The Impact of the Capital Structure on Financial Performance: An Applied Study on the Saudi Basic Materials Companies

Mwafag Mohammad Rabab’ah

1 Assistant Professor of Financial Management, Institute of Public Administration, Saudi Arabia

Correspondence: Mwafag Mohammad Rabab’ah, Assistant Professor of Financial Management, Institute of Public Administration, Saudi Arabia.

Received: April 21, 2022 Accepted: May 26, 2022 Online Published: May 30, 2022
doi:10.5539/ijef.v14n6p77 URL: https://doi.org/10.5539/ijef.v14n6p77

Abstract
This study aimed to measure the impact of the capital structure on the financial performance of basic materials companies listed on the Saudi Stock Exchange (Tadawul) during the period (2014-2021). The study relied on a number of independent variables to measure financial performance (the ratio of total debts to total assets, the ratio of Total debt to equity, the ratio of long-term debt to total assets), and ROE was used as an independent variable to measure financial performance. The study targeted all Saudi public shareholding basic materials companies listed in the Saudi financial market, a sample of (42) companies were selected, which represent the study population. To verify the acceptance or rejection of the study’s hypotheses, the descriptive statistics method was followed, and the multiple linear regression model was used. The researcher concluded that there is a positive and statistically significant effect of the total debt to the equity of the study sample companies, and the absence of a significant effect of (total debt to total assets and long-term debt to total assets) on the financial performance. The study recommended that Saudi companies should use both short-term and long-term debt to finance their operations, which has a positive impact on financial performance. The study also recommended the Saudi Capital Market Authority to issue guidelines for Saudi public shareholding companies that contain the advantages that companies obtain from managing the capital structure with high efficiency and its repercussions on financial performance.

Keywords: capital structure, financial performance, Saudi companies, Tadawul

1. Introduction
The study literature has shown great interest in how companies’ activities are financed since the study of (Modigliani & Miller, 1958) which found the effect of capital structure on the value of the company. Subsequently, theories emerged to determine the structure of capital and how companies are financed, including the Trade-off Theory (TOT), which differentiates between cost and return, and pecking-order theory (POT) which depends on how well the financier responds to the sensitivity of information variance to explain the capital structure. and Market Timing Theory (MTT), which builds on the timing of need for funding.

The capital structure effects on the performance of companies. Increasing the financial leverage ratio to a certain extent may improve profitability, and at the same time increase the company’s burdens, and choosing the appropriate capital structure balances between maximizing profits and maintaining continuity, and these are the most important goals of companies in the business sector.

In light of changing economic policies and globalization around the world, investment opportunities have expanded and dependence on capital markets has increased, which has led to multiple financing options. These changes forced companies to provide more capital if they wanted to expand, and they had to provide the necessary funds from various sources of financing, whether debt or equity, to finance their assets. (Azhagaiah & Gavoury, 2011) believes that the best option is a combination of debt and equity. One of the most vexing issues for financial managers is the relationship between the capital structure, which is a mixture of debt and equity, and stock prices. It is known that the value of the firm can be maximized by minimizing its costs. Therefore, one of the main objectives in current strategic management is to determine the optimal capital structure.

Capital structure has such a significant impact on a company’s value and financial performance that it remains an enigma in corporate finance theories and financial literature. Capital structure theories that rely heavily on large
corporations have failed to explain the optimal debt-equity mix. Therefore, the choice of capital structure is a critical issue for companies. Moreover, that properly managing the capital structure is critical because it reduces the cost of capital and affects profitability and finally the value of the company, where ineffective management of the capital structure would lead to depriving the company of the returns that could be achieved in the event of relying on an optimal percentage of financial leverage, or to financial distress as a result of high financial leverage and eventually to bankruptcy. Finance theories suggest that the optimal capital structure should be used but there is no consensus on how to achieve the optimal debt-to-equity ratio. (Gill et al., 2011) stressed that although there are many theories that have attempted to explain the optimal capital structure; researchers in the field of finance have never found a model for determining the optimal capital structure until now.

From the above it becomes clear the importance of the issue of financing behavior and its relationship to the financial performance of companies, which did not find much interest by researchers in developing countries, including Saudi Arabia, as it is in developed countries, which produced many theories and models explaining this behavior, so the topic did not take its due. The difference in the nature of the companies’ work in these countries in terms of structure, organization, and efficiency may provide a special model to explain the relationship of financing behavior with performance, through which it is possible to determine the impact of the optimal combination of financing sources on the performance of companies, and through which also, measuring the quality and effectiveness of management decisions related to the differentiation of funding sources to reach the lowest level of funding cost.

