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Analysis of caramel model as a financial performance indicator in the insurance sector

Vasani Sureshbhai Vithalbhai[1], Alok Kumar Chakrawal[2]
[1] Research Scholar, Ph. D, Assistant Professor, Department of Commerce, Saurashtra University, Gujarat, India
[2] Professor, Department of Commerce, Vice Chancellor at Guru Ghasidas Central University, Chhattisgarh, India

Abstract
Due to the Covid-19 situation, all the people of our country started to buy more insurance policies which improve the financial performance of insurance companies. Insurance companies are in the core business of managing the risk of individuals and corporations. The Indian industry needs a deep analysis of the various factors affecting its financial performance. So for analyzing the working of an insurance company, different financial indicators are well explained in the CARAMEL model. The core objective of the study is to determine the factors which are helpful to analyze the financial performance of Insurance Companies. After the research study, the researcher has concluded that the financial health of an individual insurer or insurance sector as a whole is a difficult task. So it needs to take both the primary and secondary work in the research area for the reliability aspect. These are the various ratios helpful to analyze the financial performance that are Capital Adequacy, Asset Quality, Reinsurance Actuarial Ratio, Management Soundness, Earnings/Profitability, and Liquidity Ratio.

Keywords: actuarial issues, caramel, liquidity and core set

Introduction

Today, health care costs are very high and getting higher. Who can pay your bills if you've got a significant accident or a serious illness? You buy insurance for an equivalent reason you purchase other forms of insurance or for your security, to guard yourself financially as well as mentally. With insurance, you protect yourself and your family just in case you would like medical aid that would be very expensive somewhere. You can't predict what your medical bills are going to be. In a good year, your costs could also be below. But if you become ill, your bills might be very high in the future. If you've got insurance, many of your costs are covered by a third-party payer, instead of you. Third-party payers are often an insurance firm or Company, in some cases; it is often your employer also. Health insurance provides insurance regarding medical as well as health-related benefits to the individual person and family member for their security. Health insurance plans provide regarding reimburse insured customers for their medical expenses, and other costs like including treatments, surgeries, hospitalization, and the like which arise from injuries/illnesses, or directly pay out a certain pre-determined sum to the customer this all the facility provided by the health insurance company/insurance provider. A health insurance policy offers coverage for any future medical expenses of the customer/policyholders. This is an agreement between the insurance company and the policy taker where the former agrees to guarantee payment/compensation for medical costs in case the latter is injured/ill in the future, leading to hospitalization and accident fact of the policyholders. In most cases, insurance companies have tie-ups with a network of hospitals, thereby ensuring the facility which cashless treatment for patients there. (Pariasamy, 2012).

Review of Literature

Krishna Veni (2018) [11], Application of CARAMEL Model to Life insurance Companies in India-A Comparative Analysis. This study applied the CARAMEL model using descriptive statistics and ANOVA. From the study, it is clear that LIC has managed with minimum statutory requirements as per the IRDA regulations almost during the entire study period, however, ICICI Prudential capital adequacy ratios have registered increasing trend and other insurers have shown erratic trend. Based on the results, this study concluded that the null hypothesis is rejected since there is a significant difference in all the CARAMEL indicators of the selected insurance companies considered for this study at a 1% level of significance. However, it is also clear from the results that the null hypothesis is accepted in the case of total earnings and profitability ratio since there is no significant difference across the selected life insurers. (Veni & C., 2018) Showker Dar & Javed (2015) evaluated the financial performance and soundness of selected public and private life insurance companies. The overall results reveal that selected private life insurers' capital adequacy level is far better than the mean capital adequacy level of public life insurers. However, in terms of earnings and profitability, public life insurers have outperformed private life insurers during the period under review. Singh Anoop Kumar & Fatima Sumbul (2017), attempted to assess the performance of ICICI Prudential Life Insurance and to identify the reasons for its good reputation and capturing a good market share in the life insurance industry. These are further statistically tested with the help of the one-sample t-test. All the above research are mainly focused to assess the financial performance of the life insurance companies of public and private sector companies with a comparative outlook during different periods.

