ABSTRACT

Organizational performance has attracted scholarly attention in corporate finance literature over the several decades. However, in the context of insurance sector, it has received a little attention. Current study examines the impact of firm level characteristics (size, leverage, tangibility, risk, growth, liquidity and age) on performance of listed life insurance companies of Pakistan over seven years from 2001 to 2007. The results of Ordinary Least Square (OLS) regression analysis indicate that size, risk and leverage are important determinants of performance of life insurance companies of Pakistan while ROA has statistically insignificant relationship with growth, profitability, age and liquidity.

Keywords: Performance, firm level characteristics, life insurance companies.
INTRODUCTION

The performance of any firm not only plays the role to increase the market value of that specific firm but also leads towards the growth of the whole industry which ultimately leads towards the overall prosperity of the economy. Measuring the performance of insurers has gained the importance in the corporate finance literature because as intermediaries, these companies are not only providing the mechanism of risk transfer but also helps to channelizing the funds in an appropriate way to support the business activities in the economy. Insurance companies have importance both for businesses and individuals as they indemnify the losses and put them in the same positions as they were before the occurrence of the loss. In addition, insurers provide economic and social benefits in the society i.e. prevention of losses, reduction in anxiousness, fear and increasing employment. Therefore, the current business world without insurance companies is unsustainable because risky businesses have not a capacity to retain all types of risk in current extremely uncertain environment.

For the past six decades, Pakistani life insurance companies have shown the impressive progress which not only creates the employment opportunities but also enhances the business activities in the economy. Financial statistics reported the phenomenal growth of Pakistani life insurance companies as these companies comprise 52% and 69% share of entire (life plus non-life) insurance market in terms of net premiums and assets (Insurance Year Book, 2007). In addition, the premium of these life insurers increased by 36% in 2007 (Insurance Year Book, 2007) shows the remarkable progress of life insurance sector of Pakistan. Therefore, what determines the performance of the life insurance industry is an important discussion for the regulators and policy makers to support the sector in achieving the excellence so that desirable economic fruits could be reaped from the help of the life insurance sector of Pakistan.

LITERATURE REVIEW

The Determinants of performance have been extensively studied in corporate finance literature from the last several decades. For instance; by selecting the sample of US banks, Berger (1995) investigated the impact of capital asset ratio on return on equity. He concluded that capital asset ratio has a positive relationship with profitability. Anghazo (1997) examined the impact of firm level characteristics on US bank net interest margin. The results documented
that bank interest margin positively related with leverage, opportunity cost, default risk and management efficiency. Neeley and Wheelock (1997) explored the determinants of profitability of commercial banks and find that profitability positively related with changes in per capita income.

To investigate the performance of banks, Ben Naceur and Goaied (2001) used the sample of Tunisian banks over the period of 1980 to 1995. They advocated that the banks who tried to maintain their high deposits and improve their capital and labour productivity are performed well. Guru et al. (2002) examined the determinants of performance of Malaysian banks over the 10 years period from 1986 to 1995. For this purpose, they selected both micro and macro level characteristics. The results revealed that inflation positively while efficient expense management and high interest rate negatively related with profitability. The results of Goddard et al. (2004) showed that Profit is an important prerequisite for future growth of banks and the banks that maintain a high capital assets ratio tend to grow slowly.

A study conducted by the Sufian, F. et al (2009) to investigate the determinants of profitability by selecting the non-commercial banks financial institutions. The findings indicated that credit risk and loan intensity negatively related with profitability while large size and financial institutions with high operational expenses tended to high profitability ratio. Hakim and Neaime (2005) observed that liquidity, current capital and investment are the important determinants of banks profitability. Aburime, U. (2006) identified the firm level determinants of profitability of Nigerian banks over the five years period from 2000 to 2004. He concluded that credit portfolio, size, capital size and ownership concentration are important determinants of Nigerian banks. Kosmidou (2008) showed that money supply growth has insignificant impact on profitability while GDP and stock market capitalization to assets are significant and have negative relation with the ROA. Samitas and Papadogonas (2009) illustrated that firms profitability is positively affected by size, sales growth and investment. On the other hand, leverage and current assets negatively related with profitability.

Several studies also have been conducted to measure the performance of the insurance companies. For instance; Sloan, A and Conover, J.(1998) deduced that functional status of
insurers do not affect the profitability of being insured but public coverage have significant impact on profitability of insurance companies. Chen and Wong (2004) examined that size, investment, liquidity are the important determinants of financial health of insurance companies. Chen et al. (2009) examined the determinants of profitability and the results showed that profitability of insurance companies decreased with the increase in equity ratio. In addition, insurance companies must have to diversify their investment and use effective hedging techniques which help them to create better financial revenues.

