

Financial Efficiency of the Public-sector General Insurance Firms in India

Joy Chakraborty

Assistant Professor (Finance),
Alliance School of Business,
Alliance University,
Bangalore

Abstract

Deregulation of the Indian general insurance sector has brought in a lot of opportunities and challenges. In the pre-reform era, the public-sector general insurers dominated the Indian non-life Insurance market with a market share close to 100 per cent. But the situation drastically changed since the enactment of the Insurance Regulatory and Development Authority of India (IRDAI) Act in 1999. At the end of the FY 2014-15, the collective market share of the four public-sector general insurance firms, carrying on multi-line operations, stood at 50.24 per cent with the number of players having risen to 28 in the country's general insurance sector. One of the reasons for such a decline in the market share of the public-sector general insurers during the post-reform period could be attributed to the rising presence of the private players in the country's general insurance sector. In addition to this, the performances of the country's general insurance firms suffered a setback owing to the contagion effects of the global financial crisis since 2007-08.

The present study provides an assessment of the financial efficiencies of the 04 public-sector general insurance firms in India during the post-deregulation study-period from 2008-09 to 2014-15, against the backdrop of the US financial crisis of 2007-08. In this regard, the ratio-based CAMELS framework has been used in line with the financial soundness indicators (FSIs) for the general insurance firms, as recommended by Das, Davies and Podpiera (2003) of the International Monetary Fund (IMF). The study has pointed out the United India general insurance company as the best performer among the public-sector general insurance firms in India.

Key Words: General Insurance, CAMELS, financial crisis, IRDAI

Introduction

The country's general insurance business was nationalized with the introduction of the General Insurance Business Nationalization Act (GIBNA), 1972 that led to the emergence of four fully-owned subsidiaries under GICI,¹ namely the National Insurance Company Limited, Oriental Insurance Company Limited, New India Assurance Company Limited and the United India Insurance Company Limited. But during the year 2000, the four subsidiaries were delinked from the parent company (GICI), and were restructured as independent non-life insurance companies under the Ministry of Finance, Government of

India. GICI was renotified as the only Indian reinsurer, and henceforth, ceased to be a holding company of its subsidiaries. The four public-sector general insurers eventually dominated the Indian non-life Insurance market till the insurance sector reforms were introduced in India, with a market share close to 100 per cent. The most significant landmark event in the country's insurance sector came with the enactment of the IRDAI Act in 1999, following the recommendations of the Malhotra Committee Report, 1994. With the formation of insurance regulatory body IRDAI, the country's insurance market was opened up for private and foreign participation either independently or in collaboration with Indian partners. At the end of the FY 2014-15, there were 28 general insurance companies in India, with 06 public-sector and the remaining 22 private-sector firms. Among the 06 public-sector general insurers, while the four public-sector insurance companies carried on multi-line operations, there are two specialized insurance companies: one for credit insurance (ECGC)² and the other for crop insurance (AIC).³ The four public-sector insurers namely the National Insurance Company Limited, Oriental Insurance Company Limited, New India Assurance Company Limited and the United India Insurance Company Limited specializes on all forms of general insurance business in India with a collective market share of 50.24 percent at the end of FY 2014-15.

The present study addresses the financial efficiencies of the 04 public-sector general insurance firms during the post-deregulation study-period from 2008-09 to 2014-15, with an emphasis on their performances since the outbreak of the US financial crisis during 2007-08. The financial performances of the individual players has been evaluated based on a selected set of ratios underlying the core and encouraged set of Financial Soundness Indicators (FSIs) of the CAMELS (Capital adequacy, Asset quality, Reinsurance & Actuarial issues, Management soundness, Earnings and profitability, Liquidity and Sensitivity to market risks) framework, as proposed by Das, Davies and Podpiera (2003) in their working paper published by IMF. An attempt has also been made to evaluate the relative position of the 04 public-sector non-life insurance companies during the

period under review. Hence, the present study has been structured as follows: Section-2 summarises the literature review. Section-3 presents the conceptual framework of the CAMELS model as undertaken in the present study. Section-4 discussed the research objectives, sample selection, methodologies used to extract and analyse the data along with the limitations and future scope of the study. Section-5 reported the analysis and findings of the results obtained under the present research work. Section-6 highlighted the concluding observations in line with the present study. A bibliography of the references and materials used in the present research work has been provided at the end for future references.

