Determinants Of Non-Life Insurance Companies Profitability: An Empirical Study In India

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Abstract: The main objective of this study was to identify factors that determining non-life insurance companies’ profitability in India. To achieve the objective financial report of eight general insurance companies (2 public and 6 private companies) collected from the year 2006 to 2016. Though the author tasted eight variables, company size, liquidity and inflation found statistically significant factors that determine insurance companies’ profitability in India. The study recommended insurance mangers may put significant attention on managing current assets and current liability to maintain optimal liquidity position while inflation also important from external variables.

Keywords: profitability, non-life insurance, internal factors

I. INTRODUCTION

The financial institutions play prominent role in the development of a given country economy. They are serving as a mediator between the saver and investor, assisting the selection of projects, transfers money, provides mechanism of managing and controlling of risk and promotes capital formation (K. Gupta, Nisha Aggarwl and Neeti Gupta, 2013). Insurance companies shares the function of banks and other financial institutions beside to the role of risk minimizing by pooling similar risk exposures. It helps individuals and organizations to minimize the impact of risk result on their property and life (Kaur Bawa and Samiya Chattha, 2013).

As different authors agree that companies profitability is dependent on both the internal and external factors like internal managerial efficiency of working capital management (Jibra, Sameen, Kashif and Nouma, 2016), liquidity ratio, inventory turnover ratio, return on asset and return equity, size of the company (Rahel, 2013, William; 2012) while the external determinants are real domestic product growth rate (GDP), national inflation rate, interest rate and so on. Some others expressed in terms of micro-economic factors and macro economic factors of profitability (Kanwal and Muhammad Nadeem (2013); Whereas Fadzlan Sufian and Royfaizal Razali Chong (2008). Similarly Jebra et al (2016) argues interest rate is one the macro level factor that affecting the profitability of the firm externally.

The main objective of this study was to explore the determinant factors of internal factors (micro level) as well as the external factors, which are beyond the decision capacity of the firms’ manger; rather effects of national level factors like GDP and Inflation. Because of such variations in the insurance companies and macroeconomic level factors profitability of general (non-life) insurance companies varies in India.

II. STATEMENT OF THE PROBLEM

Strong financial institution system such as banks and non-bank financial institutions, insurance companies play a vital role in the development of a given country. Insurance companies, enhances the firms and individuals saving mobilizations and transferring risk, which is minimizing the companies’ financial and non-financial worries in future. As Swiss Re Global Report (2015) shows that, the demand for the primary non-life insurance is increasing as compare to the year 2014 in the world. Non-life real premium growth in emerging markets is expected to improve in 2016 and 2017, rising by 7.9% and 8.7%, respectively, after a 5.6%-gain in 2015. Profitability of insurance firms is one of a contributing factor
for the national economic growth. One of the financial performances of an insurance company can be measured by examining the firms’ profitability according to the financial ratio analysis.

As different research findings reveal that the financial performance of insurance companies are affected by different factors. As Boadi, Antwi and Lartey (2013) stated in their research the insurance companies profitability is affected by the organizational specific factors such as leverage ratio, tangibility ratio, size, liquidity ratio, risk and growth rate of the firm. Some are explaining as micro and macro level factors (Rahel, 2013, Suhlylih 2014, Hifza Malik, 2011, Khandoker, Raul and Rahman (2012), Camelia Burja, 2011). Hifza Malik (2011) conducted research to investigate the determinants of profitability in insurance companies of Pakistan. In this study he examined the effects of firm specific factors (age of company, size of company, volume of capital, leverage ratio and loss ratio) on profitability proxied by ROA. Many argues that in addition to these factors, there are other factors affecting the profitability of the insurance companies like capital adequacy, age of the company, loss ratio and external factors like GDP, inflation and interest rate in a given country at a national. Chen-Ying Lee (2014) measured insurance company profitability by using operating ratio and return on assets (ROA) for the two kinds of profitability indicators to measure insurers’ profitability. The results show that underwriting risk, reinsurance usage, input cost, return on investment (ROI) and financial holding group have significant influence on profitability in both operating ratio and ROA models.

