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A CARAMEL MODEL ANALYSIS OF SELECTED PUBLIC SECTOR NON-LIFE INSURANCE COMPANIES IN INDIA

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ABSTRACT

Capital is the life blood and nerve centre of any business organization. It is very important to maintain adequate level of capital for the smooth running of any business. A CARAMEL model analysis is the measurement to check the financial performance of insurance companies. The aim of the present study examines the financial performance of public sector non-life insurance companies by using CARAMEL model for five years. The study is based on secondary source and data has been obtained from annual reports published by IRDAI and selected four companies for the period from financial year 2014-15 to 2018-19. The result of ratio analysis shows that all the four selected companies are focusing more on asset base rather than equity base.

Keywords: Non-Life Insurance Companies, CARAMEL Model, Ratios, Financial Performance

INTRODUCTION

Insurance has evolved as a process of safeguarding the interest of people from loss and uncertainty. It may be described as a social device to reduce or eliminate risk of loss to life and property. Insurance contributes a lot to the general economic growth of the society by providing stability to the functioning of process. The insurance industries develop financial institutions and reduce uncertainties by improving financial resources. It provides safety and security against particular event. There is always a fear of sudden loss. Insurance provides a cover against any sudden loss. The role of insurance is twofold.

Insurance achieves both risk transfer and risk reduction.

The performance of the businesses is very important because it leads towards the growth of the whole sector where it is involved and of the overall prosperity of the economy. The financial performance, is one of the main objectives of insurance companies. To determine the financial performance of insurance companies, CARAMEL model is used.

CARAMEL is an acronym for C- Capital Adequacy, A- Asset Quality, RA- Reinsurance and Actuarial Issues, M- Management Soundness, E- Earnings and Profitability, and L-Liquidity.

LITERATURE REVIEW

Dr. Sumninder Kaur Bawa, Samiya Chattha (2013), conducted their study with the aim to examine the financial performance of insurance companies in India. The study consisted a sample of 18 Indian life insurers including 1 public and 17 private sector companies for the period of five financial year from 2007-08 to 2012. To evaluate financial performance, ratios like Current ratio, Solvency ratio, Return on Asset ratio, and Leverage ratio has been used. The data has been collected from the published financial statements and annual reports. The study used multiple linear regression model for analysis. The study conducted hypothesis also which revealed that there was favourable association between liquidity and size whereas there was adverse association between profitability and capital.

Mirie Mwangi, Jane Wanjugu Murigu (2015), analysed the factors of financial performance of general insurance companies in Kenya for four years from 2009 to 2012 and 23 general Kenyan insurance companies were selected for the study. Leverage, Retention Ratio, Liquidity, underwriting risk, Equity capital, size, management competence index, ownership and age were used as independent variables whereas return on asset was used as dependent variable. Multiple regression analysis was used to study the impact of dependent variables on independent variables. The study used secondary data of financial statements of selected Kenyan insurance companies. Result of the study indicated that leverage, equity capital, and management competence index had favourable association with financial performance whereas size and ownership had adverse association with return on assets.

Anila Cekrezi (2015), conducted the study with the purpose to investigate the factors that affect financial performance of insurance companies of Albania. The sample of study consisted 5 insurance companies namely, Sigma Interalbanian Vienna Insurance Group, Sicred, Sigal Uniga Group Austria, Eurosig, Intersig Vienna Insurance Group for the period of six years from 2008 to 2013. Multiple regression analysis was used to examine the effect of independent variables (financial

leverage, tangibility, flexibility, company size, and company risk) on the dependent variable (Return on asset). The required data and information for the study were gathered from published annual reports. In this study it was found that total debt and risk had adverse association with return on asset whereas tangibility had favourable association with return on asset.

Mayowa G Ajao & Eghosa Ogieriakhi (2018), studied with the aim to check firm specific factors and financial performance of insurance firms in Nigeria. Out of twenty-seven insurance companies, twelve companies listed on Nigerian stock exchange were considered for the study purpose from the time period 2009 to 2017. The required data and information for the study were gathered from financial statements of sampled insurance firms. To measure performance of selected companies, return on asset was used whereas size of companies, leverage, tangibility of assets, growth, premium growth to check the firm specific factors and performance. In this study it was found that size and growth plays significant role as determinants of financial performance.

