# A Comparative Evaluation of Financial Performance and Soundness of Selected Public and Private Life Insurers in India

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### Abstract

In recent times, the insurance industry in India has been going through a lot of changes which appear to have increased the vulnerability of this sector. In particular, the cross-holding of shares between banks and insurance companies and the close business connection between the two industries increased the risk of contagion. Further, the need to achieve competitive returns induced insurers to invest in risky assets which resulted in their further vulnerability to economic shocks. Therefore, against the backdrop of high risky nature of this industry and the growing scepticism regarding the working of companies in this sector, this paper evaluated the financial performance and soundness of selected public and private life insurance companies. In this paper a set of ratios have been presented and discussed to lend a hand in the analysis of a life insurer's financial and statistical returns. Three parameters taken from CARAMEL model have been used to analyse and evaluate the financial performance and soundness. The three indicators are "Capital Adequacy", "Earnings and Profitability" and "Liquidity". The study framed three hypotheses to achieve the key objectives. Statistical results of the study reveal that there is statistically a significant difference between capital adequacy, earnings and profitability and liquidity position in selected public and private life insurers. The overall results reveal that the capital adequacy level of selected private life insurers is far better than the mean capital adequacy level of public life insurer. However, in terms of earnings and profitability, the public life insurers have outperformed the private life insurers during the period under review.

### Keywords:

Financial Performance, F-Value, Life Insurers, Public, Private

### Introduction

Since 1991, Indian economy has under gone a sea change in the wave of globalisation and restructuring of domestic economy through a large number of measures in real estate as well as in financial sector. Similarly, insurance industry too in India has passed through a period of structural changes under the combined impact of financial sector reforms in general and insurance sector in particular. Prior to liberalisation, the competition was restricted to existing public insurers

only. In the case of life insurance, Life Insurance Corporation of India (LIC) had a dominant role, while in non life insurance, New India, United India, National and Oriental general insurance companies were having monopoly. Following the liberalisation of the insurance sector, the paradigm for Indian insurance industry has witnessed a sea change in the last decade. The government monopoly was dissolved and private companies were permitted to operate & intermediaries suddenly had a significant role to play. After deregulation of insurance sector, the sector embarked upon development programmes with regard to delivery, innovation in product and insurance penetration. The activities undertaken by the IRDA have increased the insurance activities manifold in terms of volume, variety of products and geographical coverage and more so competition due to entry of new players have increased service diversification to a great extent (Darzi, 2010).

The development of the life insurance market is playing an increasingly substantial role within the insurance industry due to the existence of insurance – growth relationship with the increased share of the insurance sector in the financial sector (Ward & Zurbruegg, 2000). A well developed life insurance sector is a boon for the economic development as it provides long term funds for infrastructure development at the same time strengthening the risk taking ability of a country. In addition, it can enhance financial system efficiency by reducing transaction costs, creating liquidity and facilitating economies of scale in investments.

In line with Financial Stability Forum (2000), insurance can be classified into three major categories, (i) Life Insurance; (ii) Non Life Insurance; and (iii) Reinsurance. In this paper, the life segment will be touched upon which offers a variety of products, with different degree of protection and investment components, including pensions, savings, permanent health and term assurance policies. Due to the financial deregulation which caused insurance companies to compete with other financial institutions, the insurance companies are exposed to additional risks owing to return guarantees and have made their liabilities more liquid. In particular, the assimilation of bank type activities by life insurers and growing linkages between banks and insurance companies appear to be key potential threats to financial stability (Das et al., 2003). Further, the need to achieve competitive returns induced insurers to invest in risky assets which resulted in their further vulnerability to economic shocks. Therefore, against the backdrop of high risky nature of this industry and the growing scepticism regarding working of insurance companies in India, it becomes immensely critical to appraise the performance of insurance companies particularly companies from life segment. Therefore, in this study, an attempt has been made to evaluate the comparative financial performance and

soundness of selected public and private life insurers to limelight their financial standing in the post liberalisation period.

The rest of the paper is structured as follows: Section II analyses the individual financial performance and soundness of selected public and private life insurers on the basis of three indicators, i.e., Capital Adequacy, Earnings and Profitability and Liquidity. Section III deals with the comparative statistical evaluation of public and private life insurance companies. Current scenario of foreign direct investment in selected private life insurers has been discussed in Section IV. Section V provides the concluding remarks.