Therefore, this study aims to test the impact of the capital structure on financial performance of basic materials companies listed on the Saudi Stock Exchange (Tadawul) for the period 2014-2021.

1.1 Study Problem

After studying several annual reports of Saudi public shareholding companies, the researcher noted the low dependence of these companies on financial leverage, and their significantly reliance, up to 75%, on self-financing (Twairesh, 2015). This reflects the decline in financial performance as a result of not relying on external sources of financing despite their availability, such as loans, which are considered low-cost compared to internal sources of financing, and (Fossen & Simmler, 2016) believes the companies that depend on financial leverage give them the advantage of reducing taxes on profits. And the higher degree of financial leverage, the higher profits, given that the interest on loans is a fixed expense that is deducted from the taxable income, and thus is reflected in the increase in the return, provided that the financial leverage does not exceed the limit that enters the company in the circle of non-payment risks, which may lead to a situation from financial insolvency and then bankruptcy.

Therefore, this study aims to answer the following question: What is the impact of the capital structure on the financial performance of Saudi companies? A number of sub-questions emerge from this question:

1) Is there an impact of total debts to total assets on the financial performance of the Saudi basic materials companies?

2) Is there an impact of total debt to equity on the financial performance of the Saudi basic materials companies?

3) Is there an impact of long-term debt to total assets on the financial performance of the Saudi basic materials companies?

1.2 Study Importance

This study was concerned with identifying the impact of the capital structure on financial performance, to help financial managers in Saudi companies design a better capital structure to reduce the cost of capital in order to achieve raising the company’s performance and maximizing the wealth of owners while maintaining a low risk ratio, by providing evidence on the role of the financing mix increases the return on equity. In addition, to make recommendations that contribute to assisting investors and lenders in making their decisions. Investors look at financial performance as an indicator of companies’ efficiency in exploiting their assets. The higher financial performance, more encouraged investors to make the investment decision and creditors look at the high financial performance as an indicator of the company’s ability to fulfill its obligations and thus take the decision to approve the lending. This study also contributes to helping the government to take some economic decisions related to fiscal and monetary policy. The high financial performance of companies is positively reflected on the economic development of the Kingdom going with Vision 2030, such as providing new job opportunities, raising the rate of GDP and reducing inflation, in addition to encouraging the foreign investment and his role in contributing to achieving development goals and the strength of the Saudi financial market.
1.3 Study Objectives

The main objective of this study is to identify the impact of the capital structure on the financial performance of Saudi public shareholding companies during the period between 2014-2021.

In more detail, the study aims to:

1) Knowing the impact of the ratio of total debt to total assets on the financial performance of the Saudi basic materials companies.

2) Knowing the impact of the total debt to equity ratio on the financial performance of the Saudi basic materials companies.

3) Knowing the impact of the ratio of long-term debt to total assets on the financial performance of the Saudi basic materials companies.

1.4 Study Method

To achieve the objectives of the study, the researcher relied on the theoretical side by reviewing previous Arab and foreign studies in the field of financial structure, capital structure and financial performance in order to prepare the theoretical and analytical framework and then extrapolate the hypotheses of the study. The researcher relied on the financial reports of the company listed on the Saudi Stock Exchange (Tadawul) for the period from 2014-2021.

2. Theoretical Framework and Previous Studies

2.1 Capital Structure

Many writers and researchers in the field of financial management differed in defining the concept of the capital structure and its difference from the financial structure. In fact, they are neither contradictory nor separate from each other. The balance sheet consists of two sides, the right side, which consists of short and long-term assets, and the left side, which consists of short and long-term liabilities in addition to equity, and the left side of the entire balance sheet can be expressed as the way in which the assets were financed, which is known as the financing structure. That is, the concept of the financing structure refers to all types of financing sources used to finance the company’s assets, and thus it differs from the concept of the capital structure, which consists of long-term debt and equity, excluding short-term debt. Thus, the capital structure is a part of the financing structure of the company. Myres (1984) argued that the capital structure is the selection of debt, equity or hybrid securities of a company to finance its assets. Raviv (1991) pointed out that the capital structure is part of the solution to the problem of over-investment and under-investment. According to Brealey and Myres (2000), the capital structure is a mixture of debt and equity to finance real investments.

Peterson and Fabzzi (2003) believed that the concept of the capital structure is the combination of debt and equity to finance the company’s projects, meaning that the capital structure consists of a mixture of debt, common shares and retained earnings, but what is the acceptable mixture? The best capital structure depends on several factors, including the company’s ability to finance its activities with debt to a certain level, and that this ability depends on the willingness of creditors to lend to the company in return for the company’s legal obligation to pay the interest and the basic loan within predetermined periods, and if the company defaults on its commitment it leads to financial insolvency, when the company takes Decisions under pressure from creditors that are not in the interests of the owners.