Moreover, there are few studies conducted particularly in India by Bawa and Chattha (2012); to determine the life insurance company performance and calculated different ratios like; current ratio, solvency ratio, return on asset ratio and leverage ratio. B. Charumathi (2012) and Ansari and Wubshet Fola (2013) also studied on determinants of life insurance companies in India. But there are few studies done in the area of non-life insurance companies like Emine Öner Kaya (2015); Dorina Kripa and Dorina Ajaslari (2013). The profitability level of non-life insurance company in India is varying from company to company within different period of time. The researcher believes that, the profitability performance of non-life insurance companies in India is might be determined by both internal factors like; age, company size, leverage, lose ratio (risk), capital adequacy, liquidity ratio, premium growth and by external factors of GDP and inflation rate of the country.

III. OBJECTIVES OF THE STUDY

The general objective of this study is to investigate the profitability determining factors of non-life insurance companies in India as of company specific and national level factors.

IV. RELATED LITERATURE REVIEW

Williams A., Heins (1995) defines insurance as "a device by means of which the risks of two or more persons or firms are combined through actual or promised contributions to a fund out of which claimants are paid." Dinsdale and McMurdie (1980); A. Raheman, B. Zulfiqar and Mustafa (2007) also defined insurance as "a device for transferring of risks of individual entities to an insurer, who agrees, for a consideration (called the premium), to assume to a specified extent losses suffered by the insured".

A. OVERVIEW OF INSURANCE IN INDIA

Insurance in India goes back to ancient time as it mentioned in Manusmriti, Dharmashastra and Arthashastra. At that time it was considered as pooling of resources for redistributing during natural calamities lie floods, fire, famine and epidemics. The modern insurance come from the first European life insurance by England called Oriental Life Insurance in 1818. The purpose of establishing life insurance at the time was for the safety of European community, who were living in India at the era of colony (Tapen Sinha, 2003). However, later with the efforts of eminent people like Babu Muttyal Seal, the foreign life insurance companies started insuring Indian lives. But they were charged extra premium compared to Europeans. Bombay Mutual Life Assurance Society was the first Indian life insurance company which stated operation in the year 1870.

The first non-life insurance was Triton Insurance Company Ltd. at Kolkata in the year 1850 by the Britshers. In 1907, the Indian Mercantile Insurance Ltd. was established and was the first company to transact all classes of general insurance business. The general insurance was nationalized in 1972 by the act of the General Insurance Business (Nationalization) Act 1972. The recommendation of Mahlorta Committee, which was named by the chair of R.N. Malhotra in 1993, changed the history of Indian insurance industry. Based on the committee report, the Indian parliament passed the establishment of Insurance Regulatory and Development Authority (IRDA) Act in 1999. After IRDAI started its operation in 2000, many private insurance companies entered to the insurance industry and which brought a paradigm shift in the industry (IRDAI, 2015).

A. DETERMINANTS OF PROFITABILITY: EMPIRICAL STUDIES REVIEW

As one of the primary objective insurance companies, profitable is not free gift of achievement in today’s competitive business world. In broad sense the determining factors of profitability in firms especially in financial institutions classified as internal factor and external factors. Some are explaining as firm specific and macro level factors (Rahel, 2013, Suhlylih 2014, Hifza Malik, 2011, Khandoker, Raul and Rahman (2012, Camelia Burja, 2011). Hifza Malik (2011) conducted research to investigate the determinants of profitability in insurance companies of Pakistan. In this study he examined the effects of firm specific factors (age of company, size of company, volume of capital, leverage ratio
and loss ratio) on profitability proxied by ROA. In this study he was explained that a key indicator of insurance companies’ profitability is return on assets (ROA), defined as the before tax profit divide by total assets (TA). Profitability is dependent variable while age of company, size of company, volume of capital, leverage and loss ratio are independent variables.