Conceptual Framework

The CAMELS model is basically a ratio-based model of evaluating financial performance of insurance undertakings, as prescribed in the IMF working paper by Das, U.S., Davies, N and Podpiera, R (2003) entitled as 'Insurance and Issues in Financial Soundness', which was eventually published in a book⁴ form jointly by the IMF and the World Bank in 2005. The selected FSIs are presented within the CAMELS framework, which adds the 'Reinsurance and Actuarial issues' to the CAMELS (Capital adequacy, Asset Quality, Management Soundness, Earnings and Profitability, Liquidity and Sensitivity to Market Risks) methodology routinely used by banks for their performance evaluation. For assessing the financial stability and soundness of an insurance sector including the individual insurers, the proposed FSIs have been classified into two different sets based on their significance, requirements and data availability. The two sets of FSIs were developed in congruence with the increasing risks associated with the insurance sector. The two sets of indicators were as follows:-

(a) Core set of FSIs for periodic monitoring of the insurance companies. It covers those aspects for which data are readily available and which are of vital importance for evaluating the financial viability of an insurance company. Table – 1 presents a comprehensive list of the core set of FSIs used for the purpose of evaluating insurance undertakings.

Table – 1: Core Set of FSIs under CAMELS Framework

Category	Indicator	Non-Life	Life
Capital adequacy	Net premium/capital	X	
	Capital/total assets	X	X
	Capital/technical reserves		X
Asset quality	(Real estate + unquoted equities + debtors)/total assets	X	X
	Debtors/(Gross premium + reinsurance recoveries)	X	X
	Equities/total assets	X	X
	Nonperforming loans to total gross loans		X

Reinsurance and actuarial issues	Risk retention ratio (net premium/gross premium)	X	X
	Net technical reserves/average of net claims paid in last three years	X	
	Net technical reserves/average of net premium received in last three years		X
Management soundness	Gross premium/number of employees	X	X
	Assets per employee (total assets/number of employees)	X	X
Earnings and profitability	Loss ratio (net claims/net premium)	X	
	Expense ratio (expenses/net premium)	X	X
	Combined ratio = loss ratio + expense ratio	X	
	Revisions to technical reserves/technical reserves		X
	Investment income/net premium	X	
	Investment income/investment assets		X
	Return on equity (ROE)	X	X
Liquidity	Liquid assets/current liabilities	X	X
Sensitivity to market risk	Net open foreign exchange position/capital	X	X
	Duration of assets and liabilities		X

Source: - Das, U.S., Davies, N and Podpiera, R (2003), "Insurance and Issues in Financial Soundness", IMF Working Paper, WP/03/138, July Issue, Pgs. 1 – 43.

(b) Encouraged set of FSIs that includes the additional indicators useful for monitoring more specific areas of insurance risks and vulnerabilities, which are optional to the industry and computation of which depends upon the availability of data. According to the three researchers of IMF, the ratios falling under this category needs adequate

availability and disclosure of relevant data by the insurers for the purpose of computation. Table – 2 presents a comprehensive list of the encouraged set of FSIs used for the purpose of evaluating insurance undertakings, depending upon the data availability.

Category	Indicator	Non-Life	Life
Capital adequacy	Cover of solvency margin	X	X
	Risk-based capital adequacy ratios	X	X
Asset quality	Asset/liability position in financial derivatives to total capital	X	X
	Investments: geographical distribution	X	X
	Investments: sector distribution	X	X
Reinsurance and actuarial issues	Underwritten business: geographical distribution	X	X
	Underwritten business: sector distribution	X	X
	Underwritten business: distribution by main business lines	X	X
Management soundness	Operating expenses/gross premium	X	X
	Personnel expenses/gross premium	X	X
Earnings and profitability	Earnings per employee (Net profit/number of employees)	X	X
	Return on assets (ROA)	X	X
	Return on revenue (net income/ total revenues)	X	
Liquidity	Liquid assets/total assets	X	X
	Liquid liabilities/total liabilities		X
Market-based indicators	Market/book value	X	X
	Price/earnings (P/E) ratio	X	X
	Price/gross premium	X	X
Group exposures	Group debtors/total assets	X	X
	Group (premium + claims)/total (premium + claims)	X	X

Source: - Das, U.S., Davies, N and Podpiera, R (2003), "Insurance and Issues in Financial Soundness", IMF Working Paper, WP/03/138, July Issue, Pgs. 1 – 43.

The IMF researchers has not discussed about any benchmark targets that needs to be achieved or maintained by the insurance companies against each of the ratios, as discussed under the Core and Encouraged set of FSIs in the

CAMELS framework, for assessment of their financial soundness and stability. According to the three researchers of IMF, for the FSIs to be useful, the insurance companies must compare the ratios over time and with its peers for the

purposes of performance-analysis.

