Determinants that Affect the Profitability of Non-Life Insurance Companies: Evidence from Pakistan

Qamar Muhammad Ali Jibran[1*], Masood Sameen[2], Aslam Kashif[3] and Khurram Nouman[3]
[1]Department of Management Sciences, COMSATS Institute of Information Technology, Lahore, Pakistan
[2]Institute of Social and Cultural Studies, Punjab University, Lahore, Pakistan
[3]COMSATS Institute of Information Technology, Lahore Pakistan
majqamar@gmail.com

Abstract

The profitability of any organization for a specific time can be considered as the ultimate result of its investing, operating and financing activities. This research paper studies how 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. The results are generated by running balance panel data on Eviews6.The current ratio is taken as demonstrative of working capital management. The results show that current ratio, premium growth and firm size are the key factors in determining the profitability of the firms. The results also show that ROA and ROE of the firms are not influenced by the same variables. The macroeconomic variables also proved significant in determining the profitability of the firms.

Keywords: Non-life Insurance companies, Pakistan, Profitability, Working capital Management, Macroeconomic Variables.

Introduction

An operative working capital management is significant for business executives and creditors as it defines how the firms tackle their risks to avoid insolvency. Insurance companies have grasped the requirement to articulate appropriate working capital management policies to persist healthy working particularly in meeting the demands of the policy holders[1]. By taking into account the heavy rise in operating risk globally and the mounting burden on insurance institutions, it looks sensible to give consideration to the financial fitness of these firms by concentrating on effective working capital management[2]. To efficiently manage liquidity and creditworthiness, the management of commercial bodies would have to choose the optimal level of current assets and current obligations that should be taken by organizations at a specific point in time. Persistence on exploiting returns may lead to a condition of low liquidity, occasionally resulting in bankruptcy[3].

Hence, there is a trade-off concerning profitability and liquidity. It means both the excess and deficiency of the working capital does not suit the organizations. If firms have a positive balance of working capital, then it is the indicator of large idle funds which would decrease their profitability. On the other hand, if the balance of working capital is in negative then this is the indicator of having less credit worthiness[4]. The measurement of firm's efficiency lies in its working capital that characterizes the current assets existing with it. It is a gauge of a short term financial health of firms and of its capability to fulfil daily functioning expenses. There are many measures available for working capital like cash conversion cycle and current ratio[5,6].

The prime concern of this paper is to determine important factors of the profitability of non-life insurance companies so that the cash conversion cycle is not appropriate here.

Pragmatic examination specifies that firm's specific factors like age of firm, premium growth and firm size may be influential to the financial performance of the insurance companies[7]. The observed results of the current study are built by running the balanced panel data of 20 non-life insurance companies of Pakistan on the software E Views 6. The purpose of the study is to investigate the effects of different firm specific factors like turnover, sales growth and liquidity on the profitability of non-insurance firms in Pakistan. Liquidity is typically mentioned as the current ratio, obtained as current assets divided by current liabilities. This current ratio is taken to see the effects of working capital on the profitability[6]. There are many ways to measure the profitability of firms. In this paper, we use two measures of the theory, namely return on assets and return on equity. By taking these two measures the purpose of our study is broadened. Besides determining the factors of profitability of non-life insurance companies we also compare these factors with the measures of profitability.

Materials and Methods

Various studies have been carried out to find the connection of different variables with the profitability of organizations. It includes organizations of diverse character around the globe and has exploited different factors like net income, premium, return on investment and sales growth with various methods like ratio analysis, panel data or pool regression and linear regression

have been used to run the analysis. Although the outcomes of these studies are diverse but the bulk of these analyses ends in a strong affiliation between the profitability of firms and the working capital and specify that effective and efficient working capital management is a significant gauge of monetary fitness of firms.

Management of working capital has proven significant in influencing the firm's profitability and its value[8]. Both negative and positive relation between liquidity, the firm's size and profitability is found in Saudi Arabia[9]. The research also shows the insignificant relationship between the current ratio and size of the firms with the profitability in the automobile sector of Pakistan[10]. The significant positive correlation among sales growth, assets growth and return on assets is seen too whereas, sales growth has proved to be the most significant factor to judge the financial performance of companies[11,12]. Likewise, studied the insurance sector and found the weak association among liquidity, solvency and profitability by using ANOVA[13].

