Effect of Financial Leverage on the Financial Performance of Jordanian Public Shareholding Companies: Applied Study on the Financial Sector of Jordan for the Period of 2015-2019

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ABSTRACT

This paper aimed to demonstrate the effect of financial leverage measured through the liability-to-equity ratio on financial performance measured by the return on equity and the return on assets (ROA) in Jordanian public shareholding financial companies listed on the Amman stock Market. To achieve the objectives of the study, the descriptive analytical approach and simple regression analysis were used. The study population was represented by public shareholding companies listed on the Amman Financial Market during the period of 2015-2019. A total of 25 companies were selected as for the study sample. The study concluded that financial leverage affects the financial performance measured through the return on property rights in Jordanian public shareholding companies(ROE) and financial leverage does not affect financial performance measured through ROA. The study recommended that financial departments in financial institutions should identify factors that influence ROA that serve the company and work to achieve the optimal exploitation. For assets that generate additional profits to maximise the wealth of owners.

Keywords: Financial Leverage, Financial Performance, Return on Equity, Return on Assets
JEL Classifications: G

1. INTRODUCTION

The process of making financial investments and financing decisions is one of the most important functions of financial managers, who aim to maximise the market value of enterprises and manage financial risks. Through financial management, a balance between returns and risks can be achieved to determine the optimal mix of the capital structure. Therefore, considering the nature of the facility and its financial position, financial managers must choose the optimal capital structure that determines the necessary sources of financing that the facility will rely on to finance its investments, whether through external borrowing or financing.

Financing by borrowing is expressed in financial leverage, that is, the use of financial instruments that result in an amplification of the effect of profits or losses on the investor. Financial leverage is used to describe debt ratios because increasing these ratios leads to the following: the greater the effect of financial leverage on the facility's profits, the less the facility relies on loans to finance its assets and the less they are exposed to risks (Sheikh 2008).

Financial leverage leads to an improvement in the financial performance of a facility because an increase leads to an increase in profits and borrowing that creates tax abundance improves the return on the shareholders' equity and maintains control in the facility(Alsaeed, 2000).

This study aims to know the financing policies used by Jordanian public shareholding financial companies. Firstly, the percentage of financial leverage in the financial companies' reliance on borrowing or equity financing is determined. Then, the level

of financial performance of the Jordanian public shareholding financial companies is assessed by analysing the indicators of return on property rights and ROA. Finally, the effect of financial leverage variables on financial performance is determined.

The decision to finance through debt or property rights is considered a strategic decision for financial managers in establishments (Velnampy and Nires 2012) because several sources of financing are available; some of which depend on property rights, whereas some depend on loans and other traditional and modern sources (Mohamed, 2010). To reduce the cost of financing and increase the market value of the share, establishments seek to achieve an ideal capital structure through a financing mix (Akintoye, 2008). An optimal financing structure is characterised by many characteristics. Firstly, financing needs must be obtained at the lowest cost and least risks. Secondly, the profitability of the enterprise and the return on invested funds must be maximised. Furthermore, a balance must be achieved between the components of the financing structure, in addition to the lack of rigidity in the financing structure, but rather flexibility (Alsaeed, 2000). Ordinary stocks, non-amortised preferred shares and retained earnings are amongst the most important sources of ownership financing. As for the sources of borrowing financing, they are long-term loans, bonds and preference shares that are eligible Extinguishing and others. Several factors must be considered when determining the types of funds that a facility uses. These factors include profitability, liquidity, asset structure, sales volume, growth rate, degree of focus and the position of financing institutions towards risks and others.

2. LITERATURE REVIEW

The financial sector represents one of the main pillars in the development and growth of the gross domestic product of various countries. It is also an important criterion for the use of modern technology, which leads to an increase in the intensity of competition between establishments. Building and developing society and achieving the goals of the owners and maximising their wealth, and since the financial performance depends on the ability of the facility to reach the optimal mix of the capital structure, and the establishment's decisions require a balance between internal and external financing through the comparison between borrowing financing and financing by property rights, the effect of raising financial analysis on the financial performance of Jordanian public shareholding companies in the financial sector by raising the following two questions:

Does leverage affect financial performance measured through return on equity (ROE) in the Jordanian financial sector?

Does leverage affect financial performance measured through return on assets (ROA) of the Jordanian financial sector?

On the basis of the questions above, the following hypotheses are formulated:

H_{O1}: No statistically significant effect exists at the 5% significance level of the leverage measured through the ROE of Jordanian public shareholding companies.

H_{O2}: No statistically significant effect exists at the 5% significance level of the leverage measured by the ROA of Jordanian public shareholding companies.