However, this present study deals with five selected life insurance companies during the recent decade. Researchers have found there is a significant difference in the Ratio of the CARAMEL Model. Sumit Bodla *et al* (2017) [5], Profitability Performance of Life insurance Companies-A study in Indian Context, The study revealed that, among the private sector life insurers, the average net premium for the last 5 years was found the highest in the case of ICICI prudential followed by HDFC Standard and SBI Life whereas the lowest premium was mobilized by IDBI Federal followed, in the upside, by Exide life. The CAGR of investment income was found the highest in the case of ICICI Prudential (87.5%) followed by Birla Sun life (63.79%) and Tata AIA (57.9%) during the recent 5 years i.e. 2012-16. In the recent 5 years, the CAGR of underwriting income has declined in the case of almost every private sector company. Thus, in light of the above findings, it can be concluded that many life insurers in India are required to improve their underwriting income for sustainable development. Further, they need to have control of expense ratios and other outflows to register profits. Valeed, A., Ansari & Wubshet F. (2014) [2], Financial Soundness and Performance of Life Insurance Companies in India. This study aims to examine the financial soundness and performance of life insurance companies in India. Researchers have used the CARAMEL model; these parameters capture the key operations of life insurers. Typically, the overall financial soundness and performance is a summation of adequate risk management & sound inbuilt control system, and effective & efficient business underwritings. The researchers have selected seven registered life insurers companies after that examined five years from 2008-09 to 2012-13. The researcher has found there was a significant difference between capital adequacy, asset quality, management efficiency, earnings & profitability, and liquidity position in private and public life insurance companies (Valeed, Ansari, & Wubsher, 2014) [2].

Objectives of the Study

The main objective of the research paper is to determine the factors that are helpful to analyze the performance of Insurance Companies

Research Methodology

Research based on exploratory means the researcher has to explore facts or information already available and analyze them to make a critical evaluation of the theoretical Information. Secondary data is public information that has been collected by others. Research based on the theoretical framework. (U., 2012) (Kothari, 2004)

Analysis of Factors

Financial Soundness Indicator for Insurance Companies-CARAMEL Model,

We all know, for the banking sector is known as the CAMEL framework (Capital Adequacy, Assets Quality, Management Soundness, Earnings and Profitability, and Liquidity) is routinely used and has shown good results in financial Soundness measurement. But in insurance companies' performance, Quantitative soundness indicators are presented in the CARAMEL framework (Capital Adequacy, Assets Quality, Reinsurance Adequacy of claim and actuarial, Management Soundness, Earnings and Profitability and Liquidity) which adds the insurance and Actuarial part to the CAMEL Framework. It is important to note that some indicators used for banks are different in construction when used for insurance companies and require a different interpretation. Comparing to other frameworks used for the financial evaluation of insurance CARAMEL model has two significantly important parts of analysis; the issue of management soundness and the Actuarial issue. These Ratios can be calculated by using the different components which can be found from annual reports of respected companies and IRDA.

Table 1: Insurance Companies' Financial Soundness Indicator: CARAMEL Model

Sr. No	CARAMEL Components (Category)	Variables Chosen for the Study	
		Core Set	**Encourage Set(Optional)**
1	Capital Adequacy (C)	1. Capital / Total Assets	Solvency Ratio
		2. Capital / Technical Reserves	
		3. Net Premium / Capital	
2	Assets Quality (A)	1. Equities / Total Assets	
		2. Provisions for NPAs / total Gross Loans	
3	Reinsurance and Actuarial Issues (RA)	1. Risk Retention Ratio: Net Premium/Gross Premium	
		2. Net Technical Reserve/ Average of Net Premium Received in Last three years(Survival Ratio)	
4	Management Soundness and Efficiency (M)	1. Gross Premium / Number of Employees	Total Assets / Number of Employees
		2. Operating Expenses / Gross Premium	
5	Earnings and Profitability (E)	Return on Equity: Net Income/Equity	Net Profit / Total Assets
6	Liquidity Analysis (L)	Liquid Assets / Current Liabilities	Current Assets / Current Liabilities

Sources: Compiled from IMF Working Paper on insurance and Issue in financial Soundness, WP/03/138(2003)

1. Capital adequacy (C)

From the above evaluation "C" stands for Capital adequacy that ratio express the relationship two factors in analysis of performance of insurance companies. Net Premium to Capital ratio.