### **Objectives of The Study**

- To evaluate the financial soundness and performance of selected public and private life insurers in India.
- To make comparative statistical analysis of the financial soundness and performance for the selected public and private life insurance companies..

### Hypotheses

To achieve the objectives of the study, the researcher framed the following three null hypotheses:

H01: There is no significant difference between capital adequacy of public and private life insurance companies.

H02: There is no significant difference between earnings and profitability of public and private life insurance companies.

H03: There is no significant difference between liquidity position of public and private life insurance companies.

#### **Research Methodology**

The present study is of both analytical and empirical in nature and makes use of secondary data. The relevant secondary data are collected from various sources which include Annual Reports of the IRDA, Monthly Journals of IRDA, The Insurance Times, Journal of Insurance Institute of India, Daily papers and government reports relating to the issues under study. The reference period is restricted from 2005-06 to 2012-13. For the purpose of comparative analysis five life insurers have been selected (one from public sector and four from private sector) which together accounted for almost 88 per cent of the market share of the life insurance segment.

The performance of insurance companies can be measured by a number of indicators. However, in present study, three financial indicators i.e., Capital Adequacy, Earnings & Profitabilty, and Liquidity taken from CARAMEL model are used to analyse the financial performance of insurance companies. For measuring the performance of insurance companies on the basis of these financial indicators, the present study employs ratio analysis. In addition to the ratio analysis, the CARAMEL parameters have been tested statistically with the help of following statistical tools:

- Mean
- Standard Deviation
- ➤ T-Test

### II. Statistical Analysis of Public and Private Life Insurance Companies

#### **Capital Adequacy Analysis**

Capital adequacy is considered as the key indicator of an insurer's financial soundness and prudential standards recognise the importance of adequate capitalisation with solvency as key focus area of insurance supervision (Das et

al., 2003). Capital is considered as a buffer to protect insured and promote the soundness of financial system, it also indicates whether the insured has enough capital to absorb losses arising from claims. Analysis of capital adequacy depends critically on realistic valuation of both assets and liabilities of the insurance companies. Although, currently there exists no internationally accepted standards for capital adequacy of insurance companies, yet the regulator (IRDA) has asked insurance companies to maintain solvency margin of 1.5 i.e. excess of assets over liabilities which is monitored on quarterly basis by IRDA. For the capital adequacy analysis of the insurers three capital adequacy ratios have been used in present study i.e. Capital to total assets, Capital to reserves, and solvency ratio. Due to absence of international norm, capital is defined as total equity capital plus reserves plus long term debt minus miscellaneous expenses. Table-1 herein below highlights the capital adequacy ratio analysis of the public & private sector life insurers.

		2005/06	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13		
				Public Se	ctor Insure	r					
LIC	1	.0003	.0004	.0004	.0004	.0003	.0003	.0004	.0003		
	2	1.0292	1.0174	1.0161	1.0151	1.0139	1.0220	1.2419	1.2647		
	3	1.30	1.50	1.52	1.54	1.54	1.54	1.54	1.54		
Private Sector Insurers											
BAJAJ	1	.1342	.0964	.0855	.0689	.0366	.0573	.0903	.1264		
ALLIANZ	2	1.4304	1.2731	1.1422	1.1422	1.1422	1.0718	1.0442	1.0316		
	3	2.80	2.45	2.34	2.62	2.68	3.66	5.15	6.34		
HDFC	1	.2143	.1553	.1375	.1574	.0945	.0783	.0657	.0537		
STAND.	2	92.080	126.86	23.98	33.339	36.927	10.039	10.038	10.033		
	3	2.90	2.05	2.38	2.58	1.80	1.72	1.88	2.17		
ICICI	1	.1317	.1254	.1254	.1306	.0794	.0683	.0689	.0690		
PRUD.	2	.0000	2.7642	1.5923	1.4260	1.4250	1.4270	1.4139	1.4013		
	3	1.60	1.53	1.74	2.31	2.90	3.27	3.71	3.96		
SBI LIFE	1	.1890	.0982	.0961	.0713	.0450	.0412	.0459	.0518		
	2	.0000	.0000	212.84	.0000	4.9642	2.6234	1.9265	1.6130		
	3	2.90	1.78	3.30	2.92	2.17	2.04	2.11	2.15		

Table (1): Capital Adequacy Indicators

Source: - Final Figures calculated by the Authors. Compiled from the Handbook of Indian Insurance Statistics 2011 -12 & Annual R eport 2012 -13, published by Insurance Regulatory and Development Authority.