Rao (2006) reported that there are five important factors that determine the appropriate capital structure for the company: 1- Cost 2- Risk 3- Control 4- Flexibility 5- Timing. One of the important aspects in forming the capital structure is financial planning when the manager determines the company’s financial requirements, then the options determine whether these requirements are available from the internal resources or are they secured through external funding sources such as long or short-term debt or the issuance of preferred shares or common shares or other funding sources.

Based on the previous concepts of the capital structure and the difference of researchers in defining one concept of the capital structure, this study considers that the optimal capital structure is when the company uses a mixture of internal and external sources of financing to finance its assets so that the value of the company is raised and the cost of capital is reduced along with while maximizing the wealth of the owners.

2.2 Financial Performance

The financial performance for companies represents a fundamental and important concept. It is the mirror reflecting the company’s activities and achievements. It is the results of the holistic activity practiced by the
company and determines the level of its achievement and the extent to which it exploits its resources and capabilities. It is referred to as a reflection of the company’s ability and ability to achieve its goals. It is an expression of business management activities using specific financial measures, and represents the supporting tool for all the company’s various activities. Performance is also defined as the organization’s ability to achieve its long-term goals (Robins et al., 1995), and it is used as a tool to measure the current development of the organization and potential growth (Thi et al., 2021), therefore, it is the financial position of the company during a certain period, which includes the collection and use of funds that can be measured through several indicators such as capital adequacy ratio, liquidity, financial leverage, solvency and profitability (IAI, 2016).

2.3 Literature Review

Previous studies are the scientific basis on which researchers rely to enrich their studies, and to distinguish them from previous studies. The researcher has reviewed many previous studies that examined the impact of the capital structure on financial performance, and these studies will be reviewed according to their chronology from oldest to newest:

Ebaid (2009), this study aimed to verify the impact of choosing the capital structure on the financial performance of companies in Egypt as one of the emerging economies in transition. To achieve the objectives of the study, multiple regression analysis was used in the study to estimate the relationship between the level of financial leverage and the company’s performance, where three of the accounting measures of financial performance (return on equity (ROE), return on assets (ROA), and gross profit margin) were used. On a sample of non-financial Egyptian companies listed on the stock exchange from 1997-2005, the results revealed that the decision to choose the capital structure, in general, has a weak impact to no effect on the company’s performance.

Another study conducted by Saedi and Mahmoody (2011) examined the relationship between capital structure and company performance. Depend on a sample of 320 companies listed on the Tehran Stock Exchange during the period 2002-2009. Composed of all financial companies and banks. it used four measures of financial performance (return on assets, return on equity, return on equity, and market value of the company’s assets to Tobin’s replacement value) as dependent variables, and three capital structures (long-term debt, short-term debt and the ratio of total debt) as independent variables. The study indicated that the performance of companies, which is measured by EPS and Tobin’s Q, is closely and positively related to the capital structure, while it found a negative relationship between the capital structure and return on assets, and there is no statistically significant relationship between the return on equity and the structure of capital.

As for the study Salim and Yadav (2012), it examined the relationship between the capital structure and the financial performance of companies on a sample of 237 Malaysian companies listed on the Malaysian Stock Exchange during the period 1995-2011. The study relied on a set of dependent variables that represent financial performance, namely, return on equity (ROE), return on assets (ROA), and earnings per share (EPS). On the other hand, the independent variables measuring capital structure were short-term debt (STD), long-term debt (LTD), and total debt (TD). To achieve the objectives of the study, the regression method was used using the SPSS program. The results showed a negative relationship between the financial performance variables and the capital structure variables.

In the study (Al-Tally, 2014), which aimed to examine the impact of financial leverage on the financial performance of Saudi public shareholding companies, a set of financial performance ratios were selected: (return on equity, earnings per share, and return on assets) The financial leverage was also measured by (the ratio of liabilities to equity, and the ratio of liabilities to total assets), to achieve the objectives of the study, the descriptive analytical approach was relied on, where the study sample consisted of (75) public joint stock trading companies listed on the stock market in Riyadh During the period between (2002-2000), the results of the study showed a positive impact of the financial leverage measured by used the ratio of liabilities to equity on each of the financial performance measured by (return on equity, earnings per share, and return on assets), while it was found that there was no effect of financial leverage measured through the ratio of liabilities to total assets on the financial performance measured by earnings per share, and positive impact of financial leverage measured by the ratio of liabilities to total assets on each of the financial performance measured by (return on equity and return on assets), the study recommended that enterprises use the minimum debt level or determine the optimal debt level that should be used.