Financial managers need to determine the effect of financial leverage on financial performance because the financial decisions taken by all relevant parties in choosing their financing method leads to the improvement of financial performance and return on property rights. Therefore, this study is important because it contributes to theory and practice that the study aims to achieve, as well as the important role that borrowed funds play in increasing the value of the establishment.

2.1. Theoretical Review

Financial performance represents a mirror that reflects the performance of establishments because it focuses on using financial indicators to measure the extent of the achievement of goals, contributes to providing financial resources and provides the facility with investment opportunities that help it meet the needs of owners and achieve their goals (Alkhatib, 2010). Through financial performance, a facility can make it possible for investors to follow up and know the activity of the establishment. Financial performance also helps follow up and know the surrounding economic and financial conditions; thus, in addition to conducting a process of analysis, comparison and interpretation of financial statements to make appropriate decisions for an establishment(Alkhatib, 2010), the extent of the effect of the financial analysis tools can be assessed in terms of profitability, liquidity, activity and debt.

Profitability ratios are considered one of the important indicators for measuring performance because they measure the extent of a facility's ability to create profits and indicate the extent of efficiency of departments in maximising the available resources to achieve profits. The most important amongst these ratios are as follows:

- ROA expresses the extent of the success of the facility's management in optimising the use of its assets to create profits (Gibson, 2008); it is measured as follows:

    Rate of ROA = Profit after tax / Average total assets.

- ROE represents the return that the administration realises from every dinar invested by ordinary shareholders (Mohamad, 2016)); it is measured as follows:

    Rate of ROE = Profit after tax/Average total equity

2.2. Previous Studies

Many studies have dealt with the financial leverage, Kane et al. (1989) aimed to find the relationship between the cost of financing from owned and borrowed sources and financial leverage on the one hand and the rate of return on the other hand. The results showed that there is a positive relationship between the cost of financing and financial leverage.

Faff (2002(tested the effect of financial leverage on systemic risks using the time series method. The study sample included 348 American companies during the period of 1979-1994. The results showed a strong and positive relationship with statistical

significance between financial leverage and systemic risks in various economic sectors. Aivazian and Ge (2003) aimed to measure the effect of financial leverage on investment decisions. The study included 863 Canadian companies for the period of 1982-1999. The study adopted several models to study the relationship between leverage and investment. The results revealed that financial leverage has a negative effect on the rate of return on investment.

Shubiri (2010) examined the determinants of capital structure with the financial leverage of Jordanian industrial companies during the period of 2004-2007. The study concluded that a positive statistically significant relationship exists between the size of the company, the structure of the assets, the rate of growth and tax and financial leverage; moreover, a statistically significant relationship exists between ROA and financial leverage, and no statistically significant relationship exists between financial leverage and each of the company's age and company risks.

Rehman (2013) studied the relationship between the financial leverage and financial performance of a sample of 35 companies that specialise in sugar production in Pakistan for the period of 2011-2016. The results showed a negative relationship between debt ratio with earnings per share and net profit margin with ROE.

Abubakar (2015) aimed to determine the relationship between financial leverage and financial performance of banks in Nigeria through identify the effect of debt-to-equity ratio and debt ratio on ROE The study sample consisted of 11 out of 23 banks during the period of 2005-2013. The study used the descriptive analytical method. The results showed a high relationship between debt-to-equity ratio and financial performance measured by the ROE, but no statistically significant relationship exists between debt ratio and financial performance.

Nassar (2016) investigated the effect of capital structure on financial performance. The study selected a set of financial performance ratios represented by ROE, profit per share, ROA and debt ratio. Furthermore, the capital structure was measured. To achieve the objectives of the study through the liability-to-property rights ratio, the descriptive analytical approach was adopted. The study sample consisted of 136 public industrial companies listed on the Istanbul Stock Exchange during the period of 2002-2007. The results of the study revealed a positive effect of the capital structure measured through the liability to equity ratio on each of the financial performance measured through(ROE, earnings per share, ROA, and debt ratio) combined and separately, Mohamed (2016). This study aimed to assess the impact of leverage on the financial performance of non-financial companies Listed on the Nairobi Stock Exchange, the study sample consisted of 48 companies using secondary data obtained from the annual financial statements of companies, during the period 2011-2015.

The results of the study showed a negative statistically significant relationship between financial leverage and financial performance, and a positive relationship between the size of the company and financial performance, and the existence of a positive relationship between liquidity and financial performance of non-financial companies.

Oleiwi (2019) investigated the effect of financial leverage measured by the liability-to-equity ratio on financial performance measured by ROE and ROA in Jordanian public shareholding companies listed on the Amman Stock Exchange for the period of 2013-2017. The results showed that financial leverage affects financial performance measured by ROE in the Jordanian public shareholding companies; by contrast, financial leverage does not affect financial performance measured by ROA in Jordanian public shareholding companies.