It is also seen that net sales, industry concentration, sales growth and capital intensity play a significant role in the measurement of profitability of firms[14]. A significant relation exists between the working capital and the profitability of the firm[15]. Conducted a cross-sectional analysis of 131 firms for the period of 2001-2004 listed in Athens Stock Exchange and found a significant relationship between working capital and profitability[16]. Found a negative relationship between the working capital and profitability of 94 Pakistani firms for the period of 1999-2004[17]. Similarly, a negative relationship between the profitability and working capital of firms listed in Karachi Stock Exchange (KSE) for the period of 1998-2005 is also established[18]. A significant relation between the working capital management practices and the profitability of 24 manufacturing firms listed in KSE from 1998-2007 is also evident from the litreature[19].

A significant relation between current ratio, liquidity ratio and receivables turnover ratio with the profitability for Hindalco Industries Ltd is also established[20] for the period of 1990-2007. Similarly a negative relation between the proxy of working capital and profitability of Malaysian firms is also found over the period of 1997-2006[21]. Past studies also show the negative relation between the working capital and profitability of Malaysian firms by using correlation and multiple regressions[22]. In Malaysia 172 firms listed with Stock Exhange, a positive relationship between the working capital and profitability is found[23].

An inverse relation between the current ratio and the profitability of the 49 firms listed in Istanbul Stock Exchange is observed for the period of 1993-2007 which means that as the value of the current ration decreases the value of profitability increases[24] which is also further confirmed by Asutay M. and Izhar H.[25]. The negative relation between firm's size and the profitability of Indian manufacturing firms was also found[5].

This study also found a positive relation between profitability and sales growth. Similarly, firm specific factors like riskiness of firms, premium growth, firm size and age of firm coupled with the uncontrollable factors like GDP, exchange rate and lending rate probably affects the financial performance of insurance companies[7]. Lateron researchers studied the relationship between current ratio and profitability of firms and associated them with the solvency of the firms, but excluded the other firm's specific variables which are included in the current study[26]. Discovered a positive and significant relationship of profitability of Islamic and non-Islamic banks with inflation. However, in preceding years, it was found that inflation and profitability do not have any significant relationship[28].

Researchers recognized the factors of non-commercial banks/financial institution's profitability, and they discovered a negative and insignificant relationship between productivity and GDP growth[29]. A study on Tunisian banking examines the effects of financial structure, macroeconomic factors and banks' profitability found that the macroeconomic markers, for example, GDP has no effect on banks' productivity[30]. Another study in South Eastern European locale additionally found that GDP does not introduce any significant impact on banks' profitability[31]. Different researcher support different methods, e.g. panel data analysis and multiple regression to identify determinants of determinants of profitability[32].

This study is restricted to the Pakistani non-life Insurance companies which are listed on Karachi Stock Exchange and are a part of The Insurance Association of Pakistan. There are in total 33 firms in this association. We selected the 20 non-life insurance firms based on following selection criteria.

We included those firms which were established before the year 2000. We included those firms in the analysis, that had the regular data of their financial statements from 2003-2013 with The Insurance Association of Pakistan. We included those firms in the analysis, which had the ending date of 31st December.

These 20 companies were studied over the period of 9 years from 2005 to 2013. We collected the data from the consolidated financial statements of the firms. As we had a balance panel data therefore the total number of observations was 180 firms. The purpose of our research was to analyze the determinants of profitability of non-life insurance companies of Pakistan. The above literature extracts some important variables whose descriptions are mentioned in this section.

Variables and Measurement: Profitability: It is a qualified measure of firm's financial efficiency. The existing study uses two proxies for the profitability. One is named as return on assets (ROA) and the other is named as return on equity (ROE).The first shows the performance of the firms while the successor shows the return to the owners. Due to their importance we have included both of them. By taking two measures of profitability our objective is broadened. We

explained the behaviour of these measures by employing same determinants. ROA and ROE have been measured in many ways in the past by using EBIT[6]. The current study uses the proceeds from underwriting process instead of EBIT; the latter term is widely used in the manufacturing sector. Both proxies are measured by the following formula.

$$\text{RoA}_{\text{Insurance}} = \text{Proceeds from underwriting process} / \text{Total Assets}$$

$$\text{RoE}_{\text{Insurance}} = \text{Proceeds from underwriting process} / \text{Equity}$$

The above variables are used as the dependent variables for the analysis. Due to two dependent variables we run the panel data on Eviews 6 twice in two different models.