Sain and Selimović listed the general challenges of insurance industry no data base arrangement, portfolio structure decision, premium calculation (levels and structure), appropriate analysis of cost and benefit and financial services and financial management. As Boadi, Antwi and Larrey (2013) stated in their study to investigate the determinants of insurance companies’ profitability the Return on Assets (ROA) was used as dependent variable (implication of profitability) against a set of independent variables. The internal determining factors were leverage, tangibility, liquidity, size, risk and growth. In the same manner but with different expression Khandoker, Raul and Rahman (2012), stated the firms internal operating performance is basically calculated through its operating profit. But the non bank financial institution companies’ capital structure; composition of capital and debt, operating expenses and its total assets determine its profitability.

As many researchers agree that, the firm specific factories can vary from firm to firm and from country to country. As Jibran et al. (2016) stated the profitability of non-life insurance companies in Pakistan is prejudiced by working capital management, other firm’s specific variables coupled with the macroeconomic variables like Inflation and GDP. Similarly, Kasturi (2006) highlighted that the performance was assessed by maintaining the balance between all the measures in order to achieve success. In this study, he measured the financial performance of insurance company by using both financial ratios and “non-financial measures” that includes customers’ orientation, growth, and firms’ value to the society (corporate social responsibility).

Burca and Bâtrînca (2012) studied the determinants of financial performance in the Romanian Insurance market. In this research they were attempted to analyze the determining factors of insurance industry financial performance in terms of Return on Asset (ROA). In detail as it concluded in the study that financial leverage, growth of gross written premiums and underwriting risk has negative impact on insurance financial performance whereas size of company, retained risk, and solvency margin has a positive linkage between financial performances. Another study conducted in Pakistan by Hifza Malik (2011) also identified the determinants factors of insurance companies’ profitability. Similar to some other studies reviewed above this study also examined firm specific factors affecting profitability particularly; age of company, size, volume of capital, leverage ratio and loss ratio on profitability by understudy of ROA. In this study the researcher calculated ROA by dividing before tax profit by total asset. The study concluded that there is no relationship of age of the company and its profitability while the size of the company and volume of capital has significantly positive relationship. However, company loss ratio and leverage ratio has negative relationship with significant impact.

Many others also studied on the determinants of profitability both the internal and external factors (Boadi et al., .... 2010 in Ghana, Ali Jibran et al…, 2013 in Pakistan; Chen-Ying Lee , 2016 studied macro-economic effect in Taiwan). Similarly; (Hossain Khandoker, R. K. Raul, S. M. Galibur Rahman, 2011; Fadzlan Sufian, 2008; Dorina Kripa and Dorina Ajaslari, 2013; Christos K. Staikouras and Geoffrey E. Wood , 2004; Emine Öner Kayar, 2015; Abdelkader Derbali, 2012; B. Charumathi , 2012) studied on profitability determining factors in different countries.

V. RESEARCH APPROACH

As Creswell (2009), stated there are qualitative, quantitative and mixed approaches of the research designs. The researcher used quantitative research approach to identify the determining factors of profitability of non-life Insurance companies in India. This is because of the quantitative data that were collected about insurance profitability performance from their financial statement as well as for external factors that is at macroeconomic level from World Bank report.

A. DATA SOURCE

Based on the research objective data primarily collected from secondary sources. The main source of data in this study was secondary source, which was retrieved from the financial statement of the general insurance companies in India from their respective website. Therefore, based on survey of quantitative research, the author used to construct an econometric model to identify and measure the determinants of non-life insurance companies’ profitability. The individual companies income statement and balance sheet statements (from their respective company website) was the main source of data and the Insurance Regulatory and Development Authority’s of India (IRDAI) annual reports also to be referred.

B. SAMPLING TECHNIQUES AND SAMPLE SIZE

Among twenty nine non-life insurance companies in India, based on the easily accessibility of data and for research convenient; the researcher purposively selected Eight non-life insurance companies, Six from private and Two from public general insurance companies. The year of data collection scope was limited from the year 2006 to 2016 G.C.