Lawal et al. (2014) examining the impact of capital structure on company performance through a case study of manufacturing firms in Nigeria from 2003-2012, depending on secondary data for 10 industrial firms in order to provide a critical assessment of the need and importance of capital structure. Descriptive method and regression
were used to examine the effect of capital structure variables such as total debt to total assets (TD) and total debt to equity (DE) on the company’s performance measured by return on assets (ROA), return on equity (ROE). One of the findings of the study is that measures of capital structure (total debt and debt-to-equity ratio) are negatively correlated with company performance. Accordingly, the study recommended that companies use more equity instead of debt in financing their business activities, as much as the value of the business can be enhanced by using debt capital. Hence, companies must determine the point at which the weighted average cost of capital is small and maintain the debt ratio so that the value of the company is not eroded, where the company’s capital structure is optimal at this stage with the stability of the rest of the variables.

A study (Hamid et al., 2015) aimed to analyzing the impact of the capital structure on the profitability of 46 family and non-family companies in Malaysia during the period from 2009-2011. The dependent variable is return on equity (ROE), while the independent variables are debt to total assets (SDA), long-term debt to total assets (LDA), and total debt to total assets (TDA). The statistical methods used in this study are the Mann-Whitney U test, correlation matrix, and multivariate analysis. The study found a negative relationship between the short-term debt ratio, the long-term debt ratio, and the total debt ratio with profitability.

Singh and Singh (2016) aimed to analyze the impact of capital structure on performance in the top ten cement companies, which represent 90% of the total market share of the cement industry in India during the period 2009-2013. The dependent variables are total profit, return on capital and return on equity, while the independent variables are debt to equity and the ratio of total debt to total assets. The study used Pearson correlation to analyze the data and reach the results. The results showed a negative relationship between all proportions of the independent variables and all proportions of the dependent variables.

In the study of (Nassar, 2016), where the study aimed to research the impact of the capital structure on financial performance, depend on a set of financial performance ratios (return on equity, earnings per share, return on assets, and debt ratio). The capital structure was also measured by the ratio of liabilities to equity, to achieve the objectives of the study, the descriptive analytical was used. The study sample consisted of (136) public shareholding industrial companies listed on the Istanbul Stock Exchange during the period between (2005-2012). The results of the study showed a positive impact of the capital structure measured by the ratio of liabilities to equity on each of the financial performance measured by (return on equity, earnings per share, return on assets, and debt ratio) collectively and individually, and the study recommended The need for companies to use the optimal financing structure because of its positive impact on the financial performance of companies.

Hajisaaid (2020) examined the relationship between the capital structure and the profitability of eight companies operating in the basic materials sector in the Kingdom of Saudi Arabia during the period from 2009-2018. The study used regression analysis methods, fixed effect model, random effect model, and Husman test. The dependent variable is profitability, which is measured by the return on equity (ROE). In contrast, the capital structure measured by a set of independent variables is the short-term debt to total assets ratio (SDA), the long-term debt to total assets ratio (LDA), and the total debt to total assets ratio (DA). The results show that there is a negative relationship between the variables of short-term debt to total assets ratio (SDA) and long-term debt to total assets ratio (LDA) and the return on equity. While there was a positive relationship between total debt to total assets ratio (DA) and return on equity.

Dinh and Fham (2020) examines the impact of the capital structure on the financial performance of pharmaceutical companies listed in the Vietnamese market. The study used regression to analyze the variables, as it relied on ROE as the dependent variable and four independent variables, including self-financing, leverage, long-term assets and debt-to-asset ratios. In addition, the study used leading variables, such as company size, rate of fixed assets, and growth from 2015 to 2019 for all 30 pharmaceutical companies currently listed on the Vietnamese stock market. The results of the study showed that the leverage ratio (LR), the long-term asset ratio (LAR) and the debt-to-asset ratio (DR) have a positive relationship to the company’s performance, and self-financing (E/C) negatively affects the return on equity (ROE). The study recommended that pharmaceutical companies should build a more reasonable capital structure with a higher debt-to-equity ratio, and diversify borrowing such as issuing long-term bonds.