**RESEARCH METHODOLOGY**

**Sample and Data**

Currently, there are five life insurance companies operating in Pakistan and all these five companies are selected to measuring their performance over the period of seven years from 2001 to 2007. For this purpose, financial data has been collected from financial statements (Balance Sheets and Profit and Loss a/c) of insurance companies and “Insurance Year Book” which is published by Insurance Association of Pakistan.

**Model**

\[
PR = \beta_0 + \beta_1 (LG) + \beta_2 (TA) + \beta_3 (SZ) + \beta_4 (LQ) + \beta_5 (AG) + \beta_6 (RK) + \beta_7 (GR) + e
\]

Where:

- \( PR \) = Performance (Net income before interest and tax divided by total assets)
- \( LG \) = Leverage (Total debts divided by total assets)
- \( TA \) = Tangibility (Fixed assets divided by total assets)
- \( SZ \) = Size (Log of premiums)
- \( LQ \) = Liquidity (Current assets divided by current liabilities)
- \( AG \) = Age (Difference b/w observation year and establishment year)
- \( RK \) = Risk (standard deviation of ratio of total claims to total premiums)
- \( GR \) = Growth (Percentage change in premiums)
- \( e \) = the error term
Table 4.1 presents descriptive analysis of the firm level characteristic associated with life insurance sector. This study considers performance as dependent variable whereas leverage, size, growth, tangibility, liquidity, age and risk as independent variables. The industry average is provided by mean along with are the minima and maxima for respective year while standard deviation indicates the inter-industry variation of the variables value within the respective year. Table 4.1 indicates that the minimum value of industry mean of leverage is 0.79 in 2004 and 2007 while the mean value is at its maximum level in 2006 at 0.84. The maximum variation in leverage is observed in 2007 valuing at 0.30 and minimum is found in 2003 at 0.19.

The variable size constantly shows the increasing trend from year 2001 to 2007. The mean value of size is at maximum level in 2007 i.e. 7.51 whereas minimum mean value for size is observed at 6.02 in 2001. In addition, the inter industry variation is minimum in 2001 at 2.12. Table 4.1 also shows that growth of Pakistani life insurance companies is not consistent in all seven years and mean value of growth is reached 34.84 in 2007 from 11.53 which is observed in 2001. The mean value of performance (dependent variable) is maximum in 2007 valuing at 0.07 and the minimum value is observed in 2001, 2002, 2003 and 2005 at 0.02. The standard deviation is also not very high i.e. around 0.02 as compare to other variables except in the year 2007 in which it touches it maximum of 0.07.

Table 4.2 also provides descriptive results of tangibility, liquidity, age and risk for the period of seven years from 2001 to 2007 for the life insurance sector of Pakistan. The mean values and standard deviations of tangibility is around 0.03 and 0.02 respectively in all seven years from 2001 to 2007. The mean values of liquidity are indicating an increasing trend from the minimum of 1.70 in 2001 to the maximum value at 6.36 in 2007. The standard deviation is also establishing an increasing trend from a minimum value of 0.76 in 2001 to a maximum value of 8.63 in 2007. The mean value of risk is at its lowest level in 2003 at 0.58 with a minimum standard deviation of 0.45 while these values have reached their maximum level in 2007 i.e. 6.35 and 6.51 respectively.
TABLE 4.1: Descriptive Statistics

TABLE 4.1 (Continued): Descriptive Statistics

<table>
<thead>
<tr>
<th>Years</th>
<th>Leverage</th>
<th>Size</th>
<th>Growth</th>
<th>Performance</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean</td>
<td>SD</td>
<td>Min</td>
<td>Max</td>
</tr>
<tr>
<td>2001</td>
<td>0.80</td>
<td>0.21</td>
<td>0.45</td>
<td>0.99</td>
</tr>
<tr>
<td>2002</td>
<td>0.81</td>
<td>0.20</td>
<td>0.47</td>
<td>0.99</td>
</tr>
<tr>
<td>2003</td>
<td>0.82</td>
<td>0.19</td>
<td>0.51</td>
<td>0.99</td>
</tr>
<tr>
<td>2004</td>
<td>0.79</td>
<td>0.24</td>
<td>0.38</td>
<td>0.99</td>
</tr>
<tr>
<td>2005</td>
<td>0.83</td>
<td>0.21</td>
<td>0.47</td>
<td>0.99</td>
</tr>
<tr>
<td>2006</td>
<td>0.84</td>
<td>0.20</td>
<td>0.49</td>
<td>0.99</td>
</tr>
<tr>
<td>2007</td>
<td>0.79</td>
<td>0.30</td>
<td>0.26</td>
<td>1.00</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Years</th>
<th>Tangibility</th>
<th>Liquidity</th>
<th>Age</th>
<th>Risk</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean</td>
<td>SD</td>
<td>Min</td>
<td>Max</td>
</tr>
<tr>
<td>2001</td>
<td>0.03</td>
<td>0.02</td>
<td>0.00</td>
<td>0.06</td>
</tr>
<tr>
<td>2002</td>
<td>0.03</td>
<td>0.02</td>
<td>0.00</td>
<td>0.06</td>
</tr>
<tr>
<td>2003</td>
<td>0.03</td>
<td>0.02</td>
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<td>0.05</td>
</tr>
<tr>
<td>2004</td>
<td>0.02</td>
<td>0.02</td>
<td>0.00</td>
<td>0.04</td>
</tr>
<tr>
<td>2005</td>
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<td>2006</td>
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<tr>
<td>2007</td>
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<td>0.02</td>
<td>0.00</td>
<td>0.05</td>
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</table>
TABLE: 4.2 REGRESSION COEFFICIENTS & THEIR SIGNIFICANCE LEVEL