Note

1. Capital to Total Assets Ratio

2. Capital to Reserves Ratio

3. Solvency Ratio.

In order to ensure safety against insolvency, higher capital adequacy ratio is considered desirable, although no benchmark has been prescribed by IRDA. The first ratio presented in the above Table (1) reveals capital per total assets analysis, the ratio indicates the proportion of capital in the total assets portfolio of the companies, growth in the assets of the business and 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 & inefficient use of capital to create assets, where as lower ratio indicates the greater assets base of the company. As far as capital/asset ratio is concerned, all the selected companies under review are seemed to have reported quite satisfactory ratio, except with some fluctuations. The capital/asset ratio of LIC ranges between .0003 & .0004, witnessed a similar movement throughout the entire study period. On the other hand, the ratio for private life insurers ranges between .0366 & .1342, .0537 & .2143, .0683 & .1317 and .0412 & .1890 for Bajaj, HDFC, ICICI and SBI Life respectively. The analysis depicts that the asset base of the companies has been increasing except LIC over a period of time. Furthermore, the analysis reveals that the life insurer's capital levels in relation to assets are relatively smaller which indicates their efficient utilisation of capital to create dependable asset base. In addition, the increasing change can be attributed to the infusion of more capital by the insurers over a period of time.

Ratio 2 of Table (1) presents the capital to reserves ratio of selected public and private life insurers. The analysis of this ratio highlights that public sector life insurer LIC has maintained its ratio almost at a similar level, with its ratio ranging between 1.0139 & 1.2647 over the eight year study period. In contrast, the capital to reserves ratio has witnessed major fluctuations for private life insurers. The major change was witnessed by ICICI and SBI, where there has been a major change in reserves position. The ratios recorded by these companies ranged between 1.0316 & 1.4304 for Bajaj, 10.033 & 126.86 for HDFC, .000 & 2.746 for ICICI and .000 & 212.84 for SBI life. The statistical analysis also reveals the fact that private life insurers have been able to fairly improve their reserves and surplus position from year-on-year basis during the period under review.

Ratio 3 of Table (1) highlights the solvency position of public and private life insurers. The solvency margin of an insurance company is the size of its capital relative to all risks it has taken; thereby measures of the risk an insurer faces of claims it cannot absorb (Ansari & Fola, 2014). The analysis of solvency ratio as depicted in Table (1) reveals that the public sector life insurer LIC just managed its fate at

nearly the minimum statutory requirements; maintained its ratio at 1.54 during the last seven consecutive years and in the year 2005-06, it failed to maintain the minimum statutory requirement ratio of 1.5. On the other hand, all the selected private life insurers witnessed a steady increasing trend in their solvency ratio over the period of time. Bajaj Allianz has witnessed the highest solvency ratio among the selected insurers with its ratio ranging between 2.34 & 6.34, followed by HDFC with 1.53 & 3.96. Similarly, the solvency ratio of HDFC and SBI ranges between 1.72 & 2.90 and 1.78 & 3.30 respectively. Further, the analysis also revealed that private life insurers have been able to maintain a sufficient level of capital base due to more capital infusion over a period of time, which in turn enabled them to maintain above the required solvency margin as prescribed by the IRDA.

#### **Earnings and Profitability Analysis**

Earnings are the key and arguably the only long term source of capital. Low profitability may signal fundamental problems of the insurer and may be considered a leading indicator for solvency problems (Das et al., 2003). Therefore, considerable attention is given to this area.

This section examines ratios that seek an understanding of the earnings and profitability of the business. This section of the study is also a two tier standard; focusing on operational and non operational efficiency of the insurers.