A recent study by Vargas et al. (2022) that aims to empirically examine the impact of capital structure and innovation on the performance of Mexican small and medium-sized manufacturing firms (SMEs) and analyze the indirect effects of capital structure to determine the intermediate effects of innovation. The study applied a quantitative approach and cross-sectional design through partial least squares structural equation modeling (PLS-SEM). A simple random sampling method and a subjective questionnaire were used to collect data from a sample of 220 managers or employers in the state of Aguascalientes, Mexico. The results indicate that the capital
structure has a significant impact on innovation and only an indirect effect on the company’s performance. With innovation proven to play an important full-fledged mediator role in this relationship, if SMEs want better financial performance, they must increase their level of innovation. Therefore, decision makers should pay special attention to reinvesting their profits to increase innovation levels and raise corporate performance.

2.4 What Distinguishes the Current Study from Previous Studies

In terms of the subject, the current study examines the impact of the capital structure on the financial performance of Saudi public shareholding companies listed on the Saudi Stock Exchange (Tadawul). By reviewing previous studies that spoke on the subject of this study; although many previous studies dealt with the same variables of this study, the current study has been applied by the researcher to Saudi basic materials in order to obtain results that can be generalized to all companies listed in the Saudi financial market. In addition to recentness, it covered the period between 2014-2021, none of the previous studies covered it. Especially since this period was subjected to many economic changes at the level of the Kingdom, in addition to financial problems for companies. Which led to fluctuations in the Saudi financial market due to the Corona pandemic and its consequences.

3. Methodology

The researcher used the descriptive analytical approach in order to analyze the data, which were collected through the financial statements of the companies (balance sheet, income statement), by referring to the lists of basic materials companies published on the Saudi Capital Market Authority website, And refer to the annual reports of the companies. This was done by using the financial analysis of the variables, and from the reality of these data, the impact of the independent variable (capital structure) was tested on the dependent variable (financial performance) in the companies that represent the study sample during the study period, through regression analysis of the statistical indicators available in SPSS program.

3.1 Study Population and Sample

The main objective of this study is to measure the impact of the capital structure on the financial performance of Saudi basic materials companies during the period from 2014-2021. The study population consisted of 42 companies of basic materials listed in the Saudi financial market, while the study sample consisted of all companies of basic materials.

3.2 Study Variables

Independent Variables:
• Total Debt to Total Assets (TD/TA)
• Total debt to equity (TD/E)
• Long-term debt to fixed assets
Dependent variable:
• Return on Equity

3.3 Study Hypotheses

The hypotheses of the study were formulated to answer the questions of the study based on previous studies, the objectives of the study and its importance:

HO1: There is no statistically significant effect at the level (0.05) for the debt/assets on the return on equity.
HO2: There is no statistically significant effect at the level (0.05) for the debt/equity on the return on equity.
HO3: There is no statistically significant effect at the level (0.05) for the long-term debt on the return on equity.

4. Description and Analysis

This section studies the general trend of changes in financial performance over the years of 2014 to 2021. Deals with the description and analysis of the search results. Initially, descriptive analysis is shown. Then a Pearson correlation analysis.

4.1 Descriptive Statistics

Table 1 below summarizes the descriptive statistics of the variables included in the regression model as presented. This descriptive statistics was used to describe and discuss the characteristics of the result generally. It represents the variables of the Saudi basic materials companies whose financial results were available for the years 2014 to 2021.
Table 1. Descriptive statistics of variables

|          | N   | Minimum   | Maximum | Mean     | Median    | Std. Deviation |
|----------|-----|-----------|---------|----------|-----------|----------------|
| ROE      | 246 | -2.91738  | .60369  | .0712836 | .0796791  | .24195219      |
| TD/TA    | 246 | .00766    | .92098  | .3671578 | .3471005  | .21841956      |
| TD/E     | 246 | .00772    | 11.65462| .9250639 | .5316345  | 1.32602067     |
| LD/FA    | 246 | 0.00000   | .89998  | .1819249 | .1431654  | .16811769      |
| Valid N  | 246 |           |         |          |           |                |

Source: Research Data.

4.2 Correlation Analysis

The Table 2 below shows the Pearson correlation coefficient generated from secondary data for the periods of 2014 to 2021.