Literature Review

The literature review shows no evidences of such studies in India or in abroad that has evaluated the post-recessionary

financial performances of the public-sector non-life insurers in India, against the backdrop of the US financial crisis during 2007-08. Some of the literatures covered by the researcher relating to the present area of work has been summarised below in Table-3.

Table – 3: Summary of Past Studies on Financial Soundness of Insurance Firms

Sl. No.	Author (s) & Year of Publication	Research Focus	Research Methodology	Period of Study	Area of Work
1	Alamelu (2011)	To assess the financial soundness of 16 (1 public-sector & 15 private-sector) Indian life insurance companies	CAMELS model	2005 – 2008	Life Insurance
2	Ansari and Fola (2014)	To examine the financial soundness and performances of 7 (1 public-sector & 6 private-sector) Indian life insurance companies	CAMELS model	2008 – 2013	Life Insurance
3	Chakraborty and Sengupta (2016)	To evaluate the financial soundness and market-conc. of 4 (1 public-sector & 3 private-sector) Indian life insurance companies	CAMELS model, Mkt. Analysis	2008 – 2013	Life Insurance
4	Chakraborty and Sengupta (2015)	To evaluate the financial soundness and market-conc. of 4 (1 public-sector & 3 private-sector) Indian life insurance companies	CAMELS model, Market Concentration Indices	2010 – 2013	Life Insurance
5	Chakraborty and Sengupta (2014)	To examine the financial soundness and performances of 2 (1 public-sector & 1 private-sector) leading Indian life insurance Cos	CAMELS model	2010 – 2012	Life Insurance
6	Darzi (2011)	To assess the financial performances of the 12 (4 public-sector & 8 private-sector) Indian non-life insurers; and the factors affecting their solvency	CAMELS model, Multiple regression analysis	2004 – 2009	General Insurance
7	Ghimire (2013)	To analyse the financial soundness of 16 non-life insurance companies in Nepal	CAMELS model	2007 – 2011	General Insurance
8	Gulati and Jain (2013)	To evaluate the changes in the financial performance and market shares of LIC due to the LPG effect and entry of private players	Ratio Analysis	1993 – 2009	Life Insurance
9	Rani and Shankar (2014)	To assess the financial performances of 4 public-sector Indian non-life insurance companies	Ratio Analysis, CAMELS model	2003 – 2013	General Insurance

10	Shinde (2011)	To assess the comparative perf. of 22 (1 public-sector & 21 private-sector) Indian life insurers	Ratio analysis, Trend analysis, one-way Anova, etc.	2000 – 2010	Life Insurance
11	Sinha (2013)	To examine the financial soundness and performances of 2 leading private-sector Indian life insurance Cos	CARAMELS model	2004 – 2010	Life Insurance
12	Sinha (2012)	To assess the financial soundness of the 18 (1 public-sector & 17 private-sector) Indian life insurance companies	CARAMELS model	2001 – 2010	Life Insurance

Source: - Compiled by the author

Research Methodology

Objectives of the Study

The present study has three-fold objectives which are given as follows:-

- Assessment of the financial efficiencies of the 04 public-sector general insurance firms in India, based on the CARAMELS framework, during the study-period from 2008 - 2015.
- Measuring the relative performances of the 04 public-sector non-life insurance firms during the period under review.
- Evaluating the impact of the global financial meltdown on the financial performances of the 04 public-sector non-life insurance firms during the period under review.

Sample Selection

The objective of the present study is confined only in the post-reform period after the liberalization of the country's insurance sector since the financial year 1999-2000, so the subsequent period of reforms has only been considered. The purposive sampling approach has been employed in the selection of the sample that comprises of 04 public-sector general insurance firms in India, who has been consistently in operation since the nationalization of the general insurance business in India. The reason behind the selection

of the time-period from 2008-09 to 2014-15 was to judge the extent of the impact of the global financial crisis upon the performances of the non-life insurance firms under review. The US financial crisis occurred during the year 2007-08 and its ripples were even felt in the country's insurance sector. Like most of the studies in financial services, data availability for this study is also restricted to the information submitted by the non-life insurers in compliance with the regulatory authority, IRDAI.

