Effect of the Firm-Specific Factors on the Performance of the Listed Jordanian Insurance Companies

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Abstract

One of the key performance indicators and a major concern for any type of organization in any industry is profitability; this paper seeks to investigate the effects of a firm’s micro factors on performance of Jordanian insurance companies measured by return on assets (ROA) which is considered as proxy of profitability. The study utilizes a panel data of 24 listed insurance companies during the time period of 2008-2014. Finding include that liquidity, leverage and under writing risks have a negative and a significant effect, market share and size of the company have statistically a positive and a significant effect on the profitability of the Jordanian insurance industry.

Key Words: Insurance, Performance, Profitability, Firm-specific factors.
JEL Classification: G22, D22, C1, C13, C23, L25.
1. Introduction

The Insurance sector in Jordan has become a safe shield for all economic sectors; it is considered a complementary sector for the financial, production and services sectors. In recent years the insurance system has been considered as an essential element for all economic activities.

According to the universally accepted concepts, insurance itself is like any other activity that can be defined as is a cooperative device that spreads the losses of the insured over those that have agreed to protect themselves against that risk (Rejda and McNamara, 2014). There are several kinds of assets which consumers may wish to insure. For instance, before any person can be allowed to take an insurance policy for any property, that person must evidently have an insurable interest in the subject matter of insurance. (Mishra and Mishra, 2007).

The insurance sector is a safe shield for all other sectors and is considered a very important as its performance will be inversely have an effect on other sectors, especially those that are unstable. This paper aims to analyze the internal and external factors that influence performance of insurance companies.

2. Jordanian Insurance Sector Background

According to the Jordan insurance federation, insurance services first began in 1946 when the Egyptian Middle East company, which had been founded in 1921 by an Egyptian French capitalist, established a branch in Jordan. In the early fifties, Jordan experienced a significant growth within the insurance sector, specifically in the accidental and shipping activities. The "Jordan Insurance Company" was the first insurance company to be established in Jordan.

At that time, establishing an association of insurance companies was needed to regulate the insurance market.

During the sixties, the number of insurance companies increased until the mid-eighties, where it reached 23 companies. Due to the economic recession during the eighties and random competition in the insurance sector resulting in many companies experiencing a loss of profitability, the government established, Law No. 30 of 1984, a regulatory law for monitoring the activities of insurance companies. This law was established to decrease the issuance of new licenses for insurance companies and raising the capital amount of an insurance company to 600,000 J.D. This forced some companies to merge with other companies, or shut down and exit the market, leading to a decline in the number of insurance companies to 17 in 1987. This number of companies remained stable until 1994.

In 1995, Law No. 9 was established which provided the granting of licenses for new insurance companies with a capital of 1 million for companies carrying out direct insurance business, 0.2 million for reinsurance companies, 4 million for foreign insurance companies. As a result of the new law, in 1995, eight new insurance companies entered to the Jordanian
market, and the number of operating companies increased to 25 domestic companies, till the number of companies reached in 2000 to 27.

In 2001 one company had shutdown, and the number of companies dropped to 26 until 2006. During 2007-2008, three new insurance companies have entered the Jordanian market and the number of companies rose to 29. At the end of 2008, "DARKOM" company left the sector to work in the finance sector, and the number of companies decreased to 28 until 2011. During 2012-2013 three companies had shutdown, and the number of operating companies in the sector decreased to 25. At the end of 2014 the number of companies was 24 (Jordan Insurance Federation JOIF, 2016).

3. Importance of Study

The overlapping of insurance services in the economic activities and sectors through the forward and backward linkages\(^1\) refers to the importance of an insurance sector in an economy. It has become one of the most important requirements to achieve financial and economic transactions. That was evidenced by Horizontal integration\(^2\) of the insurance sector so that it has become a basic requirement of life requirements. Moreover, the importance of this paper enhanced when dealing with insurance companies because: 1) insurance companies’ transfers risk in the economy 2) provide a mechanism to promote savings 3) promote investment activities (Kripa and Ajasllari, 2016).

According to the report that was issued by the Jordanian Ministry of Industry, Trade and Supply in 2016, the results of the Jordanian insurance sector for the year 2015 indicates a decline in insurance performance, where total written insurance premiums for 2015 rose to (550.4) million, posting an increase of 4.7% over the previous year, but an insurance sector had achieved a net profit before tax by amount 30.2 million J.D, compared with a profit was 41.1 million J.D in 2014. Moreover, the sector achieved a technical profit of subscription accounts in Jordan 34 million J.D, compared with a technical profit that was equal 34.9 million J.D in 2014.