Liquidity: This term is very vital for the non-life insurance companies because the inadequate level of liquidity shows interruptions in meeting commitments of companies with respects to the clearance of entitlements demand by the policyholders of insurance companies[2]. The liquidity can be measured in many ways like quick and current ratio. Since the quick ratio is widely used in non-financial sector, therefore it is inappropriate for the current studies. Many studies also used the current ratio to measure the liquidity in the financial sector like[6].Current ratio is measured by the following formula.

$$\text{Current Ratio} = \frac{Current\ Assets}{Current\ Liabilities}$$

The current assets and current liabilities of insurance companies are different from other financial companies. Their major current assets are comprised of the amount of premiums which are due from the policy holders. Similarly the current liabilities are comprised of the amount of premium towards the working capital of the insurance companies and hence the current ratio is used as a proxy for it.

The hypothesis for the study can be expressed in following way.

H1: Current ratio has an impact on the ROA and ROE of the firms

Premium Growth: The association between profitability and premium growth can be described by the theory of pecking order. Growing firms show a higher demand of external financing as compared to other firms[7]. Studies show a deep relation between the current and the previous level of premiums[33]. For this reason, current study takes this variable as the independent variable for the analysis. It is measured by the following formula.

$$\text{Premium Growth} = \frac{\text{Current Premium} - \text{Previous Premium}}{\text{Previous Premium}}$$

H2: Premium growth has an impact on the ROA and ROE of the firms

Firm Size: Literature shows that this is also very vital factor in determining the profitability of firms. The current study takes it as an independent variable while in the past it was used as the control variable[6]. Size can be determined in many ways like it can be measured as the amount of total assets like measured by Monica S. Navendu and S. Yagnesh R.[5]. The structure of the financial sectors different from the non-financial one. Similarly the non-financial sector has a huge amount of tangible assets which are not present in the financial sector. For the current study, the size of the firm means the amount of net premium.

H3: Firm Size has an impact on the ROA and ROE of the firms

Gross Domestic Product (GDP): The Gross Domestic Product (GDP) is an estimation of total economic activity inside of an economy. It is considered as an external determinant of banks' profitability given the positive relationship between the development of the economy and the prosperity of the banking industry.

In light of 14 Islamic banks in 8 nations, researcher distinguished that, utilizing Return on Assets (ROA) and Return on Equity (ROE) as dependent variables and found that economic growth has a significant positive relationship[34]. Later on, researchers followed in their studies to identify important determinants of Islamic benefit in GCC nations and in Malaysia separately[28,35]. Both studies additionally found that GDP development has a huge positive association with Islamic bank's profitability.

Inflation: The impact of inflation on bank's profitability was initially talked about by Molyneux P. and Thornton J.[36]. Revell accepted that inflation could be a component that caused variation in bank's profitability. This hypothesis were also tested by utilizing the consumer price index (CPI) as a proxy for inflation, both studies found that inflation had a significant association with benefit[37].

Model: Since we have two dependent variables so there are two different models which are run independently and in the end we will compare their results. To establish the relationship between variables which are explained above, the panel regression is deployed. It is used because of the cross sectional and time series nature of the data. Precisely, the econometric models are written below.

Model Number 1
$$ROA = \beta 0 + \beta 1 X_{size} + \beta 2 X_{liquidity} + \beta 3 X_{premium\ growth} + \beta 4 X_{inflation} + \beta 5 X_{GDP} + \varepsilon$$

Model Number 2
$$ROE = \beta 0 + \beta 1 X_{size} + \beta 2 X_{liquidity} + \beta 3 X_{premium\ growth} + \beta 4 X_{inflation} + \beta 5 X_{GDP} + \varepsilon$$

Table-1
Measurement of Variables

Variables	Measurement	Expected Relation with Profitability
ROA	Proceeds from premium/ Total Assets	+
ROE	Proceeds from premium/ Equity	+
Size of Firm	Log of Net Premium	+
Liquidity	Current Assets/ Current Liability	-
Premium Growth	(Current Premium- Previous Premium)/Previous Premium	+
Inflation	CPI	+
Economic Growth	GDP	+

Results and Discussion

The results of the Model I are shown in the following Table-2 and 3. The Table-2 shows that all of our independent variables are significant which are related to the past studies[5,8,9,23]. The Table-2 shows that there exists a positive relation between ROA and the current ratio. This implies that as the value of current ratio increases the value of ROA also increases. As the major current asset of non-life insurance companies is the amount of premium due from the policy holders. So as this amount increases, the amount of proceeds from premium also increases

and so does the profitability.

Turnover also shows a positive relation with the ROA. The reason lies in the large proceeds coming from the premium. This means that when the volume of premium increases the size increases and hence the net proceeds also increase. Similarly the growth of premium also has the same meaning. GDP has the negative relation with the ROA which is consistent with the previous studies[30]. The reason is that as the real GDP per person increases people can afford the losses and do not opt insurance.