Research Tools

The present study involves the application of the ratio-based CARAMELS model, as proposed by the three researchers of IMF in 2003, which has been used to evaluate the financial soundness of the non-life insurance companies during the period under review. A ranking process was also initiated in the present study using the selected CARAMELS indicators to figure out the relative performances of the respective general insurers during the period under review. The 07 ratios (i.e. 06 from the core set of FSIs, and the remaining 01 from the encouraged set of FSIs) as used in the present study against the parameters of the CARAMELS model have been summarized in the following Table - 4. No ratios could be computed for the financial indicator 'S' i.e. 'Sensitivity to Market Risks' due to the lack of data disclosure practices followed by the Indian insurance companies that are relevant to the said indicator.

Table – 4: Summary of FSIs used under CARAMELS Framework

CARAMELS components	FSIs Used	
	Core set of FSIs	Encouraged set of FSIs
Capital Adequacy [C]	-----	Solvency margin ratio
Asset Quality [A]	Non-Performing Loans/ Total Gross Loans ratio	-----
Reinsurance and Actuarial Issues [RA]	Risk-retention ratio (Net Premium/Gross Premium)	-----

Management Soundness [M]	-----	Management Expense ratio (Operating Expenses/Gross Premium)
Earnings and Profitability [E]	Loss ratio (Net Claim Benefits paid/ Net Premium)	-----
	Expense ratio (Total Expenses/Net Premium)	
Liquidity [L]	Current Ratio (Liquid or Current Assets/ Current Liabilities)	-----
Sensitivity to Market Risks [S]	N.A. due to Data Insufficiency	N.A. due to Data Insufficiency

Source: Compiled by the author

Data Sources

The secondary data for the present research work has been collected from the IRDA Annual Reports from 2008-09 to 2014-15, and from the websites of the respective non-life insurers.

Limitations & Scope of the Study

The data collected for the present study has been derived from the published financial statements of the respective non-life insurers without any emphasis on primary data, and the same has not been adjusted for inflation. Hence, the study incorporates all the limitations that are inherent in the published financial statements. The study is restricted to a time span of 7 years focussing on the post-recessionary phase of the reform period from 2008-09 to 2014-15. The study includes the four major public-sector players who are involved in all forms of general insurance businesses, leaving aside the two specialised public-sector insurers such as ECGC (credit insurance) and AIC (crop insurance) besides the private non-life insurers. Hence, the future studies of research in this area could take into account more number of players covering the country's general insurance sector for an extended time-period.

Findings and Analysis

Performance Appraisal of Public-sector General Insurers

The ratio-based CAMELS framework has been used to assess the financial performances of the 04 public-sector Indian non-life insurance companies during the period under review.

Capital Adequacy

Capital is viewed as a cushion that protects the interests of the policyholders and promotes the stability and financial efficiency of the non-life insurers. It also provides an indication that whether the insurers have sufficient capital to cover up the losses arising out of unexpected claims. The solvency margin, used as an FSI in the present study, of an insurance company is expressed as a ratio of 'Available Solvency Margin' (ASM)⁵ to 'Required Solvency Margin' (RSM).⁶ Every insurer is required to maintain a Solvency Margin of 1.50 times or 150%, as stipulated by IRDAI as per section 64 VA of the Insurance Act, 1938. Higher solvency ratios may be preferred to lower ones, as higher ratios indicate a sound long-term liquidity position of the general insurers.

Table – 5: Capital Adequacy FSIs

(Figures in times)

Categories	Financial Soundness Indicators (FSIs)	Years	New India Assurance	National Insurance	United India	Oriental Insurance
Capital Adequacy [C]	Cover of Solvency Margin (ASM/RSM)	2014-15	2.44	1.53	2.36	1.68
		2013-14	2.61	1.55	2.54	1.64
		2012-13	2.50	1.50	2.52	1.51
		2011-12	2.00	1.37	2.71	1.33
		2010-11	2.90	1.34	2.75	1.35
		2009-10	3.55	1.60	3.41	1.56
		2008-09	3.41	1.56	3.32	1.66

Source: Compiled by the author

Table - 5 reflected a sound solvency position for New India and United India insurance companies with solvency ratios beyond 1.50 over all the years of the study-period. On the contrary, the other two public-sector non-life insurers showed a fluctuating trend with solvency figures below the 1.50 mark, as recorded during the FYs 2010-11 and 2011-12.

