THE EFFECT OF CAPITAL STRUCTURE ON PERFORMANCE OF INSURANCE COMPANIES: EVIDENCE FROM JORDAN

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Abstract: The relationship between capital structure and profit cannot be ignored because the improvement in profitability is essential for the company to continue its business. The objective of the paper to examine the relationship between capital structures on the profitability of the Jordanian insurance firms. A sample of 19 insurance firms listed on the Amman Stock Exchange for a period of 10 years from 2008 – 2017 was selected. The regression analysis and correlations are used to estimate the functions relating to profitability that measured by return on equity (ROE) and Tobin's Q, with measures of capital structure: Short term debt (STD), Long term debt (LTD) and Equity financing (TQ). Also, inflation rate and sales growth are used as control variables. Empirical results show (STD) and (LTD) are positively correlated with the (ROE) while negatively correlated with Tobin's Q, (ETQ is positive correlated with all profitability measures, the result also shows that financial leverage is positively significant to profitability. The results confirmed that an increase in leverage position is associated with an increase in profitability.

Keywords: capital structure, performance, insurance companies
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Introduction

The Company always strives to maximise profits, so the company must take care to make the appropriate decisions that affect its profitability, one of the most critical factors affecting the profitability of a company is the decision to choose the optimal funding source. The capital structure refers to how the company finances its assets, both internally Sources and externally Sources. In other words, debt financing is short-term debt and long-term debt. The second source is equity financing, which is retained earnings and capital paid by the owners. The Company must choose the right mix of stocks, debt or securities. This mix is called the optimal

capital structure that increases the interest of the company where the cost of capital is reduced, and the value of the company rises Abrar & Javaid (2016).

Choosing the ideal capital structure is one of the most sensitive financial decisions taken by management, which is based on comparing the advantages and costs of debt to equity, it is usually tricky for business organisations to determine the right mix of stocks and debt. This decision is important because of the need to maximise returns to the various regulatory departments. It is also essential because of the impact of such a decision on the company's ability to cope with its competitive environment subsequently, determining the appropriate capital requirements and sources of fundraising is extremely important. This is because finance represents the heart of all business. Capital structure is one of the favourite topics in the finance field Nagendra & Pasha (2017).

The objective of this study is to study the impact of the capital structure on the profitability of insurance companies in Jordan, Insurance companies are the most essential elements in the financial sector, which constitute the most significant proportion of all sectors in the Jordanian economy, despite this vital sector is currently living in the most challenging circumstances, where the losses of the insurance sector in the last decade exceeded 120 million Jordanian dinars (Tarawneh, 2015). where the independent variable will be measured using three capital structure proxies, Long term debt (LTD) , Short term debt (STD) and the second proxy is the Total Equity (TDQ) as a representative of internal and external financing for insurance companies ,This study will use one of the accounting values to assess the performance of the company (ROE) also will use One of the market performance measures, such as Tobin's Q (TQ) to measuring the dependent variable is the profitability of insurance companies in Jordan.

Literature Review

The use of debt in the capital structure of the company is called the term "leverage", where the importance of financial leverage lies in the fact that it reduces Reduce the tax burden because the interest paid by the company on the debt is deducted from the taxable income (Anarfo & Appiahene(2017) From this perspective, the issue of capital structure arises, in corporate finance theories, the seminal work by Modigliani and Miller (1958) in capital structure provided a basis for the expansion of the theoretical framework within which various theories were about to arise in the future. Theory concluded that that financial leverage does not affect the firm's market value. Their theory was based on very limited assumptions which do not hold in the real world. These assumptions do not include any taxes, Modigliani and Miller (1963) reviewed their previously position by incorporating tax benefits as determinants of the capital structure of the company.

Since Modigliani and Miller (1963) have supervised the impact of personal taxes, Miller (1977) has made a significant contribution by correcting the 1963 dispute. Based on several assumptions, Miller serves as a model to show how leverage affects the company's value. When personal and corporate taxes are taken into account, this model indicates that in that market equilibrium, the corporate tax advantage is eliminated from the effects of personal taxes and thus the inadequacy of the capital structure. Taggart (1980) expanded Miller's analysis of the conditions of unfinished capital markets and the special costs associated with corporate debt. He concluded that Miller's results could be supported, and all capital structures were considered to be quite rational for at least some institutions.

Trade-off theory (Myers 1984) the theory gives the prediction that, there exists an optimal target financial debt ratio, at which point the value of the firm is maximised. This theory concluded

that the company should choose the capital structure by balancing the costs and benefits of debt and equity and the firms should firms seek debt levels that balance the tax advantages of additional debt Opposite the costs of possible financial distress,, Because high-profit companies are less likely to face bankruptcy risks because of their increased ability to meet their debt obligations, they may tend to have more debt in their capital structure. Therefore, they will demand more debt to maximise their tax shield at more attractive costs of debt. For these considerations, the trade-off theory predicts a positive relationship between leverage and profitability.