Anam Batool, Abdullah Sahi (2019), conducted research with the aim to examine the factors of financial performance of insurance companies of USA and UK. The study consisted a sample of twenty-four insurance companies from which twelve companies of USA and twelve companies of UK for the period from 2007 to 2016. The required data and information for the study were gathered from financial statements and annual reports. The study used return on assets and return on equity as profitability indicators while size of firm, liquidity, leverage, asset turnover as internal factors and GDP, CPI, interest rate, WTI oil, as external factors. They employed fixed effect model and random effect models for analysis of data. The study found in case of USA insurance companies, internal factors like size of firm, leverage and asset turnover had favourable association with ROA and ROE and external factors like GDP and WTI oil had favourable association with ROA and ROE whereas CPI and Interest rate had adverse association with ROA and ROE. In case of UK based companies, the study found internal factors like liquidity had favourable association with ROA and ROE and external factor like GDP had favourable association with ROA and ROE.

Lavudi Vijay (2019), studied with the purpose to investigate financial performance of life insurance companies in India. The study considered a sample of 6 life insurance companies which include 1 public and 5 private life insurance companies for the period of six years from 2012-13 to 2017-18. The required data and information for the study were gathered from published reports of IRDA and annual reports. The study used Claim ratio and Expense ratio to check financial performance of selected companies. The study

found public life insurance companies had focus on capital adequacy whereas private life insurance companies gave more importance to underwriting process.

M. Surya, Dr. B. Sudha (2020), conducted their study with the aim to examine the core set of CARAMEL framework in insurance sector. The study explained the details of CARAMELS (Capital Adequacy, Asset Quality, Reinsurance and Actuarial Issues, Management Soundness, Earnings/ Profitability, Liquidity and Sensitivity to Market risk) model which was used to check the financial soundness of life and non-life insurance companies.

RESEARCH OBJECTIVES

To analyse the financial performance of selected public sector non-life insurance companies by applying CARAMEL model.

RESEARCH METHODOLOGY

This study is based on secondary data. The data was collected from the annual reports of selected insurance companies published by IRDAI. In addition to this, data was also collected from company's published annual reports, websites and various journals. The study will cover a period of five financial years from 2014-15 to 2018-19. Four non-life public sector insurance companies namely, National Insurance Company Limited, The New India Assurance Company Limited, The Oriental Insurance Company Limited and United India Insurance Company Limited has been taken as sample. The study is undertaken to analyse the performance of public sector insurance companies by using parameters of CARAMEL model, and ratios under CARAMEL model. The CARAMEL model has been widely accepted as a tool for evaluating the financial performance of insurance companies. CARAMEL is an acronym for C- Capital Adequacy, A- Asset Quality, RA- Reinsurance and Actuarial Issues, M- Management Soundness, E- Earnings and Profitability, and L-Liquidity.

C-Capital Adequacy:

Capital Adequacy is a measurement of company's available capital so that it may be financially sound to make their payments on time and protect depositors and promote stability and efficiency in financial system. It is an important indicator for financial health of the company. In this study two ratios are taken to calculate capital adequacy from CARAMEL model i.e., 1) Net Premium to Share Holders Fund and 2) Share Holders Fund to Total Assets.

A-Asset Quality:

Asset quality determines the strength of a company. In this study Equity Share Capital to Total Assets is used to measure quality of assets of selected public sector non-life insurance companies.

RA-Reinsurance and Actuarial Issues:

The reinsurance and actuarial issues indicate the risk bearing capacity of the insurance companies which is also known as Risk Retention Ratio. In this study Net Premium to

Gross Premium Ratio is used to calculate risk retention of selected non-life insurance companies.

M-Management Soundness:

It determines whether a company is able to properly react to financial stress. It is reflected by management's capacity to control risk of the company's daily activities. It covers management's ability to assure the safe operation with the necessary and applicable internal and external regulations. Operating expenses to Gross Premium Ratio is used to check soundness of management in this study.

E-Earnings and Profitability:

Earnings and Profitability is the primary goal of any business. The position of earnings and profitability of company reflect the strength of the company. To check the earnings and profitability position two ratios are used in this study 1) Net Claim to Net Premium Ratio and 2) Profit After Tax to Equity Share Capital Ratio.

L-Liquidity:

In insurance business, the time to pay the claim is uncertain. To meet the claims, a company must have sufficient liquidity so that it can pay as soon as possible. For better performance, the company need to be sound. To check the liquidity position of selected non-life insurance companies, Solvency Ratio is used for the study.

RESULTS AND DISCUSSION

Capital Adequacy

The financial soundness of the company can be measured by its capital adequacy level, although no benchmark has been prescribed by IRDAI, however to maintain safety against insolvency, high capital adequacy ratio is desirable.

a) Net Premium to Shareholder's Fund

Net Premium to Shareholder's Fund denotes appropriate proxy for the quantum of retained indemnity risk.