Asset Quality

The FSI here reflects the quantum of non-performing assets

held by the non-life insurers in proportion to their total quantum of gross loans. Though this ratio has been extensively used by the financial institutions such as banks and micro-finance institutions, its importance and requirement has also been felt in the insurance domain as this asset-class has resulted into insurance failures in several countries.⁷

Table – 6: Asset Quality FSIs

(Figures in Percentages)

Categories	Financial Soundness Indicators (FSIs)	Years	New India Assurance	National Insurance	United India	Oriental Insurance
Asset Quality [A]	NPA Ratio (Non-Performing Loans/Total Gross Loans)	2014-15	22.8	18.1	5.62	20.7
		2013-14	21.5	17.5	5.02	17.3
		2012-13	20.5	14.7	4.94	16.7
		2011-12	22.2	14.9	11.7	18.1
		2010-11	23.5	17.1	10.73	28.06
		2009-10	24.9	17.3	14.82	29.7
		2008-09	24.0	22.8	15.66	28.97

Source: Compiled by the author

Table - 6 reflected a consistently higher NPA ratio for New India with maximum and minimum figures of 24.9 percent and 20.5 percent during the FYs 2008-09 and 2012-13 respectively. However, the highest NPA ratio was recorded against Oriental Insurance company during the FY 2008-09. All the public-sector non-life insurers depicted the presence of NPAs over all the years of the study-period, with the lowest being recorded by United India insurance company during the FY 2013-14. The reasons for the same may be attributed to the regulations and restrictions imposed by the regulatory body on the Indian non-life insurance companies in extending of credit-facilities to customers and from investments in stock markets. The presence of non-performing loans among the public-sector general insurers may be also on account of the loan facilities extended to customers against their non-life insurance policies in force, and the carry forward of such non-performing assets over the years in their Balance sheet. Lower ratios may be preferred to higher ones, as higher

ratios indicate the rising presence of Non-performing loans out of the total gross loans of a firm.

Reinsurance and Actuarial Issues

The risk-hedging strategy in the life insurance sector can be exclusively dealt by the risk-retention ratio, expressed as a ratio of net premiums to gross premiums, and is applied for both life and non-life insurance businesses. The risk-retention ratio reflects the overall underwriting strategy of the insurer and shows the portion of risk passed on to the reinsurers. Table - 7 reflected the risk-retention ratio of the non-life insurers that ranged between a minimum of 79.33 percent to a maximum of 88.96 percent thereby reassuring the fact that the non-life insurers does rely considerably on reinsurers for risk-mitigation, unlike the life insurers. Higher ratio may be preferred to lower ones, as a higher risk-retention ratio indicates that the non-life insurers are more prone at retaining the risks at their own destiny rather than passing on a considerable proportion of the risks to the reinsurers.

Table – 7: Reinsurance & Actuarial FSIs

(Figures in Percentages)

Categories	Financial Soundness Indicators (FSIs)	Years	New India Assurance	National Insurance	United India	Oriental Insurance
Reinsurance and Actuarial issues [RA]	Risk-retention Ratio (Gross Premium/Net Premium)	2014-15	83.14	88.70	85.12	82.19
		2013-14	81.31	88.38	82.90	82.48
		2012-13	86.53	86.54	80.82	82.30
		2011-12	87.07	88.96	82.89	84.54
		2010-11	87.44	86.30	80.24	82.80
		2009-10	84.55	85.61	79.98	81.62
		2008-09	85.20	85.05	82.06	79.33

Source: Compiled by the author

Management Soundness

Sound management is crucial for financial stability and soundness of the non-life insurers. Based on the encouraged set of FSIs as proposed by the researchers in their IMF working paper (2003), the ratio of 'Operating expenses to gross premiums' – also referred to as the 'Management Expense ratio' has been considered in the present study.

Moreover, as a statutory measure, section 40B of the Insurance Act, 1938 has mandated the Indian insurers not to spend as 'expenses of management' in any calendar year in excess of the 'limits'⁸ specified in Rule 17 D of the Insurance Rules, 1939. Lower ratios may be preferred to higher ones, as lower ratios indicate the efficiency of the non-life insurers in controlling costs and enhancement of profit margins.