Table 2. Correlation matrix

|          | ROE         | TD/TA       | TD/E        | LD/FA       |
|----------|-------------|-------------|-------------|-------------|
| ROE      | Pearson     | -0.256**    | -0.355**    | -0.182**    |
|          | Correlation | 1           | -0.256**    | -0.355**    |
|          | Sig. (2-tailed) | 0.000   | 0.000     | 0.000       |
|          | N           | 246         | 246         | 246         |
| TD/TA    | Pearson     | -0.256**    | 0.757**     | 0.547**     |
|          | Correlation | -0.256**    | 1           | 0.547**     |
|          | Sig. (2-tailed) | 0.000   | 0.000     | 0.000       |
|          | N           | 246         | 246         | 246         |
| TD/E     | Pearson     | -0.355**    | 0.757**     | 0.547**     |
|          | Correlation | -0.355**    | 1           | 0.547**     |
|          | Sig. (2-tailed) | 0.000   | 0.000     | 0.000       |
|          | N           | 246         | 246         | 246         |
| LD/FA    | Pearson     | -0.182**    | 0.719**     | 1           |
|          | Correlation | -0.182**    | 0.719**     | 1           |
|          | Sig.(2-tailed) | 0.004   | 0.000     | 0.000       |
|          | N           | 246         | 246         | 246         |

**. Correlation is significant at the 0.01 level (2-tailed)

Source: Research Data.

The table depicts that there exist a strong significant relationship between the dependent variable return on equity and the independent variable debt/total assets at a significant level of 0.05, and the value of the Pearson correlation coefficient -0.256 and the significance level is 0.00. This shows that there is an inverse correlation between return on equity and debt/total assets. This is because a higher debt ratio will lead to higher interest at the expense of return on equity.

The table also shows a strong significant relationship between the dependent variable return on equity and the independent variable debt/equity at a significant level of 0.05, the value of the Pearson correlation coefficient is -0.355 at significance level is 0.00, this shows that there is an inverse correlation between the variables of return on equity and debt/equity.

We can also observe that there a significant relationship between the dependent variable return on equity and the independent variable long-term debts to fixed assets at a significant level of 0.05 and the value of the Pearson correlation coefficient -0.182 at the significance level 0.00. This shows that there is an inverse correlation between the variables of return on equity and long debt Deferred to fixed assets.

4.3 Regression Analysis

The Table 3 shows the summary of our model. R square measures the proportion of the variation in the dependent variable explained by the independent variables. This implies that 12.6% of the financial performance is explained by the independent variables (debts / total assets, Debt/Equity, long-term debt to total assets).

Table 3. Model summary

|          | R  | R Square | Adjusted R Square | Std. Error of the Estimate |
|----------|----|----------|-------------------|---------------------------|
|          | .355* | .126   | .122             | .22667219                |

ANOVA means analysis of variance. The ANOVA table is a table that looks at the differences of the variances of the variable. It’s used to know the significance of your variable. From the table, one can observe that the
regression model is significant at 1% that is 0.000 is less than 0.01. This implies that the different independent variables effectively have an effect on the dependent variable.

Table 4. ANOVA

| Sum of Squares | df  | Mean Square | F      | Sig.  |
|----------------|-----|-------------|--------|-------|
| Regression     | 1.806 | 1           | 1.806  | 35.144 | .000b |
| Residual       | 12.537 | 244         | .051   |        |
| Total          | 14.343 | 245         |        |       |

Predictors: (Constant), debts / total assets, Debt/Equity, long-term debt to total assets

Source: Research Data.

The research hypotheses are tested through the use of multiple regression using the Stepwise Regression method, which is used when studying the relationship between a dependent variable and several independent variables, in order to predict the mean values of the dependent variable depend on the independent variables, there are three independent variables (debts / total assets, Debt/Equity, long-term debt to total assets) and a dependent variable is the return on equity.

From Table 5 below, the established multiple linear regression equation becomes:

\[ \text{ROE} = \beta_0 + \beta_1 \frac{TD}{TA} + \beta_2 \frac{TD}{E} + \beta_3 \frac{LD}{FA} + \epsilon \]

Where,

- ROE: Return on equity
- TD/TA: Total debt / total assets
- TD/E: Total debt/equity
- LD/FA: Long term debt/ fixed assets
- \( \epsilon \): error

Table 5. Multiple regression model using sequential step regression

|                        | Unstandardized Coefficients | Standardized Coefficients | t     | Sig.  |
|------------------------|-----------------------------|---------------------------|-------|-------|
|                        | B                           | Std. Error                | Beta  |       |
| (Constant)             | .131                        | .018                      |       | .000  |
| TD/E                   | -.065                       | .011                      | -.355 | -5.928| .000  |

a. Dependent Variable: ROE

Source: Research Data.

It is clear from the previous table:

- The calculated F value was (35.144) with a probability value of (0.00), which is less than the level of significance (0.05), which indicates the significance of the regression model as a whole.
- Pearson’s correlation coefficient between the independent variable (debt/equity) and the dependent variable (return on equity) was 0.355.
- The value of the coefficient of determination of the model R2 = 0.126, meaning that the independent variable (debt/equity) explains about 12.6% of the change in the dependent variable (return on equity).
- The value of the significance level for the variable total debt/equity is (0.00), which is less than the level of morality (0.05), which means that the first hypothesis is accepted that there is a statistically significant effect at the level of significance (0.05) for the debt/equity variable on the return on equity.

