# Impact of Capital Structure on Bank Performance of Tadhamon International Islamic Bank in Yemen

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**Abstract**

*The study aims to investigate the relationship between capital structure and bank performance of Tadhamon International Islamic Bank in Yemen. This study verified the existence of relationships between capital structure as measured by LAR, EAR, and Total Debt ratio on bank's performance as measured by ROA and ROE, EPS, and NPM. the panel data has used of the bank from 2010 to 2019. Using Pearson product-moment correlation coefficients were to represent the relationship between the main independent variables. It was observed that the relation between the Capital structure and the performance was non-significant. Moreover, Multiple Linear Regression was conducted to investigate the relative contribution of the predictors Capital structure to the dependent variable, EPS, ROE, NPM, and ROA. The contributions of the Capital structure to EPS, ROE, NPM, and ROA, were non-significant.*

**Keywords:**

*Capital structure, performance, Total Debt, LAR, EAR, ROE, ROA, and EPS.*

## Introduction

The capital structure decision plays a vital role in the bank's performance. Bank's performance, which is the core of the financial sector, plays an important role in bringing the pulse of monetary policy to the entire economic system. Also, capital structure plays an important role in the success of the institution. A good capital structure allows a bank corporation to move ahead and achieve gradual growth successfully (Pinto, Hawaldar, Quadras, & Joseph, 2017). The concept of capital structure is generally described as a set of debt and equity that makes the total capital of the bank. The selection of capital components and the use of these components play an important role in determining financial strategies. Capital structure is one of the most puzzling issues in corporate finance. Issuing activities verses leverages change and the financial-debt-to-assets and issuing activities verses leverages changes considering an issue in some organization (Mehar, 2018). Furthermore, capital structure plays a vital role in determining the financial risk level. The capital structure

decision is an important management decision, as it affects the bank's return and financial risk. Therefore, the study of capital structure and financial performance is of central importance. The significant of the present study will be to guide the bank management in deciding the right combination of equity and debt to finance its operations and increase the value of the bank at the same time to contribute to the development of the Yemeni economy. The adequate performance of financial institutions is critical to their clients. The prices and quality of their products are determined by efficiency and competition. Since efficiency and competition cannot be observed directly, many indirect measures have been developed in the form of simple indicators or complex models and their use in theory and practice (Bikker, 2010).

Jenesn and Meckling (1976) noted that the company uses indebtedness as a means to mitigate opportunistic behaviors of managers and other agency problems so that indebtedness reduces free cash flows that may be used to serve the personal benefits of managers such as excessive bonuses and additional benefits for themselves and to choose investment opportunities based on their own interests, As the use of indebtedness entails financial obligations that the company must comply with to protect the company from the risk of bankruptcy, so managers strive to commit to pay the obligations arising from the borrowed funds on time in order to avoid loss of credit.The bankrupt company, and in this context, increasing attention to managers more in the case of owning a share of the company's shares, also seeks managers to maximize the value of the company and improve its performance, and based on it according to the theoretical model of agency theory, it assumes a positive relationship between capital structure and performance of the company. (Yinusa, 2015) argues that when the theoretical cost model of the agency was developed, companies in developed economies were considered, but does this positive correlation between the company's capital structure and performance remain in emerging markets? These markets are still in the early stages of economic activity compared to developed markets that enhance the efficiency of companies and mitigate the problems of the Agency, in order to maximize the value of the company.

In addition to the conflicts of interest between management and shareholders, the Agency's theory pointed to conflicts of interest between creditors and shareholders, as a result of the increased risk of bankruptcy, so that shareholders seek to obtain the highest returns, although investment projects are high risk while creditors are interested in comfortable and safe projects, where shareholders receive returns As a result of the additional risk, while creditors receive only fixed payments, they do not compensate for this additional risk, which

leads them to request a premium, and consequently the high cost of debt financing (Margaritis&Psillaki, 2010) Leads to a reduction of the use of available cash flow, and increased risk of bankruptcy, high debt financing costs, which limits the ability of managers to Alastmthar in profitable projects (lack of investment) (underinvestment problem) (Myers, 1977)Therefore, the theory of the agency assumes a negative relationship between the capital structure and performance as a result of a conflict of interest between creditors and shareholders, which leads to the problem of under-investment as a result of default risk (default risk) and accordingly, the researcher asks whether this negative relationship between the capital structure and performance in countries Which advanced economy remains in emerging markets?The objective of study is to find out the statistically significant effects of capital structure on bank's performance of Tadhamon International Islamic Bank And to find the significant moderation role of Banks' size, Growth opportunities and Banks' age in the relation between capital structure and bank's performance of Tadhamon International Islamic Bank. The study uses secondary data for 2010-2019. And analysis of correlation coefficient, regression analysis, variance, and Standard deviation for the research variables. Pearson Correlation Coefficient will be extracted to find out the magnitudes and the direction of the correlations between independent and dependent, and Regression Analysis used to find out the impact of capital structure on bank's performance of Tadhamon International Islamic Bank