3. DATA AND ESTIMATION TECHNIQUES

3.1. Data
The study was covered in two frameworks, the theoretical framework and the practical one. In the theoretical framework it was done, addressing some financial concepts related to the topic, as for the applied framework; The researcher has adopted On the descriptive and analytical approach, in which it aims to analyze the impact of financial leverage on financial performance in Jordanian public shareholding companies listed on the Amman stock exchange. The study was adopted in the collection Data on: Secondary sources: books and literature related to the topic of the study, scientific journals, published research, documents and that In order to build the theoretical framework of the study.- Main sources: basic data related to the study from reports and financial statements For public shareholding companies listed on the Amman stock exchange, for the application framework to extract the values of the study variable.

3.2. Model Specification
This study used statistical and descriptive methods to achieve the desired objectives and prove what came from the hypotheses or not. On the basis of economic theory and previous studies, the study model was chosen as follows:

$$FL = (ROE, ROA) \tag{1}$$

where FL is leverage, ROE is return on equity, and ROA is return on assets.

To determine the appropriate mathematical formula for the study model, the following formula was used:

$$FL = \alpha + \beta1ROE + \beta2\ ROA + \varepsilon t \tag{2}$$

4. EMPIRICAL RESULTS

After data collection from the financial statements of Jordanian public shareholding financial companies, a financial analysis was conducted through which the leverage ratio and financial performance indicators were calculated, represented by the rate of ROE and the rate of ROA in addition to the following tests:

4.1. Descriptive Tests
To achieve the objectives of the study, descriptive data of the study variables (independent and dependent) were analysed through the actual data in the published reports of 25 randomly selected companies, which represent the financial sector (Table 1).

Table 2 shows the results of the correlation matrix for the study variables. The Pearson correlation matrix was used to determine the type of relationship between financial leverage and financial leverage indicators.

The Table 2 shows the following:
1. A statistically significant relationship exists between financial leverage measured through liability-to-equity ratio and financial performance measured through ROE As the value of the correlation coefficient and the value of the statistical significance (R = 0.507, sig = 0.000, confidence level = 0.95). This finding indicates that the property rights of financial companies increases with the increase in financial leverage; thus, the returns on borrowed funds exceed the cost of borrowing, leading to inflated property rights.
2. No statistically significant relationship exists between financial leverage measured through the liability-to-equity ratio and financial performance measured through ROA (R = −0.213, sig. = 0.095, confidence level = 0.95). This finding indicates the existence of a negative relationship that is not statistically significant between the two variables. This result also explains the tendency of financial companies to increase the degree of financial leverage to fill the liquidity deficit.
3. A correlation exists between the study variables higher than 60%, indicating the existence of a statistically significant relationship between the financial performance indicators (R = 0.67, sig. = 0.000, confidence level = 0.95). This result indicates that the ROE of companies increases as ROA increases.

4.2. Hypothesis Testing

Simple regression analysis was used to test the hypotheses of the study. Probability value (T) was used to accept or reject the hypotheses. If (T) is less than 5%, the hypothesis is rejected; otherwise, the hypothesis is accepted.

H_{O1}: Leverage does not affect the financial performance measured through ROE in Jordanian public shareholding financial companies.

The Table 3 shows the results of the simple regression of the financial leverage measured through liability-to-equity ratio as an independent variable and its effect on financial performance measured through ROE as a dependent variable. The value of the St. coefficient (0.507) indicates the positive effect of leverage on the return on property rights in the Jordanian public shareholding financial companies. The value of T (0.00) indicates that this effect has a statistical indication of property rights. Therefore, the first null hypothesis was rejected; the alternative hypothesis, which states that financial leverage affects financial performance measured through ROE, was accepted because it reached a value of 0.41.

H_{O2}: Leverage does not affect the financial performance measured through ROA in Jordanian public shareholding financial companies.

The Table 4 shows the results of the simple regression of the financial leverage measured through liability-to-equity ratio as

Table 1: Results of the descriptive analysis of the quantitative variables of the financial sector

Variables	Mean	SD	Highest %	Lowest %
Liability-to-equity ratio	0.38	1.98	2.51	416-
ROE	1.50	1.18		4.16-
ROA	0.12	1.01	4.40	4016-

Table 2: Pearson correlation matrix results between study variables

Variables	Liability-to-equity ratio	ROE	ROA
Liability-to-equity ratio	1		
ROE	0.507	1	
ROA	0.213-	0.670	1