The three ratios comprising the indicator, "earnings and profitability" highlight underwriting results and investment opportunities of the concerns simultaneously. Profitable insurance operations are essential for a company to operate as a going concern. For an insurer to remain viable in the marketplace, it must operate a financially strong balance sheet for its policyholders. To have a proper assessment of an insurer's current and prospective profitability may involve a review of multiple financial ratios and results to ascertain the true economic picture. The ratios in this section include Expenses Ratio, ROE and ROA.

The Expense Ratio is measured as the ratio of underwriting or operating expenses to net Premium, the lower the expense ratio the better it is because it means more profits to the insurance company. The ROE (return on equity) is measured as the ratio of net profit to equity and the figure shows the net profits that are returned to shareholders. On the other hand, the ROA (return on assets) is measured as the ratio of net profit on assets. The table (2) below presents the earnings and profitability ratios of selected public and private life insurers.

		( )									
		2005/06	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13		
				Public Sec	tor Insure	r					
LIC	ROE	126.31	154.72	168.92	191.47	212.14	234.36	13.13	14.38		
	ROA	.0001	.0001	.0001	.0011	.0009	.0009	.0010	.0009		
	Exp. Ratio	.0665	.0554	.0554	.0557	.0685	.0835	.0735	.0801		
Private Sector Insurers											
BAJAJ	ROE	655	476	-1.538	4690	.3598	.7013	.8700	.8530		
ALLIANZ	ROA	0261	0093	0152	0040	.0164	.0269	.0332	.0335		
	Exp. Ratio	.1553	.2000	.2064	.1769	.1555	.1678	.1892	.2341		
HDFC	ROE	2076	1567	1915	2801	1398	0493	.1359	.2263		
STAND.	ROA	0432	0231	0253	0429	0127	0035	.0081	.0110		
	Exp. Ratio	.2543	.2023	.2085	.3189	.2173	.1670	.1251	.1194		
ICICI	ROE	1585	4945	9956	5436	.1806	.5654	.9687	1.0469		
PRUD.	ROA	0203	0384	0463	0213	.0043	.0115	.0193	.0201		
	Exp. Ratio	.1701	.1926	.2154	.1789	.1559	.1228	.1441	.1519		
SBI LIFE	ROE	.0047	.0076	.0343	0263	.2756	.3663	.5558	.6222		
	ROA	.0008	.0007	.0032	0019	.0098	.0093	.0118	.0119		
	Exp. Ratio	.1764	.1108	.0796	.0862	.0656	.0710	.0783	.1109		

### Table (2): Earnings and Profitability Indicators

Source: (i) Handbook on Indian Insurance Statistics (2011-12), published by IRDA. (ii) Annual Report of 2012-13, published by IRDA.

Ratio 1of Table (2) presents the analysis of ROE of selected public and private life insurers. The analysis reveals that all the selected insurers witnessed an increasing trend in the ROE over a period of time except LIC whose ratio declined sharply during the year 2011-12 and 2012-13. The ROE for LIC during the year 2011-12 and 2012-13 stood at 13.13 and 14.38, the sharp decline can be attributed to fresh injection of capital of 950 million (Ansari & Fola, 2014). On the other hand, all the selected private life insurers registered negative ROE during the initial four years of the study SBI Life which has reported positive ROE during the entire study period.

Ratio 2 of Table (2) depicts the ROA analysis of public and private life insurers over the eight year study period. The analysis reveals that only LIC and SBI reported the positive ROA throughout the entire study period. Among the private life insurers, Bajaj has reported the highest ROA which stood at .0335 (3.35 percent), followed by ICICI with .0210 (2.10 percent) and SBI with .0119 (1.19 percent). The analysis also reveals the fact that Bajaj, HDFC and ICICI reported the negative investment income during the initial four years of the study.

Similarly, Ratio 3 of Table (2) represents the expenses ratio of selected public and private life insurers. The statistical analysis of expenses ratio divulges that LIC has witnessed a slightly increasing trend during the last four years of the study. In contrast, all the selected private life insurers are seem to have witnessed a decreasing trend in their expenses except Bajaj whose expenses ratio increased over a period of time. From the analysis, it can be concluded that all the private life insurers have done tremendous progress in controlling the expenses ratio, which surely will have positive impact on their profitability picture.