Table – 8: Management Soundness FSIs

(Figures in Percentages)

Categories	Financial Soundness Indicators (FSIs)	Years	New India Assurance	National Insurance	United India	Oriental Insurance
Management Soundness [M]	Management Expense Ratio (Operating Expenses/Gross Premium)	2014-15	28.43	33.37	30.88	37.24
		2013-14	27.96	28.06	27.94	30.62
		2012-13	28.56	26.56	21.6	32.39
		2011-12	29.24	28.67	19.15	28.47
		2010-11	32.78	31.96	27.06	35.0
		2009-10	34.62	35.71	22.08	31.12
		2008-09	33.30	31.72	24.11	30.08

Source: Compiled by the author

Table - 8 reflected higher management expense ratios for all the public-sector general insurers covering all the years of the study-period, with minimum and maximum figures of 19.15 percent and 37.24 percent being recorded against United India and Oriental insurance companies during the FYs 2011-12 and 2014-15 respectively. The rise in management expense ratios of the public-sector non-life insurers may be in line with their expansion of branch networks, high costs related to sourcing and servicing of customers, inflationary market conditions and stiff competition from the private players in the industry.

Earnings and Profitability

Earnings are the key and arguably the only long-term source of capital base for an insurance company. Low profitability may signal fundamental problems of the insurer and hence

considered as a leading indicator for solvency problems. For the purpose of the study, the two ratios have been used i.e. the Loss ratio and the Return on Equity. The loss ratio indicates the percentage of claims paid or payable on account of insurance claims as well as the benefits promised by the general insurers out of their net premium incomes. Hence, lower loss ratios may be preferred to higher ones as it indicates better profitability position for the insurers. The return on equity (RoE) gives an indication about the monetary benefits provided to equity shareholders against the net worth of the business, and is in line with the wealth maximisation objectives of the firm. Higher ratios may be preferred to lower ones, as higher ratios indicate more returns to the shareholders. Table-9 reflects the figures for both the ratios as obtained for the public-sector general insurance firms during the period under review.

Table – 9: Earnings and Profitability FSIs

(Figures in Percentages)

Categories	Financial Soundness Indicators (FSIs)	Years	New India Assurance	National Insurance	United India	Oriental Insurance
	Loss Ratio (Net Claims Incurred/Net Earned Premiums)	2014-15	84.02	77.54	80.27	77.91
		2013-14	83.51	81.18	82.56	85.84
		2012-13	86.16	85.56	84.61	81.54
		2011-12	90.0	87.49	88.49	91.01
		2010-11	100.79	97.05	94.36	94.21

Earnings and Profitability [E]		2009-10	89.87	85.05	86.73	90.79
		2008-09	88.9	99.16	78.62	99.68
		2014-15	14.72	25.59	5.38	12.32
		2013-14	12.63	26.57	9.84	15.92
		2012-13	10.90	7.29	10.65	5.12
		2011-12	2.54	3.57	8.52	2.56
		2010-11	(1.78)	0.77	3.07	0.53
		2009-10	1.75	2.35	17.06	(0.44)
		2008-09	1.52	(2.98)	13.19	(0.89)

Source: Compiled by the author

The loss ratios were found to be significantly higher over the period, with minimum and maximum figures of 77.54 percent and 100.79 percent for National insurance and New India assurance companies respectively during the FYs 2014-15 and 2010-11. The higher loss ratio for the public-sector firms could be attributed to the vast customer-base which has been carried over since the pre-reforms period. The most encouraging observation was to find a decline in the loss ratios of the public-sector general insurers during the recent years of the study-period, which vividly reflects their efficient underwriting mechanisms.

The RoE ratios reflected minimum and maximum figures of (–) 2.98 percent and 26.57 percent for National insurance company during the FYs 2008-09 and 2014-15 respectively. The negative figures for RoE as obtained during the FYs 2008-09 to 2010-11 for the public-sector general insurers clearly hinted upon the contagion effects of the global financial crisis upon the country's insurance sector. As such, the profitability of the insurance companies deteriorated in 2008-09 and thereafter, not only due to low investment yields but also because of high cost of guarantees, lower revenues from management fees and impairment in the value of their investments. This has emerged as a big challenge as investors lost substantial wealth and were reluctant to make further investments from scarcity of capital. However, a favourable trend was witnessed in the performances of the public-sector non-life insurers from 2011-12, since the downturn observed in the

wake of the financial crisis.

Liquidity

Liquidity is the sixth component of the CAMELS framework that is used to evaluate the financial soundness of insurance companies. The term 'Liquidity' ensures adequate cash/bank balances and highly liquid investments of the insurers to efficiently meet any short-term obligations and immediate claims of the policyholders. Hence, the insurers need to plan their liquidity carefully since the frequency, severity and timing of insurance claims or benefits are uncertain.

The 'current ratio' determines a firm's short-term assets - liabilities position to indicate whether the firm can efficiently service its short-term claims. The claims can either be in the form of death claims, surrender claims or any short-term benefits desired to be paid to the policyholders according to the terms of the contract. Higher ratios may be preferred to lower ones, as higher ratios reflects the insurer's ability to efficiently service its short-term obligations of the policyholders.