## Literature review

Al-Kayed, Syed Mohd Zain, and Duasa (2014) examined the impact of capital structure on Islamic banks' performance to provide guidance to finance managers for raising capital funds using a sample of eighty five Islamic banks covering banking systems in nineteen countries. Two-stage least squares method applied to examine the performance determinants of Islamic banks to control the reverse causality from performance to capital structure. After control of financial market structure, the macroeconomic environment and taxation. Results revealed that Islamic banks' performance (profitability) responds positively to an increase in equity (capital ratio). The result supported the signal theory that banks expects to perform better reliably transfers this information through higher capital. The optimal results of the capital structure of Islamic banks found a heterogeneous U-shaped relationship between the ratio of capital to assets and profitability, thus supporting the risk of efficiency and the value propositions of excellence.

Hafeez, Khan, Majeed, and Azeem (2018) examined the effect of the capital structure on the Islamic banks in Asia, particularly in Egypt, Jordan, Pakistan and Bahrain. The study have been used the secondary data of sixteen Islamic banks in these countries for ten years from 2007 to 2016. The regression model was used in analyzing the data to reach the results according to the variables of return on assets and return on equity as well as the variables ratio of debt and the ratio of shareholders. The study found that there is a strong positive relationship between the ratio of debt and return on assets while there is a strong negative relationship between the ratio of shares and return on assets.

Ibrahim, M. (2015)..The study aimd to measure the financial performance of two Islamic banks in United Arab Emirates for the period of 2003 to 2007. Different groups of ratios have been used to measure the performance and make a comparison between these two banks. The ratios which are used are going to measure liquidity, profitability, management capacity, capital structure and share performance ratios. The research goes further step to measure the financial stability of the two banks. Descriptive statistical analysis was used to rank the performance, measuring the dispersion and the stability of performance. The finding revealed that the both banks did well for the above period. Moreover, the liquidity level is lower in Dubai Islamic bank than its rival, while the profitability level is much higher in Dubai Islamic bank than in Abu Dhabi bank. Dubai Islamic bank, has managedby and large its operation more successfully than Abu Dhabi Islamic bank, but the later bank is not far off with a similar capital structure. The four ratios of share performance indicted that Abu Dhabi Islamic bank is better off than Dubai Islamic bank. Finally, Abu Dhabi bank had a high level of stability than Dubai Islamic bank

Kalash (2019) conducted his study to deal witha comparison of the capital structure of Islamic and traditional banks in Turkey in addition to investigate the effect of the debt ratio on the performance of these banks, as a comparative study was conducted between 5 Islamic banks and 11 traditional banks for a period of time extending from 2008 to 2017. The results revealed that the debt ratio has a positive and significant effect on the performance of Islamic banks, as the rate of return on total assets increases, and the rate of return on property rights as a result of the increase in the debt ratio. On the other hand, it was found that the debt ratio negatively affects the performance of traditional banks, as the rate of return on total assets decreases as a result of the high debt ratio of conventional banks. The results of the research are generally consistent with the theory of balance between the benefits and costs of debt, where the costs of debt (agency costs associated with debt and bankruptcy costs) are

relatively low for Islamic banks within the framework of the balance theory, and therefore the high debt ratio of these banks will contribute to enhancing their performance as a result of the declinerelative to costs

## Empirical result

The Pearson product moment correlation coefficients were used to represent the relationship between the main independent variables (I.e., Total Debt, LAR, and EAR) and the dependent variables (ROA, ROE, NPM, EPS). Table 1 shows the correlation matrix that illustrates the interrelationships among the research variables.