### Liquidity Analysis

Liquidity measures a company's ability to meet its anticipated short term and long term obligations to policyholders and other creditors. A company's liquidity depends on the degree to which it can satisfy its financial obligations, whether by holding cash and investments those are sound, diversified and liquid. Due to the uncertainty with regard to timing and frequency of insurance claims, insurers need to plan their liquidity carefully. Compared to banks, Liquidity is usually a less pressing problem for insurance companies since the liquidity of their liabilities is relatively predictable (Das et al., 2003). A high degree of liquidity enables an insurer to meet its unexpected needs for cash without untimely sale of investments or fixed assets which may result in substantial realized losses due to temporary market conditions.

Theoretically, the rule of thumb for liquidity is above 1:1 ratio; however, the limit differs from country to country because a regulatory body stipulates internal requirement based on its financial industry structure and system but usually fall between 1.5 and 2.3. For the purposes of statistical analysis, we employed two important liquidity indicators, i.e., ratio of liquid assets to liquid liabilities and ratio of liquid assets to total assets. Table (3) below presents the liquidity analysis of selected public and private life insurers.

		2005/06	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13	
Public Sector Insurer										
LIC	LA to LL	1.456	1.693	1.937	2.486	2.259	3.722	3.007	5.858	
	LA to TA	.056	.053	.052	.057	.044	.047	.071	.094	
				Private S	Sector Insu	irers				
BAJAJ	LA to LL	.943	.616	.484	.632	.474	.777	.810	1.037	
ALLIANZ	LA to TA	.099	.069	.036	.030	.016	.020	.024	.042	
HDFC	LA to LL	1.439	1.363	1.371	1.056	.621	.804	.852	.977	
STAND.	LA to TA	.131	.098	.088	.081	.035	.037	.038	.041	
ICICI	LA to LL	.587	.670	.592	.573	.375	.417	.537	.648	
PRUD.	LA to TA	.038	.043	.035	.019	.010	.009	.013	.017	
SBI LIFE	LA to LL	.957	.761	.607	.398	.553	.777	2.415	2.399	
	LA to TA	.095	.059	.027	.028	.028	.033	.068	.065	

Table (3)	): Liqui	dity Indicators
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Source: (i) Handbook on Indian Insurance Statistics (2011-12), published by IRDA.

(ii) Annual Report of 2012-13, published by IRDA.

Note: (i) Liquid Assets to Liquid Liabilities (ii) Liquid Assets to Total Assets

Ratio 1 of Table (3) presents the current ratio. The statistical analysis of current ratio reveals that LIC has witnessed a consistent increase in its current ratio, the ratio laid between 1.456 & 5.858. In a similar way, all the selected private insurers seem to have registered the steady increase in the current ratio except HDFC which reported a slight amount of decrease over a period of time. Furthermore, the study also reveals that except HDFC all the private life insurers reported the current ratio above the standard benchmark only in the year 2011-12 and 2012-13. In a similar way, Bajaj managed to report its current ratio well above the rule of

thumb only during the year 2012-13.

Ratio 2 of Table (3) presents the liquid assets to total assets ratio which reflects the financial assets position in the total assets of an insurer. The statistical analysis indicates that LIC has shown fairly improvement in its liquid assets in proportion to total assets. On the other hand, all the selected private life insurers reported a declining trend in their liquid assets over a period of time which is a serious cause of concern and which needs to be taken care of seriously. Otherwise, the high liquidity problem may call upon capital restructuring and more capital infusion on the part of insurer to heighten their liquidity graph.

### **III. Statistical Evaluation of Public and Private Life Insurance Companies**

### (i) Statistical Evaluation of Capital Adequacy

	Category	Ν	Mean	Std. Deviation	Std. Error Mean
Capital to Total Assots	Public	8	.00035	.00005	.00001
Capital to Total Assets	Private	32	.0996	.0440	.0077
Constal to Decoming and Sumplus	Public	8	1.0848	.1075	.0380
Capital to Reserves and Surplus	Private	32	18.3753	44.8976	7.9386
Salvanay Datio	Public	8	1.5025	.08311	.0293
Solvency Katlo	Private	32	2.6846	1.0312	.1822