Table-10 provides evidence about the superior liquidity performances of New India insurance company in comparison to the other public-sector general insurers, but it was encouraging to find gradual signs of improvement demonstrated by all the non-life insurers over the study period.

Table – 10: Liquidity FSIs

(Figures in Percentages)

Categories	Financial Soundness Indicators (FSIs)	Years	New India Assurance	National Insurance	United India	Oriental Insurance
Liquidity [L]	Liquid Ratio (Liquid Assets/Current Liabilities)	2014-15	56.60	34.7	23.88	39.5
		2013-14	66.30	29.4	26.8	38.6
		2012-13	63.90	28.7	28.1	36.7
		2011-12	69.40	21.1	31.8	38.6
		2010-11	65.30	29.3	30.1	39.4
		2009-10	71.30	39.8	38.7	48.3
		2008-09	68.80	39.2	35.5	47.8

Source: Compiled by the author

The maximum and minimum liquidity performances during the period under review went in favour of New India and National insurance companies respectively. The noteworthy performances in current ratios were found to be in favour of New India insurance company thereby depicting a much better position to meet its short-term commitments over the entire duration of the study period, than the rest of the public-sector non-life insurers.

Assessment of Relative Performances of Public-sector General Insurers

The relative performances of the public-sector non-life insurers were reviewed based on a final set of 05 FSIs out of a total of 07 FSIs, inclusive of the core and encouraged ones, as presented under the CAMELS model. The two ratios that were dropped and kept out of the ranking process were the 'Risk-retention ratio' and the 'Loss Ratio' since these ratios failed to provide any notion on the relative performances of the general insurers' under review because of their similarities across all the non-life players over the study-period.

An attempt has been made in line with the methodology proposed by Chakraborty and Sengupta (2016) and Sinha (2012) for the purpose of determining the relative performances of the insurance firms by giving equal weightage to the shortlisted FSIs as used in the present study. The steps have been elaborated as follows:-

(A) The Performance-wise ranking of all the general

insurers' under review for each FSI has been done for each year, based on their relative performances over the study-period.

(B) The 'Initial Ranks' of a particular non-life insurer for a particular FSI has been computed by adding up the ranks for all the years and the total so obtained is divided by the number of years as relevant to the present study i.e. 07, in this case.

(C) The 'Average Ranks' of an individual life insurer is then calculated, by adding the 'initial ranks' obtained by it under each FSI divided by the total number of FSIs i.e. 05 as in the context of the present study.

(D) At the end, the 'Final Ranks' were computed using the value of the 'average ranks'. The one with the minimum average rank is given the final rank of one and the next placed insurers were ranked subsequently based on the ascending order of the 'average ranks' as obtained against each of the selected non-life insurers. In other words, the non-life insurer with the minimum average rank is placed at the top position followed by the next placed insurers with the ranks of two, three, and so on.

Tables 11 – 14 presents the ranks assigned to the public-sector non-life insurers' under review based on their relative performances covering the period from 2008-09 to 2014-15, in accordance with the final set of 05 FSIs, as discussed in the present study.

Table – 11: Depiction of Ranks for United India Insurance based on FSIs Used

United India Insurance	2014-15	2013-14	2012-13	2011-12	2010-11	2009-10	2008-09	Initial Ranks	Average Rank	Final Rank
FSIs Used	Ranks (Performance-wise)									
Cover of Solvency Margin	2	2	1	1	2	2	2	1.71	1.91	1
NPA Ratio	1	1	1	1	1	1	1	1		
Operating Expense Ratio	2	1	1	1	1	1	1	1.14		
Return on Equity	4	4	2	1	1	1	1	2		
Liquid Ratio	4	4	4	3	3	4	4	3.71		

Source: Calculated

Table – 12: Depiction of Ranks for New India Assurance based on FSIs Used

New India Assurance	2014-15	2013-14	2012-13	2011-12	2010-11	2009-10	2008-09	Initial Ranks	Average Rank	Final Rank
FSIs Used	Ranks (Performance-wise)									
Cover of Solvency Margin	1	1	2	2	1	1	1	1.29	2.29	2
NPA Ratio	4	4	4	4	3	3	3	3.57		
Operating Expense Ratio	1	2	3	4	3	3	4	2.86		
Return on Equity	2	3	1	4	4	3	2	2.71		
Liquid Ratio	1	1	1	1	1	1	1	1		

