start decreasing, it is the year 2019-20 when the share of private companies show increasing trend again; further it is found in the ANOVA test that there issignificant difference in the first year premium over the time period as well as between the companies. In terms of measuring operational efficiency SBI Life and LIC are found more efficient companies as compared to all other private companies. These two companies are efficient than the life insurance industry. It is further found that there is significant difference in the performance when compered intercompany but found no difference over the period of study.
4. Re-insurance and Actuarial issues are assessed with the help of Retention Ratio, in the present analysis it is found that all the companies are maintaining more than 99 percent, it means they have less expenses on reinsurance and have capacity to bear the risk in their own destiny, it further found that there is no significant difference between the study period as well as between the companies. While analysing the survival ratio it is found that Bajaj Allianz Life is having very good survival chance followed by HDFC Life, ICICI Prudential, SBI Life and Max Life, whereas survival ratio of LIC is less than all the other private companies. It is further found that there is no significant difference between the periods of study as well as between the companies when compared.
5. Earning and Profitability of insurance company is determined by the analysis of operating expenses, return on equity and return on assets, operating expenses of the SBI are found lower to insurance Industry as these two companies are well managing their operating expenses as compared to all other selected private companies, it is further found that there is no significant difference during the period of study as well as between the selected life insurance companies with respect to return on equity and return on assets ratios. But in case of operating expenses companies differ significantly whereas not differ significantly over the period of time.
6. During Liquidity Analysis, it is found that the companies differ significantly with each other but do not differ significantly over the time period; this implies that all the companies are capable to pay off their short term obligations out of their current assets. The lower liquid ratio depicts that there are less short term obligations of the company as compared to the asset.

10. Limitations

The study is based on historical data from the annual reports of IRDAI, the selected companies, books and Journals, therefore, the study is suffering from limitations of secondary data. The study did not recommend investor to buy policy from any particular company, but it recommend that before taking decision to buy life insurance policy, they should use CARAMEL analysis of the said company.

11. Conclusion

There is sufficient scope for life insurance companies to grow in India. All the selected life insurance companies are maintaining solvency ratio more than the prescribed limit of 150 percent as fixed by IRDAIwith respect to capital to total asset ratio all the companies are found having lower capital to asset ratio, hence all the selected companies have poor borrowing capacity, but all the companies have invested more than 100 billion in Share Capitalwhich is greater than the statutory limit, it means all the companies doing business more than their capital. Asset Quality Ratio of the selected companies is less than onewhich is said to be satisfactory, where more than one indicative to the fact that non-performing asset is increasing. Companies like Bajaj Allianz, HDFC Standard Life, ICICI and Max life have higher percentage of operating expense on gross premium, whereas SBI Life is having lower percentage of operating expense on gross premium underwritten. The reason behind this may be the large network of branches and sale of life insurance products through bancassurance. The regulator has fixed the limit of 100 percent of first year premium in case of operating expenses, however this is the further scope of research in this area to know whether life insurance companies are complying with the stipulated rules pertaining to OPEX or not? On reinsurance and actuarial issues all the companies private are bearing the risk at their own destiny, they are all having less expenditure on reinsurance. It is observed that ROE of selected companies like Bajaj Allianz, HDFC Life, ICICI Prudential, Max Life and SBI Life has decreased during the period of study; however out of these Bajaj Allianz is badly affected company. All the selected companies have showed declining trend of earning and profitability during the period of study. In terms of liquidity of the selected life insurance companies Bajaj Allianz and SBI Life are having sufficient cash that these two companies can make payment in very short span, whereas others insurers are also solvent to make payment of their short term liabilities.

12. Bibliography

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