Table 4(a): Capital Adequacy Determinant Variables

Source: SPSS

					Indepen	ident Sam	ples Test						
		Levene's Te Equality of Variances	st for	t-test for Equality of Means									
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confi the Inte Differ	95% Confidence of the Interval Difference			
									Lower	Upper			
Capital to Total Assets	Equal Variances Assumed	14.949	.000	6.116	38	.000	.09629	.01574	.06441	.12816			
	Equal Variances not Assumed			12.352	31.000	.000	.09629	.00779	.08039	.11218			
Capital to	Equal Variances Assumed	3.991	.053	1.079	38	.288	17.2898	16.0295	-15.1603	49.740			
Reserves & Surplus	Equal Variances not Assumed			2.178	31.001	.037	17.2898	7.9369	1.1024	33.477			
Solvency Ratio	Equal Variances Assumed	6.811	.013	3.209	38	.003	1.1821	.36847	.43632	1.9280			
	Equal Variances not Assumed			6.402	32.535	.000	1.1821	.18464	.80631	1.5580			
Sor	wree SPSS												

Table 4(b)

Table 4(a) presents the descriptive statistics of capital adequacy indicators. The Table shows that the mean value of capital to total assets, capital to reserves & surplus and solvency ratio is higher for private life insurers as compared to public life insurer. The mean for private life insurers for capital to total assets, capital to reserves & surplus and solvency margin is .0996, 18.084 & 2.684 against .0003, 1.084 and 1.502 for public life insurer respectively. The overall results reveal that the capital adequacy level of selected private life insurers is far better than the mean capital adequacy level of public life insurer. However, in terms of standard deviation, private life insurers have shown higher amount of variation in capital adequacy indicators

In a similar way, Table 4(b) above presents the t-test

statistics of capital adequacy indicators for both public and private life insurers. The P-Value at 5 percent level of significance portrayed in the above Table is equal to .000, .288 and .000 for capital to total assets, capital to reserves & surplus and solvency ratio respectively. From the P-Value, it can be said that there is statistically a significant difference between the mean capital adequacy level of public life insurer and the mean capital adequacy level of private life insurers. However, in terms of capital to reserves and surplus ratio, the two set of companies seem to be statistically insignificant as revealed by greater than 5 percent significant level. On the whole, it can be concluded from the P-Value that the two set of companies seem to have statistically a significant difference as far as capital adequacy level of both is concerned. Hence, the null hypothesis stands rejected.

## (ii) Statistical Evaluation of Earnings and Profitability

	Category	N	Mean	Std. Deviation	Std. Error Mean
Boturn on Equity	Public	8	139.428	84.406	29.842
Return on Equity	Private	32	.0436	.0440	.0077
Baturn on Accata	Public	8	.0006	.0004	.0001
Return on Assets	Private	32	0032	.5796	.1024
Expanses Datio	Public	8	.0673	.0112	.0039
Expenses Ratio	Private	32	.1627	.0572	.0101

### Table 5(a): Earnings and Profitability Determinant Variables

Source: SPSS

than public life insurers.

					Indeper	ndent San	ples Test					
		Levene's T Equality o Variances	fest for f	t-test for Equality of Means								
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence of the Interval Difference			
									Lower	Upper		
Determ of Familta	Equal Variances Assumed	70.373	.000	-9.733	38	.000	-139.385	14.321	-168.377	-110.392		
Return of Equity	Equal Variances not Assumed			-4.671	7.000	.002	-139.385	29.842	-209.950	-68.819		
Poturn on Assots	Equal Variances Assumed	15.672	.000	495	38	.623	00387	.00782	01972	.01197		
Return on Assets	Equal Variances not Assumed			-1.000	31.104	.325	003878	.00387	01178	.00403		
Expenses Ratio	Equal Variances Assumed	7.760	.008	4.650	38	.000	.0954	.0205	.0535	.136986		
	Equal Variances not Assumed			8.780	37.365	.000	.0954	.0108	.0734	.117458		

Table 5 (b)

Source: SPSS

Table 5(a) presents the descriptive statistics of earnings and profitability indicators for both public and private life insurers. The above table shows that the mean value ROE, ROA and Expenses ratio for public life insurers is 139.428, .0006 and .0678 against .0436, -.0032 and .1627 for private life insurers respectively. From the statistical figures, it can be said that public sector life insurer has outperformed the private life insurers as far as earnings and profitability performance is concerned.