Net Premium to Shareholder's fund ratio of selected non-life insurance public sector companies during the period from 2014-15 to 2018-19 (in Percentage)

Year	National	New India	Oriental	United
2014-15	254.36	125.03	201.93	157.74
2015-16	270.68	131.53	210.43	174.88
2016-17	267.93	146.38	509.06	315.24
2017-18	605.21	125.72	305	266.83
2018-19	6022.37	134.76	370.29	445.11

RESULT

The ratio of net premium to shareholder's fund shows continuous growth in case of National Insurance Co. Lid. From 254.36 to 6022.37 percentage whereas United India Insurance co. ltd. has fluctuating trend ranging between 157.74 and 445.11 percentage. The New India Assurance Co. Ltd. And Oriental Insurance Co. Ltd. Shows Increase trend up to 2016-17 than it decreases by 2018-19. The decrease trend insurers result in more capital infusion.

a) Shareholder's Fund to Total Assets

The ratio of shareholder's fund to total assets indicates the portion of shareholder's fund in total assets of company and how effectively the

shareholder's fund has been invested to generate assets.

Shareholder's fund to total asset ratio of selected non-life insurance public sector companies during the period from 2014-15 to 2018-19 (In Percentage)

Year	National	NewIndia	Oriental	United
2014-15	30.8	34.25	24.64	48.7
2015-16	43.48	36.09	14	58.08
2016-17	37.71	34.59	27.87	40.13
2017-18	28.16	40.67	26.72	48.59
2018-19	4.69	41.74	25.57	40.34

Result:

The ratio of shareholder's fund to total assets of National Insurance Co. Lid. Decreases over the period of five years from 30.80 percentage to 4.69 percentage which shows that the company is not highly dependent on shareholder's fund for generating assets. The ratio of Oriental Insurance Co. Ltd. and United India Insurance Co. Ltd. is fluctuating over the period of time whereas in case of New India Assurance Co. Ltd. it increases from 34.25 percentage to 41.74 percentage.

1) Asset Quality

Asset Quality indicates the quality of asset of the company which describe the financial soundness of the company.

a) Equity Share Capital to Total Assets.

The ratio indicates the amount of total assets observed by equity capital of the company.

Equity Share capital to Total Assets of selected non-life insurance public sector companies during the period from 2014-15 to 2018-19 (In Percentage)

Year	National	NewIndia	Oriental	United
2014-15	0.79	0.97	1.55	1.31
2015-16	1.09	0.97	1.7	1.52
2016-17	0.94	0.96	1.67	1.58
2017-18	1.51	1.07	1.69	1.51
2018-19	2.72	2.16	1.79	2.05

Result:

The ratio of equity share capital to total asset, witnessed for New India Assurance Co. Lid. shows continuous growth from 0.97 percentage to 2.16 percentage. The result also shows overall growth from 2014-15 to 2018-19 in all the three other companies i.e. National Insurance Co. Lid., Oriental Insurance Co. Ltd., and United India Insurance Co. Ltd.

2) Reinsurance & Actuarial Issue

It is also known as Risk Retention Ratio.

a) Net Premium to Gross Premium

Net Premium to Gross Premium of selected non-life insurance public sector companies during the period from 2014-15 to 2018-19 (In Percentage).

Year	National	NewIndia	Oriental	United
2014-15	87.72	86.01	84.97	82.46
2015-16	89.79	84.22	81.56	81.82
2016-17	75.64	82.48	75.41	74.91
2017-18	69.36	78.4	82.03	73.79
2018-19	68.51	80.76	78.62	79.81

Result:

The analysis of risk retention ratio indicates the risk retention capacity of the selected public sector insurance companies which fluctuate during the study period of time. In case of New India Assurance Co. Ltd., Oriental Insurance Co. Ltd. and United India Insurance Co. Ltd it fluctuates from 2014-15 to 2018-19 whereas in case of National Insurance Co. Ltd. it decreseses from 87.72 in 2014-15 to 68.51 percentage in 2018-19.

3) Management Soundness

Year	National	New India	Oriental	United
2014-15	26.37	19.8	31.24	24.95
2015-16	29.19	19.79	29.96	23.87
2016-17	18.56	17.51	24.79	18.48
2017-18	-13.36	14.02	23.82	14.9
2018-19	-11.17	15.18	21.79	18.63

Result:

The ratio of operating expenses to gross premium shows fluctuation in terms of New India Assurance Co. Ltd. and United India Insurance Co. Ltd. from 2014-15 to 2018-19 whereas in case of Oriental Insurance Co. Ltd. it reduces from 19.80 percentage in 2014-15 to 15.18 percentage in 2018-19 which shows a good sign. National Insurance Company Ltd. shows continuous decline from 26.37 percentage in 2014-15 to -11.17 percentage in 2018-19 which shows positive management of the company.