Table 3: Results of the first null hypothesis test

Variable	B	ST. Coefficient (β1)	Prob. (T)	T-Statistic
Constant	1.67		0.000	13.781
ROE	0.446-	0.507	0.050	1.894-
F-Statistic		4.013	0.000	
R²		0.550		
Adjusted R²		0.410		

Table 4: Results of the second null hypothesis test

Variable	B	ST. Coefficient (β2)	Prob. (T)	T-Statistic
Constant	0.329		0.0094	2.652
ROA	0.538-	0.213-	0.090	2.225-
F-Statistic		1.864	0.0129	
R²		0.362		
Adjusted R²		0.168		

an independent variable and its effect on financial performance measured through ROA as a dependent variable. The value of St. Coefficient (0.213) indicates the negative effect of leverage on ROA in the Jordanian public shareholding financial companies, and the value of t (0.090) indicates that this effect has no statistical significance on ROA. Accordingly, the second null hypothesis, which states that leverage does not affect financial performance measured through ROA, was accepted.

5. CONCLUDING REMARKS

The results of the study can be summarised as follows:
1. Financial leverage affects financial performance measured through ROE in Jordanian public shareholding financial companies because the goal of financial managers is to maximise the wealth of owners and achieve the largest possible profits.
2. Financial leverage does not affect financial performance measured through ROA in Jordanian public shareholding financial companies because financial managers and departments seek to increase the degree of financial leverage to bridge the liquidity deficit required for operation and preserve the wealth of owners.

The study recommends that financial managers of financial institutions should:

1. Search for factors that influence ROA, which serves the assets of the company.
2. Work to increase the optimal use of assets that generate additional profits. In this manner, the wealth of the owners can be maximised.
3. Balance must be achieved between the returns achieved for each of the shareholders and assets.

REFERENCES

Abubakar, A. (2015), Relationship between financial leverage and financial performance of deposit money banks in Nigeria. International Journal of Economics, Commerce and Management, 111(10), 233-243.

Aivazian, V.A., Qiy, Y. (2005), The impact of leverage on firm investment Canadian investment. Journal of Corporate Finance, 11(2), 277-291.

Akintoye, I.R. (2008), Effect of capital structure on firms' performance: The Nigerian experience. European Journal of Economics, Finance and Administrative Sciences, 10(1), 233-243.

Al-Khatib, M. (2010), Financial Performance and Its Impact on Corporate Stock Returns. 1st ed. Amman, Jordan: Al-Hamed House for Publishing and Distribution.

Alsaeed, J. (2000), Financial Performance for Business Organizations: Current Challenges. 1st ed. Riyadh: Dar Almariekh.

Al-Shubiri, F. (2010), Determinants of capital structure choice: A case study of Jordanian industrial companies. An-Najah University Journal for Research (Humanities), 24(8), 458-88.

Amman Stock Exchange. (2020) Available from: http://www.ase.com.jo.

Faff, R.W., Brooks, R.D., Yew, K.H. (2002), New evidence on the impact of financial leverage on beta risk: A time-series approach. Journal of Economics and Finance, 13(3), 21-42.

Gibson, C. (2008), Financial Reporting and Analysis: Using Financial Accounting Information. 11th ed. South-Western: Cengage Learning.

Kane, A., Alan, J.M., Robert, L. (1989), The impact of financial leverage and the cost of capital on return of investment. Journal of Financial and Quantitative Analysis, 20(4), 59-69.

Matar, M. (2010), Recent Trends in Financial and Credit Analysis. 2nd ed. Amman, Jordan: Wael House for Publishing and Distribution.

Matar, M. (2016), Financial and Credit Analysis, Methods, Tools, and Uses Operation. 4th ed. Amman, Jordan: Wael Publishing and Distribution House.

Mohamed, I. (2016), Effect of Financial Leverage on Financial Performance of Non-Financial Firms Listed at The Narobi Securities Exchange, Unpublished Master Thesis, School of Business. Nairobi: University of Nairobi.

Nashat, O. (2019), The Impact of Financial Leverage on the Financial Performance of Jordanian Public Shareholding Companies Listed in Amman Stock Exchange. MA, Unpublished, Middle East University.

Nassar, S. (2016), The impact of capital structure on financial performance of the firms: Evidence from Borsa Istanbul. Journal of Business and Financial Affairs, 5(173), 2167-2234.

Sheikh, F.M. (2008), Financial Analysis. 1st ed. Financial Analysis. Ramallah, Palestine: SME Financial.

Ur Rehman, S. (2013), Relationship between financial leverage and financial performance: Empirical evidence of listed sugar companies of Pakistan. Global Journal of Management and Business Research Finance, 13(8), 2249-5853.

Velnampy, T., Nires, J. (2012), The relationship between capital structure and profitability. Global Journal of Management and Business Research, 12(13), 1-10.