Table 5(b) above presents the t-test statistics of earnings and profitability. The P-Value at alpha 5 percent depicted in the above table is equal to .002, .325 and .000 for ROE, ROA and Expenses Ratio respectively. From the P-Value, it can be concluded that there is statistically a significant difference between public and private life insurers in terms of ROE and Expenses Ratio. However, the two set of companies seem to have statistically insignificant difference as far as ROA is concerned. Hence, the null hypothesis stands rejected.

#### (iii) Statistical Evaluation of Liquidity Position

Table 6(a): Liquidity Determinant Variables

	Category	N	Mean	Std. Deviation	Std. Error Mean
Liquid Assets to Liquid	Public	8	2.8022	1.4348	.5073
Liabilities	Private	32	.8600	.4899	.0866
Liquid essets to Total Assets	Public	8	.0592	.0161	.0057
Liquid assets to Total Assets	Private	32	.0460	.0306	.0054

Source: SPSS

#### Table 6 (b)

					Indepen	dent Sam	ples Test				
		Levene's Equality Variance	Test for of s	t-test for Equality of Means							
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence of the Interval Difference		
									Lower	Upper	
Liquid Assets to	Equal Variances Assumed	12.875	.001	-6.479	38	.000	-1.9421	.29976	-2.5490	-1.3353	
Liquid Liabilities	Equal Variances not Assumed			-3.774	7.413	.006	-1.9421	.51464	-3.1455	73884	
Liquid Assets to	Equal Variances Assumed	3.863	.057	-1.175	38	.247	01325	.01127	03607	.00957	
Total Assets	Equal Variances not Assumed			-1.681	21.282	.107	01325	.00788	02962	.00312	

Source: SPSS

Table 6(a) highlights the descriptive statistics of liquidity risk indicators for public and private life insurance companies. The table shows that the mean value of liquid assets to liquid liabilities and liquid assets to total assets is **2.802** and **.0592** respectively for public life insurer against the mean value of **.8600** and **.0460** for private life insurers. From the statistical analysis, it can be said that compared to private life insurers, public life insurer possesses higher degree of liquidity during the period under review.

Similarly, Table 6(b) represents the t-test statistics for public and private life insurers. The P-Value as portrayed in the above table is equal to **.006** and **.247** at 5 percent level of significance for liquid assets to liquid liabilities and liquid assets to total assets respectively. From the P-Value, it can be said that the two set of companies seem to have statistically insignificant differences in terms of their liquid assets to liquid liabilities ratio. Whereas, there is statistically a significant between public and private life insurers as far as their ratio of liquid assets to total assets is concerned. Therefore, on the whole, we can conclude that there is statistically a significant difference between public and private life insurers in terms of overall liquidity. Hence, the null hypothesis again stands rejected.

### **Concluding Remarks**

In this paper a set of ratios have been presented and discussed to lend a hand in the analysis of a life insurer's financial and statistical returns. The said ratios can be used to help out in forming a view as to the strength of the insurer's operations and financial standing. Three parameters taken from CARAMEL model have been used to analyse as well as to evaluate the financial performance and soundness of selected public and private non-life insurers in India. The first indicator is "Capital Adequacy" under which Ratio of Capital to Total Assets, Ratio of Capital to Reserves and Surplus and Solvency Ratio have been evaluated. The second indicator is "Earnings and Profitability" under which three ratios, i.e., ROE Ratio, ROA Ratio and Expenses Ratio have been interpreted. Of this parameter, the first two ratios are considered to be minimal for the positive and prolonging performance of insurance companies, while the third one is always preferred to be on the lower side. The third and the last indicator is "Liquidity" under which Ratio of Liquid Assets to Liquid Liabilities and Ratio of Liquid Assets to Total Assets have been statistically analysed which are always preferred to be on the higher side normally above 100 percent. Statistical results of the study reveal that there is statistically a significant difference between capital adequacy, earnings and profitability and liquidity position in selected public and private life insurers. The overall results reveal that the capital adequacy level of selected private life insurers is far better than the mean capital adequacy level of public life insurer. However, in terms of earnings and profitability, the public life insurers have outperformed the private life insurers during the period under review. Further, the study also concluded that compared to private life insurers, public life insurers possess higher degree of liquidity during the period under review.

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