The total investments of insurance companies in 2015 was estimated to be worth 533.6 million J.D compared with 534.4 million in 2014, and the total compensation paid in 2015 was worth 387 million J.D, an increase of 3.8% from the year 2014. The total profit for financial assets and investments was estimated to be 7.4 million J.D, compared with a profit of 8.8 million J.D. in 2014. This indicates a decline by 16%. The interest income was worth $12.7

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1 - Forward and Backward linkages are describing the process of how a company in a given sector purchases and sells its inputs and outputs, or supplies from a company in a different sector.

2 - Horizontal integration is the acquisition of additional business activities that are at the same level of the value chain in similar or different industries.
million compared to $14.9 million in 2014. Therefore, the loss rate (ratio of net cost of compensation to net revenue from premiums) in insurance companies was 88.5% in 2015.

4. Literature Review

The recent relevant literatures mentioned two groups of variables that have been found to share significant relationships with performance of insurance companies “profitability”. Where profitability of insurance companies is influenced by both internal and external factors and these factors divided into micro and macro variables. Research conducted by Browne et al. (2001); Boadi et al (2013); Lee (2014); Kaya (2015); Hailegebreal (2016); and Datu (2016), identified important economic and market factors and insurer specific characteristics related to life and non-life insurer performance.

For internal and micro factors that influence in insurer performance. Browne et al. (2001) found that firm performance was positively related to firm size, liquidity, bond portfolio returns. Almajali et al (2012) aimed to investigate the factors that mostly affect financial performance of Jordanian Insurance Companies. These factors were (Leverage, liquidity, Size, age, Management competence index). The results showed that the following variables (Leverage, liquidity, Size, Management competence index) had a positive statistical effect on the financial performance of Jordanian Insurance Companies.

Sambasivam and Ayele (2013) examined the effects of firm specific factors (age of company, size of company, volume of capital, leverage ratio, liquidity ratio, growth and tangibility of assets) on profitability measured by (ROA). The results showed that leverage, size, volume of capital, growth and liquidity are most important determinant of performance of life insurance sector whereas ROA has statistically insignificant relationship with, age and tangibility. The findings show that liquidity does have a negative impact on profitability and provides further implication on the effective risk management practices in the companies.

Boadi et al (2013), aimed to find out the determinants of the profitability of insurance firms in Ghana. The study measured profitability by (ROA), and the determinants were Leverage, Liquidity, Size, Risk, and firm growth. The study found that there is a positive relationship between leverage, liquidity and profitability of insurance firms in Ghana.

Lee (2014) investigated the relationship between firm specific factors like (Firm size, Financial leverage, Underwriting risk, Firm growth, Reinsurance, Return on investment, Market share, Diversification, Input cost) on profitability in Taiwanese property-liability insurance industry. 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 a significant influence on profitability in both operating ratio and ROA models.
In a study conducted by Kaya (2015), eight independent variables were tested to determine the firm-specific factors that affect the profitability of non-life insurance companies that operate in Turkey. These are size of the company, age of the company, loss ratio, insurance leverage ratio, Current ratio, premium growth rate, motor insurance, and premium retention ratio. Results show that the firm-specific factors affecting the profitability are the size of the company, age of the company, loss ratio, current ratio, and premium growth rate.

Kripa and Ajaslari (2016) identified that internal factors play a major role in determining profitability measure by (ROA). The study sought to identify the impact of growth rate, liabilities, liquidity, fixed assets, volume of capital and company size on the profitability of insurance companies. The results show that factors such as growth rate, liabilities, liquidity and fixed assets are the main factors affecting the profitability of insurers, where the growth rate is positively associated with profitability, while liabilities, liquidity and fixed assets are negatively correlated. Company size and the volume of capital are positively correlated with the profitability of insurance companies’, but their impact is statistically insignificant.