MODEL

\[
\text{ROA}_{it} = \beta_0 + \beta_1 \text{Age}_{it} + \text{Log}\beta_2 \text{Siz}_{it} + \beta_3 \text{LoS}_{it} + \beta_4 \text{CAO}_{it} + \beta_5 \text{LiQ}_{it} + \beta_6 \text{PGR}_{it} + \beta_7 \text{GDP}_{it} + \beta_8 \text{INF}_{it} + \epsilon_{it}
\]

Where,

\[
\text{ROA}_{it}: \text{ return on assets defined as the insurance companies after tax profit over total assets. ROA is the profitability of insurance company i at time t.}
\]

VI. REGRESSION RESULTS AND HYPOTHESES TEST

Under this section the empirical findings from the econometric results on the determinants of profitability of insurance company in India are presented. The data from the sample of eight insurance companies are included for all
eleven years (i.e. 2006-2016). As stated earlier, the models estimated are a combination of both internal variables (i.e. Size of total asset, Capital adequacy, Liquidity, Loss ratio, premium growth and Age) and external variables (i.e. GDP and Inflation). The empirical results of the model of the OLS regression analysis are presented below.

<table>
<thead>
<tr>
<th>Mode</th>
<th>R</th>
<th>R Square Adjusted R Square</th>
<th>Std. Error of the Estimate</th>
<th>Durbin-Watson</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>.558*</td>
<td>.311</td>
<td>.242</td>
<td>.11916</td>
</tr>
</tbody>
</table>

Source: Financial Statement computed by SPSS 20.

Table 1: Model Summary

The coefficient of R-squared provides the explanatory power of the combined internal and external variables on profitability and its significance level. The R-squared result of 31.1% for the Model, which prove that 31.1% of the variation in the dependent variable ROA and explained by the independent variables of the model. The remaining 68.9% of the variation in the dependent variable is left explained by other explanatory variables which are excluded in the study in Model. Statistically, the overall predictive ability of a model is better if Prob (F-statistics) is less than 5%. The estimated Model has Prob (F-statistics) of 0.000, which shows that the independent variables altogether explain the dependent variables ROA very well.

Table 2: ANOVA

Liquidity

H0: There is no significant effect of liquidity on profitability of insurance companies.

Liquidity is the ability of the insurers to fulfill their immediate commitments towards policyholders without having to increase profits on underwriting and investment activities and/or liquidate financial assets.

There is a positive relationship between the return on assets and liquidity. The Beta coefficient for this variable is positive i.e. β=0.19 and is significance at 5% level with a P-Value of 0.000. The coefficient for liquidity of the variables indicate if the amount of liquidity change by one percent the profitability (ROA) of insurance companies will change by 19 percent. Companies with more liquid assets are less likely to fail because they can realize cash even in very difficult situations. This positive sign indicates that when insurance the company’s liquid assets increases, their profitability also increases compared to those which have less liquid assets. This result is consistent with Charumathi, (2012) who found positive and significant relation with return on asset. Based on the regression result the researcher rejects the null hypothesis that liquidity and insurance profitability have no significant relationship and accepts that liquidity has an impact on profitability of insurance companies in India.

AGE OF INSURANCE COMPANY

H0: There is no significant effect of age on profitability of non-life insurance companies.

Age shows the time frame (duration) in which the insurance companies have been providing services. The regression result indicates age has a positive relation, which is significance at 5% level in model. The Beta coefficient for this variable in model is positive i.e. β = 0.02 with a P-Value of 0.005. This implies that older insurance companies are more profitable than younger companies. This may be due to younger firms are more focused on investment future return rather focusing on short run profit and initial time of business had large incurrence of cost while company with long age focus on their profit through adaptation of new technology, quality of service, good management experience, had identified market share and resource utilization. This result is supported by Athanasoglou et al., (2005) who were found a
positive relation between age of company and profitability. Therefore, based on the regression result the researcher rejects the null hypothesis that age and insurance profitability have no significant relationship and accepts that age has an impact on profitability of insurance companies in India.

GROSS DOMESTIC PRODUCT (GDP)

H0: There is no significant effect of GDP on profitability of non-life insurance companies.