Over the past few years, many theories have arisen about the structure of capital and its impact on the profitability of the company, and Research findings have not agreed on the relationship between capital structure and profitability. Fredit. (2014) conducted a study on the impact of the capital structure on profitability. The sample size consisted of 22 companies listed from 2006 to 2012. The correlation and multiple contractions helped in the analysis of the data. The study found that corporate influence has a positive relationship with profitability. Therefore, that there should be a balance at a time when the level of leverage used in the capital structure is determined.

Abidemi (2012) examined the impact of optimal capital structure on Nigeria firm performance, among 10 firms from the year 2000 to the year 2009. In this study, the debt ratio was applied as a capital structure variable against company performance. The results showed a link between debt ratio distribution and corporate performance. The author found that manufacturing industries are in line with the trade-off theory, denoting the positive link between debt ratio and corporate performance. Company performance and environments are likely to change over time, and for this reason, the target may change as well. In making an adjustment to their capital structure, companies are likely to move towards the best debt ratio, and this is in line with the past financial behaviors of companies. Aburub (2012) believes that the capital structure of the company has had a significant positive and statistical impact on the company. Accounting procedures and market performance, Also both Priya (2013), Chisti & Sangmi (2013) and AhmedKaranja (2014) showed a positive relationship between profitability and capital structure In Nigeria, Kayode (2014) examined the impact of capital structure on firm performance. For the purpose, the author employed panel data obtained from 10 companies, and the data were from 2003 to 2012. In the determination of the relationship between performance and capital structure, descriptive and regression techniques were used. The results denote the negative link between capital structure and firm performance. In other words, an increase in the level of debt finance causes interest payments to increase, and this causes profitability in reduce. This finding is in line with pecking-order theory, which suggests that firms demonstrate preference towards raising capital in the following order: from retained earnings, from debt, and from the issuance of new equity.

A study conducted in Pakistan by Habib &the Minister (2016) aimed to study the relationship between the capital structure and performance of the non-financial sector in Pakistan, using panel data for ten years, which ranged from 2003 to 2012. Short-Term Debt to Asset, Long-Term Debt to Asset, Total Debt to Asset are employed as independent variables, while ROA is used as a measure of profitability and a dependent variable, regression analysis has been used as a random effect to see the impact of debt on profitability. The results indicate an essential but negative relationship between short-term debt, long-term debt, total debt and return on assets. Also, both of Kumari (2015), Revathy & Santhi (2016) show a negative relationship between capital structure and profitability.

Farid (2015) conducted a study in Tanzania on the impact of capital structure on profitability, using panel data of six companies listed on the DSM during the 5-year period from 2009 to 2013, during which 30 observations of the team data were obtained. Mixed results, a negative relationship between the ratio of debt to equity and return on equity. Different findings indicated a positive relationship between ROA and all capital structure variables. As a result of this conclusion, it was not clear whether the capital structure affected performance or not. Rouf (2015) found conflicting results or lack of relationship between capital structure and profitability. There is an urgent need to conduct further research and studies on the factors that affect the profitability of companies, especially on the profitability of financial companies in developing countries. (Shamsuddin et al. 2018), (Aziidah 2017), (Patjoshi 2016), (Kaya 2015), have pointed to the need to study the financial performance of companies represented by profitability and identify the factors that affect the level of profitability of companies .furthermore, in Jordan, studies on the profitability of companies in various sectors such as Al-Momani and Obaidat (2017) AlGhusin (2015) Alqudah and Laham (2013)confirmed the need for further studies on the factors affecting the profitability of companies..

Capital Structure and Profitability

Profitability is an important explanatory variable that influences capital structure. However, there are no clear theoretical predictions on its direction with some theories arguing for a negative relationship with the debt ratio while others argue the opposite. For example, in the context of pecking order theory, profitable firms are likely to have sufficient finance to ensure they do not need to rely on external sources. This explanation suggests a negative relationship between profitability and leverage. In sharp contrast, in the agency theory framework of Jensen and Meckling (1976) and Jensen (1986), leverage alleviates the agency problems by forcing managers to pay out the firm's free cash flow. Debt financing ensures that management is disciplined to make efficient investment decisions and that they do not pursue individual objectives as this would increase the probability of bankruptcy (Harris and Raviv 1990). In situations of information asymmetry, increases in leverage of profitable firms can signal quality financial management. Hence, this theory predicts a positive association between leverage and profitability. According to the tax-based models, profitable firms should borrow more, ceteris paribus, as they have more significant needs to shield income from corporate tax. However, the interest tax shield hypothesis may not work for those firms that have other avenues, like depreciation, to shield their taxes (DeAngleo and Masulis 1980)