Hailegebreal (2016) conducted a study to identify the determinants of profitability (ROA) of Ethiopian insurance industry. The study examined the firms specific factors which are the age of company, size of company, leverage ratio, liquidity ratio, premium growth, technical provision, underwriting risk. The study revealed that under writing risk, technical provision, and leverage have a negative and significant effect whereas premium growth, and age of the company, have a statically positive and significant relationship with the profitability of Ethiopian insurance industry. Datu (2016) also examined the relationship between firm specific factors and profitability (ROA). The empirical underpinning revealed that underwriting risk, reinsurance utilization, firm size, financial leverage and input cost significantly affect on profitability.

For external and macro factors that influence in insurer performance, Browne et al (2001) found that firm performance was negatively related to unanticipated inflation. Doumpos and Gaganis (2012) estimated the performance of non-life insurers and found that macroeconomic indicators such as gross domestic product (GDP) growth, inflation and income inequality influence the over performance of firms. Lee (2014) investigated the relationship between macroeconomics factors like (Economic Growth Rates, Inflation rates) and profitability in Taiwanese property-liability insurance industry. The results show that economic growth rate has significant influence on profitability in operating ratio model but insignificant influence on profitability in ROA model.

Study of Hailegebreal (2016) shows the importance of macroeconomic factors which are (GDP and Inflation rate) in determining the performance of insurance companies. The study
found that GDP and performance are related positively, but inflation and performance are related negatively. Datu (2016) also examined the relationship between macroeconomics and profitability in Philippine non-life insurance market. Return on assets (ROA) and operating ratio were used for profitability. The results show that there is no evidence found in the Gross Domestic Product (GDP) and inflation rate on profitability in both ROA and operating ratio.

5. Research Methodology

5.1 Research Questions

High performance of any company determines the position of that company in the market it serves which enhances the market growth. The variation in the number of insurance companies over the last years may be caused by the variation of profits between insurance companies within the country, which leads to believe that both internal and external factors play a major role in determining profitability. The insurance market in Jordan is relatively small by comparing it with international insurance markets, where its contribution in GDP was about 2.07% for 2015. It is among the highest in the Middle East and North Africa region, which has average contribution about 1.9%, but still lower than the global level, which was at 6.23% in 2015 (Ministry of industry, trade and supply, 2016).

This study’s problem arises from the fluctuations (ups and downs) in the number of insurance companies, where some of these companies suffer losses which force them to shutdown and exit from the market in recent years. In addition to a steep fall in profits of insurance companies by -88.5% in 2015, accompanied with an increase in total written insurance premiums by 4.7% during the years 2014-2015. The question is: what are the expected factors that affect on performance of the Jordanian insurance companies?

5.2 Research Design

According to the nature of research problem and the research perspective, a research design and method could be based on the both of quantitative and qualitative or a combination of these two approaches, a mixed method approach.

5.3 Target Population and Sample Size

According to Amman Stock Exchange, there are 24 listed insurance companies in Jordan. Through purpose sampling, companies established before the year 2008 were selected. Accordingly, 24 insurance companies were included in this study during the years 2008-2014.

5.4 Types and Sources of Data

This study employed Secondary data which was collected from the annual reports of each listed insurance company and through the Jordanian Statistics Department during the fiscal year of 2008 to 2014. Thus, this study will be utilizing the Panel data.

5.5 Variables with its Measurement

Table 1 shows variables of the study with its measurement (See Appendix).
5.6 Model Specification

This paper employs ordinary least square (OLS) regression model to analyze the panel data and examine the effects of firm specific factors on profitability of insurers. The study determines which of the two models (fixed effect (FE) and random effect (RE)) is best fit by applying the Hausman test for random effects. Through literature review, this study constructs an empirical regression model below:

\[ \text{ROA}_t = C + \beta(X_{it}) + U_t \]

Where ROA is return on assets, Xit are independent variables for insurers “i” at time “t”, C is constant, \( \beta \) is the coefficient and U is the error term.

6. Results and Discussion

The data collected from annual reports of each insurance company and department of statistics were analyzed utilizing the (E-views 9) software and then were interpreted in the following section.

6.1 Regression Analysis

To determine which model of effects FE or RE is appropriate to study’s regression model, Hausman test was conducted. According to Chi-square statistic 19.23 and its probability 0.001 the Hausman test shows that FE is appropriate for the regression model. The results of regression analysis were as table 2 (See Appendix).