It shows the efficiency of management of companies for its financial stability.

a) Operating Expenses to Gross Premium

The operating expenses to gross premium indicate the operating expenses in underwriting gross premium. It is preferred to be lower.

Operating Expenses to Gross Premium of selected non-life insurance public sector companies during the period from 2014-15 to 2018-19 (In Percentage)

4) Earnings and Profitability

Two ratios: Net Claim to Net Premium and Profit After Tax to Equity Share Capital are used to check the earning position of selected companies.

a) Net Claim to Net Premium

To check Net Claim and Net Premium for non-life insurance company is important as it faces uncertain risk.

Net Claim to Net Premium of selected non-life insurance public sector companies during the period from 2014-15 to 2018-19 (In Percentage)

Year	National	NewIndia	Oriental	United
2014-15	77.54	84.02	81.89	84.42
2015-16	95.28	87.84	83.71	87.81
2016-17	97.25	91.26	112.11	107.06
2017-18	114.24	85.66	85.38	94.38
2018-19	109.94	95.39	106.1	109.4

Result:

The ratio of Net Claim to Net Premium shows continuous growth in case of National Insurance co. Ltd. from 77.54 percentage in 2014-15 to 114.24 percentage in 2017-18 but in last year in 2018-19 it decreases to 109.94

percentage. In other three companies i.e., New India Assurance Co. Ltd., Oriental Insurance Co. Ltd., and United India Insurance Co. Ltd., it fluctuates from 2014-15 to 2018-19.

b) Profit After Tax to Equity Share Capital

It shows the proportion of return on equity capital.

Profit After Tax to Equity Share Capital of selected non-life insurance public sector companies during the period from 2014-15 to 2018-19 (In Percentage)

Year	National	NewIndia	Oriental	United
2014-15	970.1	715.61	196.05	200.38
2015-16	149.23	414.35	150.25	147.06
2016-17	45.84	503.97	-845.55	-1275.69
2017-18	-2170.77	534.2	754.95	653.44
2018-19	-1696.12	70.36	-146.83	-1266.94

Result:

The ratio of Profit After Tax to Equity Share Capital of New India Assurance Co. Ltd. fluctuating from 715.61 percentage in 2014-15 to 70.36 percentage in 2018-19. The result indicates that the ratio of profit after tax to equity share capital of all the companies continuously decreases but it turns negative in case of Oriental Insurance Co. Ltd., United India Insurance Co. Ltd., National Insurance Co. Ltd. in 2016-17, 2017-18 and 2018-19 respectively.

5) Financial Soundness and Liquidity

Assessing financial soundness of insurance company is a very complex task. To check financial soundness solvency ratio is used in this study.

Solvency Ratio of selected non-life insurance public sector companies during the period from 2014-15 to 2018-19 (In Percentage)

Year	National	NewIndia	Oriental	United
2014-15	1.52	2.44	1.68	2.36
2015-16	1.26	2.3	1.59	1.91
2016-17	1.9	2.19	1.11	1.15
2017-18	1.55	2.58	1.66	1.54
2018-19	1.04	2.13	1.57	1.52

Result:

Considering IRDAI report, solvency ratio of National Insurance Co. Ltd. shows fluctuation from 1.52 percentage in 2014-15 to 1.04 percentage in 2018-19. New India Assurance Co. Ltd.'s solvency ratio increases from 2.44 percentage in 2014-15 to 2.19 percentage in 2016-17 but it decreases in 2017-18 to 2.58 percentage whereas Oriental Insurance Co. Ltd. and United India Insurance Co. Ltd. shows decreasing in ratio from 1.68 percentage in 2014-15 to 1.57 percentage in 2018-19 and 2.36 percentage in 2014-15 to 1.52 percentage in 2018-19 respectively.

CONCLUSION

The study aimed to analyse the financial performance of selected four public sector non-life insurance companies by using CARAMEL model for the period of five financial year from 2014-15 to 2018-19. The result of the various ratios of CARAMEL model explained that during the selected period of time all the selected research companies are showing downward trend and

focusing more on asset base in comparison to equity base. In case of management soundness, National Insurance Co. Ltd. perform well as compared to other three companies. The study concluded that all the four selected companies show average outcomes in comparison to standard norms of financial performance of general industries.

FUTURE RESEARCH DIRECTION

The present research paper evaluates financial performance of public sector non-life insurance companies by using CARAMEL framework. However, the future research can focus on life insurance companies by using CARAMEL model. A similar study can also be undertaken for private sector non-life insurance companies.

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