Methodology

To measure profitability dependent variable, we used the ROE which is measured by dividing net income on owner's equity and Tobin's Q which is measured by dividing the total market value of assets on book value of assets, as a proxy for the firm's profitability. Capital structure independent variable was measured as debt ratios (short-term debt to total assets, long-term debt to total assets, and Total equity to total assets). Two control variables (sales growth and Inflation Rate) were also included as standard determinants of corporate profitability.Sales growth (SG) is measure as sales of the current year minus sales of the previous year divided by sales of the current year. Inflation Rate (INF) is measure as the current average price level minus price level a year ago divided by price level a year ago.To identify the effect of capital structure on firm's performance. For investigating the profitability of the Jordanian Insurance companies. This study applied regression using static Panel data will be used for this study to identify the effect of capital structure on firm's performance. For investigating the profitability of the Jordanian Insurance companies.

The general model;

Y it = α + β X it + μ it

Where,

Y it = is the dependent variable.

B0 = is the intercept.

X it = is the independent variable.

μ it = are the error terms.

i = is the number of firms and

t = is the number of time periods.

The regression models used are as follows:

Equation 1

ROA It = β_0 it + β_9 STD + β_1LTD it + β_8 (TQ) + β_5 INF it + β_4 Growth it + ε it t

Equation 2

(TQ) It = β_0 it + β_9 STD + β_1LTD it + β_8 (TQ) + β_5 INF it + β_4 Growth + ε it t

Where: ROA is the return on assets, (TQ) is Tobin's Q, STD is short term debt to total assets, LTD is long term debt to total assets, TQ is total equity to total assets, INF is inflation rate, Growth is sales growth,

Data Collection

The data used was secondary, and most of the data will be extracted from annual reports of 19 Jordanian insurance companies listed in the Amman Stock Exchange. Considering the availability of data and companies in operation for all the ten years (2008 - 2017), 19 of the 28 insurance companies were selected as a sample, and all of them are listed on the Amman Stock Exchange

Table 1: Descriptive Statistics of the Dependent, Independent and Control Variables

Descriptive Statistics					
Variable	**Obs**	**Mean**	**Std. Dev.**	**Min**	**Max**
ROE	190	-0.9595	13.4826	-185.7664	2.9765
Tobin's Q	190	0.4847	0.2708	0.0315	1.7364
STD	190	0.1965	0.1257	-0.4023	0.7902
LTD	190	0.3878	0.1713	0.0175	1.0580
ETQ	190	0.4169	0.1617	-0.1684	0.9236
Sales growth	190	-0.1321	1.6590	-18.8262	0.9062
Inflation Rate	190	3.6780	4.1324	-0.8800	13.9000

Table above shows the maximum Return on equity of Jordan Insurance firms is 297.65% while the minimum shows a loss of -48576.64%. While he Tobin's Q of Jordanian firm is far better than the ROE. The average Tobin's Q is 48.47%, implying that the market valuation of Jordanian firms is high; the average Tobin's Q is 48.47%, meaning that the market valuation of Jordanian firms is high. About the poor performance of ROE, it means that the Jordanian Insurance sector is overvalued, which may lead to great adverse selection and agency conflict relationship between the shareholders and the firm's managers. The reason for this is that

corporate managers of Jordanian insurance firms are concerned about the firms and their interest with less interest in shareholders wealth creation.

Evidence in table 1 shows that Jordanian insurance companies rely on long-term debt over short-term debt and equity financing. This indicates that Jordanian firms practice the trade-off theory of capital structure to take the opportunity of the tax benefits of debts. However, the difference between the percentage of debt and equity financing (say 58.43% minus 41.69%) represent the financing risk or agency costs borne by the equity owners of the Jordanian Insurance firms.

As for control variables, the maximum sales growth is 90.62%. However, the average sales growth across Jordanian Insurance firms is a loss of 13.21%. This implies that there is a problem of sales and asset turnover in Insurance firms in Jordan. The standard deviation of inflation rate is high about its mean value. This implies that the inflation rate may have a significant negative effect on the financial performance of Jordanian Insurance firms.