The regression result in the table 2 shows the relationship between profitability as proxied by Return on Assets (ROA) and liquidity (LQW) is negative and significant (p-value of 0.01) at 0.99 percent confidence interval. This is an indication that when the liquidity increases, its return on assets will fall. This result is similar with the result of Hailegebreal (2016), Kripa and Ajasllari, (2016), Ayele (2013), and Almajali et al (2012). Perhaps the reason is that the financing of liquidity in capital structure of insurance companies in Jordan relies heavily on debt rather than equity. Thus the insurance companies in Jordan should reconsider its capital structure.

Leverage (LAV) and return on assets of Jordanian insurance industry have a negative and a significant (with p-value of 0.00) relationship. Showing that while the leverage of companies increased, the profitability of the industry will move to the opposite direction. These results identify while the insurance companies increase their debt (if the insurance companies operate with huge debt), the profitability of the industry will significantly decrease. These results were also achieved by Hailegebreal (2016), Datu (2016), Kaya (2015), Lee (2014), Ayele (2013), and Almajali et al (2012).

The results show that size of the company has a positive and a statistically significant (p-value of 0.00) effect on the Jordanian insurance industry’s profitability. This is an indication
that when the size of the company increases, its return on assets will increase. The results of this research is similar with the previous studies done by Hailegebreal (2016), Datu (2016), Kripa and Ajasllari, (2016), Kaya (2015), Lee (2014), Ayele (2013), and Almajali et al (2012).

Market share (MS) and return on assets of Jordanian insurance industry have a positive and a significant (with p-value of 0.00) relationship, Showing that while the market share of companies increased, the profitability will increases as well. The high market share might result in high profit, mainly because high market share boosts a firm’s market advantage and its ability to set prices, which helps the firm to boost profit and achieve economies of scale. These results are consistent with the previous study done by Lee (2014).

As identified in this study, underwriting risk (UWRR) has a negative and a significant effect (p-value 0.00) on Jordanian insurance industry’s profitability. These results are consistent with the previous studies conducted by Hailegebreal (2016) and Datu (2016). This is an indication that when the underwriting risk increases by 1%, its return on assets will decrease by 5%. The results in table 2 show that the value of R-square is 66%, meaning 66% of the profitability variation of insurance industry in Jordan is explained by the independent variables. Durbin Watson coefficient (DW=1.91) is close to 2, meaning that there is no evidence of autocorrelation between the residuals as a role of thumb. Moreover, F-statistic and its probability show that the overall regression model is statistically significant. Under these circumstances, the panel analysis seems to be appropriate for this research model.

7. Conclusion

Profitability considered as one of the main objectives of financial management and economics because it maximize the owner’s wealth. This study attempts to examine the effects of firm specific factors (liquidity ratio, leverage ratio, size of company, market share, underwriting risk) on profitability of Jordanian insurance industry. 24 listed insurance companies established before 2008 were included in the study. This study found that liquidity, leverage and under writing risk have a negative and a significant effect on the profitability of Jordanian insurance industry, market share and size of company have a statically positive and a significant effect on the profitability of Jordanian insurance industry. However, this study suggests that insurance companies should critically reconsidering its capital structure and underwriting risk and should minimize the level of leverage. This study also suggests the merger between those companies that are threatened by a loss in order to increase their market share and size of company as both are affect positively on profitability.

References


### Appendix

<table>
<thead>
<tr>
<th>Variable</th>
<th>Measures</th>
<th>Sign</th>
<th>Source</th>
</tr>
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<tbody>
<tr>
<td>Market Share (MS)</td>
<td>Firms’ Gross premium / Sectors’ Gross premium</td>
<td>+</td>
<td>Lee (2014)</td>
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<td>-------------------</td>
<td>-----------------------------------------------</td>
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<tr>
<td>Underwriting risk (UWR)</td>
<td>claim incurred / premium earned</td>
<td>-</td>
<td>Hailegebreal (2016), Datu (2016)</td>
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**Sources**: empirical literatures

### Table 2: Regression Analysis

<table>
<thead>
<tr>
<th>ROA = -2.17 - 0.04 LQW -0.20 LAV + 0.32SIZE + 0.11 MS - 0.05 UWRR</th>
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<tbody>
<tr>
<td>t-statistic</td>
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<td>P-value</td>
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<td>R²</td>
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<td>F-statistic</td>
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<td>F- Probability</td>
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<td>Durbin-Watson Stat.</td>
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<td>Observation</td>
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