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>t</th>
<th>Sig.</th>
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<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
<td>Beta</td>
<td></td>
</tr>
<tr>
<td>(Constant)</td>
<td>.010</td>
<td>.051</td>
<td></td>
<td>.204</td>
</tr>
<tr>
<td>Leverage</td>
<td>-265</td>
<td>.090</td>
<td>-1.579</td>
<td>-2.940</td>
</tr>
<tr>
<td>Size</td>
<td>.038</td>
<td>.009</td>
<td>1.722</td>
<td>4.120</td>
</tr>
<tr>
<td>Growth</td>
<td>-4.69</td>
<td>.000</td>
<td>-.032</td>
<td>-2.45</td>
</tr>
<tr>
<td>Tangibility</td>
<td>.507</td>
<td>.367</td>
<td>.183</td>
<td>1.382</td>
</tr>
<tr>
<td>Liquidity</td>
<td>.001</td>
<td>.003</td>
<td>.058</td>
<td>.205</td>
</tr>
<tr>
<td>Age</td>
<td>-.003</td>
<td>.003</td>
<td>-.235</td>
<td>-1.169</td>
</tr>
<tr>
<td>Risk</td>
<td>.004</td>
<td>.002</td>
<td>.374</td>
<td>1.903</td>
</tr>
</tbody>
</table>

R Square 0.816
Adjusted R Square 0.749
F statistics 12.062
* Significant at 1% level
** Significant at 10% level

REGRESSION ANALYSIS

Tables 4.2 reports the results of regression analysis in which seven independent variables are regressed by using the data of life insurance sector of Pakistan from 2001 to 2007. The value of R square (0.816) indicates that performance of life insurance companies is nearly 82% dependent on independent variables i.e. size, leverage, growth, tangibility, age, risk and liquidity. Therefore, performance is mainly defined by these seven variables of life insurers in Pakistan over seven years.

Table 4.2 indicates that leverage is negatively and significantly related with the performance of the life insurance companies. This predicts that the performance of highly levered Pakistani life insurance companies is not up to the mark. Table 4.2 also shows that coefficient of variable size is positive and statistically significant at 1% level. This predicts that
performance of large size life insurance companies is better than small size companies. The negative coefficient of growth indicates a negative relationship between growth and performance. However, this negative relationship is found to be statistically insignificant with the p-value of 0.809. Therefore, growth is not considered as a proper explanatory variable of performance in life insurance sector.

The beta values of explanatory variables tangibility and liquidity are 0.507 and 0.001 respectively with the positive coefficient sign. However, tangibility and liquidity are not statistically significant with the large p-values. Therefore, tangibility and liquidity are not considered a powerful explanatory variable to define the performance of life insurance companies in Pakistan over seven years. Negative coefficient of variable age specifies the negative relationship between performance and age of the Pakistani life insurance companies. However, the relationship between performance and age is statistically insignificant. Table 4.2 indicates that the coefficient of variable risk is positive and statistically significant at 10% level. According to the nature of insurance industry, ratio of total claims to total premiums (loss ratio) is used as a proxy to measure the risk of the life insurance companies in Pakistan. Positive sign shows a positive relationship between performance and risk of the insurance companies i.e. performance increases with the increase of loss ratio.

CONCLUSION

The current study investigates the impact of firm level characteristics on performance of the life insurance sector of Pakistan over the period of seven years from 2001 to 2007. For this purpose, size, profitability, age, risk, growth and tangibility are selected as explanatory variables while ROA is taken as dependent variable. The results of OLS regression analysis reveal that leverage, size and risk are most important determinant of performance of life insurance sector whereas ROA has statistically insignificant relationship with profitability, growth, tangibility and liquidity.

REFERENCES