Table-2
Result of Model I

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	3.475211	3.169477	1.096462	0.2744
Inflation	-0.241370	0.158208	-1.525650	0.1289
GDP	-0.805566	0.323630	-2.489155	0.0137
Current Ratio	0.602822	0.191628	3.145790	0.0019
Growth	0.049010	0.012573	3.898024	0.0001
Turnover	2.156831	0.713517	3.022818	0.0029
R-squared	0.154706	Mean dependent var		5.146040
Adjusted R-squared	0.130416	S.D. dependent var		5.988561
Prob(F-statistic)	0.000019	-	-	-

Table-3
Result of Model I

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	16.40799	7.305619	2.245941	0.0260
GDP	-2.557117	0.745966	-3.427928	0.0008
Inflation	-0.856913	0.364669	-2.349838	0.0199
Liquidity	0.598128	0.441701	1.354145	0.1774
Turnover	5.381911	1.644650	3.272375	0.0013
Growth	0.087789	0.028981	3.029188	0.0028
R-squared	0.135788	Mean dependent var		12.65040
Adjusted R-squared	0.110955	S.D. dependent var		13.65167
Prob(F-statistic)	0.000106	-	-	-

The above results show that liquidity has no effect on ROE. It shows that owners are only concerned with their return and not with the liquidity position of the firms which are similar with past studies like[9]. Remaining all independent and control factors are proven significant which are consistent with the previous research like[10,11,13,29]. The Table-3 also shows the significant, but the negative relation of control variables with the ROE.

Here one thing is very important related to the value of the adjusted R square. The value is on the lower side in both of the models which depicts that the profitability of insurance firms cannot be fully explained by using these variables. Here we only mention that these are also key variables in determining the profitability of non-life insurance companies of Pakistan. There are other variables which have an impact on it, but those are out of the scope of the studies. The results show that, except liquidity all other variables affect in the same manner in both the models. Liquidity shows the positive significant relation with ROA, but proves insignificant in case of ROE. The reason is that the investor has more focus on the returns rather than the liquidity of it.

Conclusion

The study was conducted on 20 non-life insurance companies of Pakistan, which are part of the Insurance Association of Pakistan. The data was collected through the consolidated financial statements of the companies. The study was conducted to find the determinants of profitability of these firms. Based on the results of panel data that was run on Eveiws we can conclude that the determinants of both ROA and ROE are not same. Current assets were proved significant in case of ROA, but it proved insignificant in case of ROE. The control variables also play their part in determining the profitability of firms. Current ratio has positive relationships with the ROA which shows that the higher current ratio will bring higher profits for firms. The size of the firm also proved vital in determining the

profitability of the firms. It affects positively both the ROA and ROE of the firms as with the case of premium growth. The latter term also proves significant for both the measures. The management of firm may use this paper to increase their profitability. Our research findings suggest that by just trying to increase their size and growth of their premiums these firms can achieve higher profits.

References

1. Abid F. and Mseddi S. (2004). The impact of operating and financial leverages and intrinsic business risk of firm value. International Conference AFFI 2004 at Cergy-Ponthoise.

2. Naveed A., Zulfqar A. and Usman A. (2011). Determinants of performance: A case of life insurance sector of Pakistan. *International Research Journal of Finance and Economics*, 61(1), 123-128.

3. Samiloglo F. and Dermirgunes K. (2008). The effect of working capital management on firm profitability: evidence from Turkey. *Int J Appl Econ Financ,* 2(1), 44–50.

4. Singhania M., Sharma N. and Rohit J. (2014). Working capital management and profitability: evidence from indian manufacturing industries.

5. Monica S. Navendu and S. Yagnesh R. (2014). Working capital management and profitability: evidence from Indian manufacturing companies. 41(3), 313-326.

6. Gartchie J.G., Samue G.G. and Richard K.A. (2013). Degree of Financial and Operating Leverage and Profitability of Insurance Firms in Ghana. *International Business and Management,* 7(2), 57-65.

7. Abor J. (2008). Determinants of the capital structure of Ghanaian firms. African Economic Research consortium,

Research paper No. 176, Nairobi.

8. Smith (1980). Profitability versus liquidity tradeoffs in working capital management, in readings on the management of Working Capital. West Publishing Company, New York, St.

9. Abuzar and Eljelly (2004). A.M. Liquidity—profitability trade off: An empirical investigation in an emerging market. *Int J Commer Manag.* 14(2), 48–61.

10. Zubairi J.H. (2013). Impact of working capital management and capital structure on profitability of automobile firms in Pakistan.