The amount of premium minus the agent's commission is known as Net Premium.

Adequacy Ratio:

1. $Net\ primiun\ Ratio = \frac{Net\ Primium}{Capital}$
2. $\text{Share Capital to Total Assets Ratio} = \frac{\text{Share Capital}}{\text{Total Assets}}$
3. $\text{Share Capital to Technical Reserve Ratio} = \frac{\text{Share Capital}}{\text{Mathematical Reserves}}$

Where,
Share Capital = Equity share capital + Reserve and surplus –Debit balance of policyholders account– Debit balance of shareholders account–Miscellaneous expenditure.
1. Total Assets = Fixed assets + Current assets + Investments.
2. Technical Reserves are taken after the allocation of Bonus.
3. Net premium = Amount of Premium – Agent Commission

2. Asset Quality (A)
Asset quality means the quality of assets of the company which absorbs/cover the financial strength of the company as well as liability. As mentioned in the above table, it includes two asset quality indicators that are...
1. Equities / Total Assets and
2. Provisions for NPAs / total Gross Loans

3. Reinsurance and Actuarial Issues(R)
As per the IMF research paper the financial soundness and performance indicators of insurance companies include the reinsurance and actuarial issues that could be evaluated through the use of two ratios.
1. Risk Retention Ratio: Net Premium/Gross Premium
2. Net Technical Reserve/ Average of Net Premium Received in Last three years(Survival Ratio)

Risk Retention Ratio
This ratio assists as an indicator of insurance risk management policy of the insurance company. It is worked out by dividing the Net premium by Gross premium.
That is, Risk Retention Ratio=Net Premium/Gross Premium x 100 Where, Net Premium = Gross premium – Reinsurance ceded + Reinsurance accepted.

4. Management Soundness (M)
Management Soundness and health indicates the efficiency of working personnel/agent/employees of the company. It means how efficient and sound the employees of the company are work. The ratio used to evaluate the management soundness throws light on the operational efficiency of these employees meaning thereby how well and how good are they at decision making which is ultimately bearing fruits to the business. The cost effectiveness and proper utilization of funds means that the management of the company is sound.
1. Gross Premium / Number of Employees
2. Operating Expenses / Gross Premium
3. Total Assets / Number of Employees

5. Earnings and Profitability (E)
Earnings and profitability of any company reflect the strength of its existence in the market as well as efficiency in the market. Earnings are the key and arguably the only long term source of capital of the company. When there is Low profitability it will lead for solvency problems in market. This ratio analysis gives the capacity of the insurers in creating earnings by this means showing the profitability position in the market. It is of utmost importance so that the various companies working in the industry could be compared and judged upon their profitability position at industry level. As proposed by IMF working paper there were many ratios to evaluate namely expense to net premium ratio, return on equity ratio, return on assets ratio and earnings per employee ratio to measure the performance insurance companies.
1. Expense to Net Premium Ratio
2. Total Expense to Net Premium Ratio
3. Operating Expense to Net Premium Ratio
4. Return on Equity Ratio
5. Earnings Per Employee
6. Return on Assets Ratio

6. Liquidity (L)
In the insurance business, the timing of insurance claims is uncertain as we know. No One can predict as to when the insured could claim for its insurance policy. It is therefore on this ground the insurer should be ready, enough to pay out its uncertain claims otherwise position is not well. So, the insurer must also consider the frequency of the claims and understand the relentlessness of the business and claim settlement. Hence, an insurance company should look into its liquidity position. It should maintain its liquidity level to meet out its uncertain and unpredictable obligations.

Conclusion
After the research work, researchers have concluded that financial health of an individual insurer or insurance sector as a whole is a difficult task. So it needs to take both the primary and secondary work in research area for the reliability aspect. As per the literature work researchers identified several indicators are available but CARAMEL model best to analyse the financial soundness and performance of insurance companies. The researchers have found Various ratios that like Capital Adequacy, Asset Quality, Reinsurance, and Actuarial issues, Management soundness, Earnings/Profitability and Liquidity. These all are helps in monitoring and controlling the financial performance of the insurance company insisting on the occurrence of the problems more information mention above.

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