4.4 Variables Excluded from the Model

Table 6. Variables excluded from the model

|                  | Beta In | t     | Sig.  | Partial Correlation | Collinearity Statistics |
|------------------|---------|-------|-------|---------------------|-------------------------|
| TD/TA            | .029a   | .314  | .754  | .020                | .427                    |
| LD/TA            | .018b   | .249  | .804  | .016                | .700                    |

Source: Research Data.
The value of the significance level of the debt/total assets variable is (0.754), which is greater than the significance level (0.05), which means that the second hypothesis is rejected, meaning that there is no statistically significant effect at the level of significance (0.05) for the debt/total assets variable on the return on equity.

The value of the significance level of the variable long-term debts to total assets is (0.804), which is greater than the level of significance (0.05), which means that the third hypothesis is rejected, meaning that there is no statistically significant effect at the level of significance (0.05) for the variable long-term debts to total assets on the return on property rights.

5. Findings and Recommendation

5.1 Findings

Through the stepwise multiple regression model, the following results were obtained:

1) The agreement of the majority of previous studies on the existence of an impact of the capital structure on financial performance.
2) There is a positive and statistically significant impact of total debt to equity on the financial performance of the basic materials companies listed on the Saudi Stock Exchange (Tadawul). This result is in agreement with studies of (Al-Tally, 2014; Nassar, 2016), and different from study of (Lawal et al., 2014) that find negatively correlated.
3) There is no significant impact of total debts to total assets on the financial performance of the basic materials companies listed on the Saudi Stock Exchange (Tadawul). This result is in agreement with studies of (Ebaid, 2009; Saedi & Mahmoody, 2011; Salim & Yadav, 2012; Hamid et al., 2015) and different from study of (Al-Tally, 2014; Hajisaaid, 2020) that find positive correlated.
4) The absence of a significant impact of long-term debts to total assets in the financial performance on the financial performance of the basic materials companies listed on the Saudi Stock Exchange (Tadawul). This result is in agreement with studies of (Ebaid, 2009; Saedi & Mahmoody, 2011; Salim & Yadav, 2012; Hajisaaid, 2020).

The researcher explains the low percentage of the impact of the capital structure on financial performance by (35.5%), to the presence of other factors outside the model due to the interest of Saudi public shareholding companies in self-financing through shares or withholding profits, in addition to the fact that the economic situation in the Kingdom of Saudi Arabia helped on the weak interest of Saudi companies in financing through borrowing, this was confirmed by a study (Twairesh 2015) that the financial leverage rate in Saudi companies reached 25%.

5.2 Recommendations

In order of the results extracted from the study of the impact of the capital structure on the financial performance of the Saudi basic materials companies listed on the Saudi Stock Exchange (Tadawul), for the periods of 2014 to 2021. The researcher recommends the following:

1) The necessity for Saudi companies to use both short-term and long-term debts to finance their operations, which has a positive impact on financial performance.
2) The Saudi Capital Market Authority should issue guidelines that contain the advantages that companies obtain from managing the capital structure efficiently.
3) The boards of directors of companies listed on the Saudi Stock Exchange must direct the executive departments to take advantage of non-self-financing to implement their investment projects and to exploit their own funds in investing opportunities that may be available to the company in the future.
4) The study also recommended researchers to work on the need to pay attention to conducting more studies that examine the impact of the capital structure on financial performance on all sectors and not only on the basic materials sector.

References

Ahmad, Z., & Yousaf, S. (2018). Impact of Capital Structure, Dividend Policy and Sustainability on Value of
Firm: A Case Study of Spinning Textile Sector of Pakistan. *International Journal of Economics and Management Engineering*, 5(1).

Al-Tally, H. A. (2014). *An investigation of the effect of financial leverage on firm financial performance in Saudi Arabia’s public listed companies* (Doctoral dissertation, Victoria University). Retrieved from https://vuir.vu.edu.au/id/eprint/24843

Azhagaiah, R., & Gavoury, C. (2011). The Impact of Capital Structure on Profitability with Special Reference to IT Industry in India vs. Domestic Products. *Managing Global Transitions*, 9(4), 371.

Brealey, R., & Myers, S. (2000). *Principles of Corporate Finance* (6th ed.). McGraw-Hill.