Source: Calculated

Table – 13: Depiction of Ranks for National Insurance based on FSIs Used

National Insurance	2014-15	2013-14	2012-13	2011-12	2010-11	2009-10	2008-09	Initial Ranks	Average Rank	Final Rank
FSIs Used	Ranks (Performance-wise)									
Cover of Solvency Margin	4	4	4	3	4	3	4	3.71	2.83	3
NPA Ratio	2	3	2	2	2	2	2	2.14		
Operating Expense Ratio	3	3	2	3	2	4	3	2.86		
Return on Equity	1	1	3	2	2	2	4	2.14		
Liquid Ratio	3	3	3	4	4	3	3	3.29		

Source: Calculated

Table – 14: Depiction of Ranks for Oriental Insurance based on FSIs Used

Oriental Insurance	2014-15	2013-14	2012-13	2011-12	2010-11	2009-10	2008-09	Initial Ranks	Average Rank	Final Rank
FSIs Used	Ranks (Performance-wise)									
Cover of Solvency Margin	3	3	3	4	3	4	3	3.29	2.97	4
NPA Ratio	3	2	3	3	4	4	4	3.29		
Operating Expense Ratio	4	4	4	2	4	2	2	3.14		
Return on Equity	3	2	4	3	3	4	3	3.14		
Liquid Ratio	2	2	2	2	2	2	2	2		

Source: Calculated

Based on the results obtained under Tables 11 – 14, United India insurance company was found to be the best with a minimum average rank of 1.91, followed by New India Assurance, National Insurance and Oriental insurance companies with average scores of 2.29, 2.83 and 2.97 respectively.

Conclusion

Although the liquidity ratios were found to be encouraging for the public-sector general insurance firms, yet they need to seriously address the higher operating expenses, NPAs and claims costs which can be detrimental to their profitability position in the long-run. The study has even witnessed the contagion effects of the US financial crisis in terms of negative RoE ratios as obtained in case of the four major public-sector general insurers between the FYs 2008-09 to 2010-11. Among the public-sector general insurers, United India insurance company was found to be ahead of its peers during the period under review. The results obtained from the present study were also indicative of the continued decline in market share of the public-sector general insurance firms, since the entry of the private players in the country's general insurance sector during the post-reform period.

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- purpose of superintending, controlling and carrying on the general insurance business in India.
- ²Export Credit Guarantee Corporation of India Limited
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- ⁴Das, U.S.; Davies, N; and Podpiera, R. (2005): "Indicators of Financial Structure, Development, and Soundness", in "Financial Sector Assessment: A Handbook", jointly published by World Bank and International Monetary Fund, Chapter-2, World Bank, Washington DC, USA, (<http://www.imf.org/external/pubs/ft/fsa/eng/pdf/ch02.pdf>)
- ⁵The term 'Available Solvency Margin' (ASM) refers to the aggregate of the excess in policyholders' funds and the shareholders' funds. (Source:- IRDA Annual Reports)
- ⁶The term 'Required Solvency Margin' is referred to an amount in excess of the value of assets over the amount of life insurance liabilities and other liabilities of policyholders' fund & shareholders' funds, and should not be less than an amount as prescribed by the IRDA (Assets, Liabilities and Solvency Margin of Insurers) Regulations, 2000.
- ⁷Like Japan (during 1997 to 2001 seven life insurers failed as a consequence of high NPLs), Korea (13 life and 3 non-life insurers failed during 1998 to 2002 suffered from NPLs and liquidity problem), Australia (HH non-life failed in 2001 suddenly, apparently due to mismanagement), UK (Insurance Corporation of Ireland-ICI-non-life, came close to formal liquidation due to poor underwriting in its London branch, in 1985), Canada (Confederation Life failed due to partially real estate market and liquidity problem, in 1994), Ethiopia (Universal Insurance-General, in 1997 the case is still in court) (Source: Das, Davies and Podpiera, IMF-Working Paper, July 2003).
- ⁸After the 31st day of December, 1950, no insurer shall, in respect of the insurance business transacted by him in India, spend as 'expenses of management' in any calendar year in excess of 10 per cent of the first year's premium as shown in the revenue account, and 20 per cent of the renewal premiums as shown in the revenue account in respect of that business transacted in India during the year. (Source:- Insurance Rules, 1939, Department of Financial Services, Government of India)

¹The General Insurance Corporation of India (GICI) was formed in pursuance of Section 9(1) of GIBNA for the