Correlation Analysis

This section presents the correlation analysis between the variables of this study with emphasis on the independent and control variables. The importance of the correlation analysis is a method of statistical evaluation used to study the strength of a relationship between numerically measured, continuous variables, The purpose of such analysis is to find out if any change in the independent variable results in the change in the dependent variable or not, The essence is to know the distribution of the data of this study and its suitability for the use of ordinary least square (OLS, FEM and REM) regression technique

Table 2: Correlation Analysis (Test of Multicollinearity)

	STD	LTD	ETQ	Asset Size	Firms Age	Sales growth	Inflation Rate
STD	1.0000						
LTD	-0.4142	1.0000					
ETQ	-0.3251	-0.7200	1.0000				
Asset Size	0.0760	-0.3013	0.2466	1.0000			
Firms Age	0.0578	0.0056	-0.0496	0.2634	1.0000		
Sales growth	0.0076	0.0456	-0.0541	-0.0869	0.0936	1.0000	
Inflation Rate	-0.0154	-0.2133	0.2388	-0.1136	-0.1043	0.1329	1.0000

Table 2 shows that there is no presence of multicollinearity in the data series as there is no correlation coefficient equal to or greater than 0.8. Hair et al. Male (2017) that correlation coefficient 0.8 and above indicates a multi-link problem. Also Table shows a negative correlation between capital structure variables. The higher the short-term debt (STD), the lower the long-term debt and equity financing and vice versa. However, there is a high negative correlation between long-term debt and equity financing. This means and emphasizes agency conflict between debtors and shareholders.

Table 2 shows that there is a positive relationship between equity financing (long-term debts and short-term) and inflation rate.However,debt financing has a negative correlation with the inflation rate , indicating that as inflation rate increases increases (signifying an efficient and overvaluation of the financial markets), Jordanian firms tend to use high equity financing.

Table 3: Relationship between capital structure and (ROE) of Jordanian Insurance Firms

	(1)
Dependent Variable: Return on Equity (ROE)	
VARIABLES	**FEM**
STD	91.0413*
	(54.6313)
LTD	72.8409
	(55.2595)
ETQ	104.7419*
	(56.4156)
Inflation Rate	0.2556
	(0.2925)
GDP growth	-0.8426
	(0.9456)
Constant	-279.1437**
	(131.7511)
Observations	190
R-squared	0.0867
Number of firms	19

Standard errors in parentheses
*** $p<0.01$, ** $p<0.05$, * $p<0.1$

The table above presents the regression results between ROE (as the dependent variable), STD, LTD, ETQ (as the independent variables), and GDP growth, asset size, sales growth, inflation rate and GDP growth (as the control variables).The results of the study revealed that all capital structure index is used in this study (LTD, STD, and ETQ) have a significant positive impact on return on equity, but the influence of short-term debt and equity financing have a more significant impact on return on equity than long-term debt. It implies that the use of large equity financing favours equity owners more than when long-term debt financing is used in the capital structure pattern of Jordanian Insurance firms. To the control variables, only sales growth negatively affect the return on equity. This Results is supported by Addae & Hughes (2013). In contrast, the results of this study contradict the results of Awuah (2016); Hamid, Nassar (2016).

Table 4: Relationship between capital structure and (Tobin's Q) of Jordanian Insurance Firms

	(1)
Dependent Variable: TOBIN's Q	
VARIABLES	**FEM**
STD	-0.6113
	(0.7092)
LTD	-0.5771
	(0.7174)
ETQ	0.0810
	(0.7324)
Inflation Rate	0.0049
	(0.0038)

GDP growth	0.0301**
	(0.0123)
Constant	4.8761***
	(1.7104)
Observations	190
R-squared	0.5160
Number of firms	19

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

The table above presents the regression results between Tobin's Q (as the dependent variable), STD, LTD, ETQ (as the independent variables), and GDP growth, asset size, sales growth, inflation rate and GDP growth (as the control variables).The analysis revealed a discrepancy in the results as short-term debt and short-term debt has a negative effect on Tobin's q variable, while equity financing has a positive impact. This result supports the assumption of the Irrelevance theory of capital structure claimed by Modigliani and Miller (1958) that capital structure does not determine the value of the firm (Modigliani & Miller, 1958), this result is consistent with those of Vuong, & Mitra (2017) and Kodongo & Maina (2015). In contrast, the results of this study contradict the results of Ghanavati, Khanqah and khosroshali (2012); Salim & Yadav (2012).

Conclusions
Based on the findings of this paper, we can conclude that there is a relationship between capital structure and profitability. It is because interest on the debt is tax deductible in Jordan. The results suggest that profitable firms depend more on debt as their main financing option. But the results indicate that equity financing is a more lucrative source of funding for the company. Although interest on the debt is tax deductible, a higher level of debt increases default risk, which in turn, increases the chance of bankruptcy for the firm. Therefore, the firm must consider using an optimal capital structure. The optimal capital structure includes some debt, but not 100% debt. Which means that, balance the ratio of debt/equity ratio, will minimise the cost of capital. Based on the findings obtained from the results, the following recommendations were made. The management of insurers should place greater emphasis on raising equity capital through retained earnings and issuing shares of stocks to obtain sufficient capital in financing their core business operations rather than relying heavily on debt capital in their capital structure.

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