Dinh, H., & Fham, C. (2020). The Effect of Capital Structure on Financial Performance of Vietnamese Listing Pharmaceutical Enterprises. *The Journal of Asian Finance, Economics and Business*, 7(9), 329-340. https://doi.org/10.13106/jafeb.2020.vol7.no9.329

Ebaid, I. El S. (2009). The Impact of Capital-Structure Choice on Firm Performance: Empirical Evidence from Egypt. *The Journal of Risk Finance*, 10, 477-487. https://doi.org/10.1108/15265940911001385

Fabozzi, F. J., & Pamela, P. P. (2003). *Financial Analysis*. Hoboken, New Jersey: John Wiley & Sons, Inc.

Fossen, F. M., & Simmler, M. (2016). Personal Taxation on Capital Income and the Financial Leverage of Firms. *International Tax and Public Finance*, 23(1), 48-81. https://doi.org/10.1007/s10797-015-9349-0

Gill, A., Biger, N., & Mathur, N. (2011). The Effect of Capital Structure on Profitability: Evidence from the United States. *International Journal of Management*, 28(4).

Hajisaaid, A. (2020). The Effect of Capital Structure on Profitability of Basic Materials Saudi Arabia Firms. *Journal of Mathematical Finance*, 10, 631-647. https://doi.org/10.4236/jmf.2020.104037

Hamid, M. A., Abdullah, A., & Kamaruzzaman, N. A. (2015). Capital Structure and Profitability in Family and Non-Family Firms: Malaysian Evidence. *Procedia Economics and Finance*, 31, 44-55. https://doi.org/10.1016/S2212-5671(15)01130-2

Harris, M., & Raviv, A. (1991). The Theory of Capital Structure. *Journal of Finance*, 46, 297-335. https://doi.org/10.1111/j.1540-6261.1991.tb03753.x

Horne, J. C. V., John, M., & Wachowicz, J. R. (2001). *Fundamental of Financial Management* (12th ed.). Prentice-Hall, Inc. IAI, (2016).

Lawal, et al. (2014). Effects of Capital Structure on Firm’s Performance: Empirical Study of Manufacturing Companies in Nigeria. *Journal of Finance and Investment Analysis*, 3(4), 39-57. https://www.researchgate.net/publication/341314155

Modigliani, F., & Miller, M. (1958). The Cost of Capital, Corporation Finance and Theory of Investment. *American Economic Review*, 48, 261-297. https://www.jstor.org/stable/1809766

Myers, S. C. (1984). Capital Structure Puzzle. *Journal of Finance*, 575-592. https://doi.org/10.1111/j.1540-6261.1984.tb03646.x

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), 2167-0234. https://doi.org/10.4172/2167-0234.1000173

Robins, J., & Wiersema, M. F. (1995). A Resource-Based Approach to Multibusiness Firry Empirical Analysis of Portfolio interrelationship and Corporate Financial Performance strategic. *Management Journal*, 16(4), 279. https://doi.org/10.1002/smj.4250160403

Saeedi, A., & Mahmoodi, I. (2011). Capital Structure and Firm Performance: Evidence from Iranian Companies. *International Research Journal of Finance and Economics*, 70, 21-28.

Salim, M., & Yadav, R. (2012). Capital Structure and Firm Performance: Evidence from Malaysian Listed Companies. *Procedia—Social and Behavioral Sciences*, 65, 156-166. https://doi.org/10.1016/j.sbspro.2012.11.105

Singh, B., & Singh, M. (2016). Impact of Capital Structure on Firm’s Profitability: A Study of Selected Listed Cement Companies in India. *Pacific Business Review International*, 8, 46-54. https://www.researchgate.net/publication/339365614

Tim, K., Duverany, D., & Thanh, H. (2021). Determinants of financial performance of listed firms
manufacturing food products in Vietnam: Regression analysis and Blinder–Oaxaca decomposition analysis. *Journal of Economics and Development*, 23(3), 267-283. https://doi.org/10.1108/JED-09-2020-0130

Twairesh, A. (2015). Determinants of Capital Structure: Evidence from Saudi Arabia. *Arab Journal of Administrative Sciences*, 2(22), 233-261.

Vargas, H., Palacios, H., & Garcia, J. (2022). Impact of capital structure and innovation on firm performance. Direct and indirect effects of capital structure. *Procedia Computer Science*, 199, 1082-1089. https://doi.org/10.1016/j.procs.2022.01.137

Copyrights
Copyright for this article is retained by the author(s), with first publication rights granted to the journal.
This is an open-access article distributed under the terms and conditions of the Creative Commons Attribution license (http://creativecommons.org/licenses/by/4.0/).