The macroeconomic variables (i.e. GDP) are not found to have a significant impact on non-life insurance companies’ return on assets as measures of profitability. Table 4.6 indicates that there is positive impact on insurance profitability and GDP growth rate but is insignificant. As a result the model came with insignificant results which indicated that GDP has no impact on profitability of non-life insurance companies. This regression result similar with Bikker and Hu, (2002) find out the positive relationship between GDP growth rate and profitability. Hence the null hypothesis is accepted. GDP does not have significant impact on profitability of non-life insurance companies in India.

INFLATION RATE

H0: There is no significant effect of inflation on profitability of insurance companies.

There is a negative effect of inflation on insurance companies’ profitability (ROA) which the result is statistically significant. This implies inflation has negatively significant important effect on insurance companies’ profitability. Ijaz Hussain (2011) found that inflation has impact on profitability but concluded has a positive effect. However a study conducted by Reshid (2014) and Alper and Anbar, (2011) found that inflation had a negative effect on insurance companies profitability. Hence, the null hypothesis is rejected inflation does not have significant impact on profitability of non-life insurance companies in India.

VII. CONCLUSIONS

Insurance company in India generates on an average 8.47 cents Profit after Tax for each single rupee of their asset investment. The average total asset of the insurance company in India is about INR 9.29 corer. Its Standard Deviation indicates there is high variation in the insurance company in terms of asset. The liquidity ratio’s mean value is 0.60 in insurance companies. It indicates the insurance companies in India have less capacity to meet their short term liability. Some of the insurance companies show a liability ratio of 0.14, which indicates they face difficulty in meeting short term liability. However, there are companies whose liquidity ratio is 1.82. It indicates strong capacity to meet short term requirement. The mean value of capital adequacy is 0.59. It indicates insurance companies are less financed through equity. Loss ratio that measures total claim over total earned premium its mean value is 0.89 while mean for premium growth shows 0.29.

According to the results, size in terms of total assets, loss ratio, liquidity, age and GDP are positively correlated with ROA while capital adequacy, premium growth and inflation are negatively correlated with ROA. The positive sign of size indicates that larger insurance companies achieve a higher ROA than smaller ones. This means when the insurance companies’ asset goes up the profitability also move the same direction. Likewise, there is positive correlation in insurance company’s liquidity and age with profitability (ROA). This implies the change in these explanatory variables; liquidity and age is positively contributing towards the change in ROA. Based on the results depicted in multiple regression following facts are emerge.

Size (log of total asset), capital adequacy and liquidity have a positive effect on insurance profitability (ROA) with at 1%, 5% and 10% significance level respectively. On the other hand other insurance specific explanatory variables; age, leverage, and loss ratio have negative effect on profitability at 1%, 5%, and 5% significance level respectively. In case of macroeconomic factor, inflation has a positive relation but is insignificant while GDP has a negative effect on ROA but is also insignificant.

As it identified; age and liquidity have a positive effect on insurance profitability (ROA) with significance level of 5% each respectively among firm specific factors. On the other hand other insurance specific explanatory variables; size, capital adequacy, loss ratio and premium growth have negative effect on profitability. In case of macroeconomic factor; inflation has a negative significant relation while GDP has a positive effect on ROA but insignificant. In general, it can be concluded from this empirical study that insurance companies’ specific factors such as age of the firm and liquidity of the firm are the most significant determinants of the profitability of insurance companies and inflation is statistically significant variable among macroeconomic variables in Indian non-life insurance.

VIII. AGENDA FOR FUTURE RESEARCH

This study mainly focused on non-life insurance companies in India by collecting data from 8 insurance companies, which are six private and two public insurance. As findings shows only two internal variables (age and liquidity) and one external variable (inflation) statistically identified significant however the rest hypothesized variables failed to express the model. The researcher proposes for future by increasing the sample size and testing other internal factors will result in expected expression of variables. More importantly, I strongly recommend applying panel data analysis with consideration of both time and cross-section of companies. Finally, measuring profitability by taking ROE as a proxying dependant variable may express more by taking additional variables like leverage ratio, profitability index and etc.
REFERENCES