11. McGuire et al. (1998). Corporate social responsibility and firm financial performance. *Acad Manag J,* 31(4), 854–872.

12. Paquette L.R. (2005). Growth rates as measures of financial performance. *J Account Educ.* 23(1), 67–78.

13. Huselid M.A. (1995). The impact of human resource management practices on turnover, productivity, and corporate financial performance. *Acad Manag J,* 38(3), 635–672.

14. Deloof M. (2003). Does working capital management affect profitability of Belgian firms? *J Bus Financ Account.* 30(3–4), 573–588.

15. Tryfonidis L.I. (2006). Relationship between working capital management and profitability of listed companies in the Athens stock exchange. *J Financ Manag Anal,* 19(1), 26–35.

16. Nasr M. and Raheman A. (2007). Working capital management and profitability–case of Pakistani firms. *Int Rev Bus Res Pap,* 31, 279–300.

17. Afza T. and Nazir M. (2009). Impact of aggressive working capital management policy on firms' profitability. *IUP J ApplFinanc.,* 15(8), 19–30.

18. Raheman A. and Afza T. (2010). Working capital management and corporate performance of manufacturing sector in Pakistan. *Int Res J Financ Econ.* 47(Issue), 151–164.

19. Singh J.P. and Pandey S. (2008). Impact of working capital management in the profitability of hindalco industries limited (CFA). *Univ J Financ Econ,* 6(4), 62–72.

20. Zariyawati M., Annuar M., Taufiq H. and Abdul Rahim A. (2009). Working capital management and corporate performance: case of Malaysia. *J Mod Account Audit,* 5(11), 47–54.

21. Saad N. and Mohamad N. (2010). Working capital management: the effect of market valuation and profitability in Malaysia. *Int J Bus Manag,* 5(11), 140–147.

22. Den Mehmet. and Oruc Eda. (2009). Relationship between efficiency level of working capital management and return on total assets in Ise (Istanbul Stock Exchange). *Int J Bus Manag,* 4(10), 109–114.

23. Uyar A. (2009). The relationship of cash conversion cycle with firm size and profitability: an empirical investigation in Turkey. *Int Res J Financ Econ,* 24.

24. Shin H. and Soenen L. (1998). Efficiency of working capital management and corporate profitability. *Financ Pract Educ,* 8(2), 37–45.

25. Asutay M. and Izhar H. (2007). Estimating the Profitability of Islamic Banking: Evidence from Bank Muamalat Indonesia. *Review of Islamic Economics*, 11 (2), 17-29.

26. Srairi S.A. (2009). Factors Influencing the Profitability of Conventional and Islamic Commercial Banks in GCC Countries. *Review of Islamic Economics*, 13 (1), 5-30.

27. Sufian F. and Habibullah M. (2009). Bank Specific and Macroeconomic Determinants of Bank Profitability: Empirical Evidence from the China Banking Sector. *Frontiers of Economics in China*, 4(2), 274-291.

28. Naceur S.B. (2003). The Determinants of the Tunisian Baning Industry Profitability: Panel Evidence. University Libre de Tunis Working Paper.

29. Athanasoglou P.P., Brissmis S.N. and Delis M.D. (2005). Bank Specific, Industry-specific and Macroecnomic Determinants of Bank Profitability. Working Paper, Bank of Greece.

30. Garcı´a-Teruel P.J. and Martı´nez-Solano P. (2007). Effects of working capital management on SME profitability. *Int J Manag Financ,* 3(2), 164–177.

31. Myers S.C. (1984). The capital structure puzzle. *Journal of Finance*, 39(1), 575-592.

32. Bashir A. (2000). Determinants of Profitability and Rates of Return Margins in Islamic Banks: Some Evidence from Middle East. Paper presented at ERF's Seventh Annual Conference, 26-29 October 2000, Amman, Jordan.

33. Wasiuzzaman S. and Tarmizi H.A. (2010). Profitability of Islamic Banks in Malaysia: An Empirical Analysis. *Journal of Islamic Economics, Banking and Finance*, 6(4), 51-68.

34. Revell J.R.S. (1980). Costs and Margins in Banking: An International Survey. Paris: Organization for Economic Co-operation and Development.

35. Bourke P. (1989). Concentration and Other Determinants of Bank Profitability in Europe, North America and Australia. *Journal of Banking and Finance*, 13(1), 65-79.

36. Molyneux P. and Thornton J. (1992). Determinants of European Bank Profitability: A Note. *Journal of Banking and Finance*, 16(6), 1173-1178.