**Table 1: Summary Results of Pearson Product Moment Correlation Coefficients**

| | ROE | ROA | NPM | EPS | Total debt | LAR | Skewness | Kurtosis |
|---|---|---|---|---|---|---|---|---|
| ROE | 1 | | | | | | 1.595 | 2.785 |
| ROA | .898** | 1 | | | | | .638 | 1.175 |
| NPM | .882** | .864** | 1 | | | | .815 | -.445 |
| EPS | .500 | .608 | .419 | 1 | | | .681 | 1.447 |
| Total debt | .195 | -.056 | -.075 | -.042 | 1 | | -.508 | -1.968 |
| LAR | .563 | .250 | .393 | -.127 | .449 | 1 | .894 | -1.264 |
| EAR | -.049 | .237 | .222 | .278 | -.029 | -.467 | .170 | -.883 |

It was observed that the relation between the independent variables and the dependent variables were non-significant.

The tolerance value ranged from .592 to .756 and the VIF ranged from 1.322 to 1.690, indicating no multicollinearity problem at the multivariate level. Since the absolute values of the Kurtosis are less than 3, the data is normally distributed (Field, 2011).

Multiple Linear Regression was conducted to investigate the relative contribution of the predictors (independent variables) to the dependent variable, EPS. The model summary revealed that the model of the three independent variables explained 289% of the variance in EPS ($R^2$ =.28).Results of ANOVA revealed that the model *of total debt, LAR, and EAR was non*-significantly predictor of EPS (table 2).

**Table 2: Summary Results of ANOVA**

| Model | | Sum of Squares | df | Mean Square | F | Sig. |
|---|---|---|---|---|---|---|
| 1 | Regression | 89739.359 | 4 | 22434.840 | 1.817 | .263 |
| | Residual | 61752.928 | 5 | 12350.586 | | |
| | Total | 151492.287 | 9 | | | |

As we can see in table 3, the contributions of the independent variables to EPS were non-significant.

**Table 3: Multiple Regression Analysis Summary for Total debt, LAR, and EAR Predicting EPS**

| Model | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. |
|---|---|---|---|---|---|
| | B | Std. Error | Beta | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| 1 | (Constant) | 1567.214 | 782.126 | | 2.004 | .101 |
| | Total debt | 4.376 | 8.500 | .175 | .515 | .629 |
| | LAR | 42.831 | 319.831 | .050 | .134 | .899 |
| | EAR | -2548.651 | 2402.117 | -.479 | -1.061 | .337 |

Multiple Linear Regression was conducted to investigate the relative contribution of the predictors (independent variables) to the dependent variable, ROE. The model summary revealed that the model of the three independent variables explained 63% of the variance in ROE ($R^2$ =.63). Results of ANOVA revealed that the model *of total debt, LAR, and EAR was non*-significantly predictor of ROE (table 4).

**Table 4: Summary Results of ANOVA**

| Model | | Sum of Squares | df | Mean Square | F | Sig. |
|---|---|---|---|---|---|---|
| 1 | Regression | .002 | 4 | .001 | .846 | .552 |
| | Residual | .003 | 5 | .001 | | |
| | Total | .005 | 9 | | | |

As we can see in table 5, the contributions of the independent variables to ROE were non-significant.

**Table 5: Multiple Regression Analysis Summary for Total debt, LAR, and EAR Predicting ROE**

| Model | | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. |
|---|---|---|---|---|---|---|
| | | B | Std. Error | Beta | | |
| 1 | (Constant) | -.030 | .175 | | -.173 | .870 |
| | Total debt | -.001 | .002 | -.108 | -.263 | .803 |
| | LAR | .123 | .072 | .774 | 1.724 | .145 |
| | EAR | .186 | .538 | .189 | .345 | .744 |

Multiple Linear Regression was conducted to investigate the relative contribution of the predictors (independent variables) to the dependent variable, NPM. The model summary revealed that the model of the three independent variables explained 72% of the variance in NPMS ($R^2$ =.72). Results of ANOVA revealed that the model *of total debt, LAR, and EAR was* significantly predictor of NPM (table 6).

**Table 6: Summary Results of ANOVA**

| Model | | Sum of Squares | df | Mean Square | F | Sig. |
|---|---|---|---|---|---|---|
| 1 | Regression | .054 | 4 | .014 | 1.412 | .352 |
| | Residual | .048 | 5 | .010 | | |
| | Total | .102 | 9 | | | |

As we can see in table 7, the contributions of the independent variablesto NPM were non-significant.

**Table 7: Multiple Regression Analysis Summary for Total debt, LAR, and EAR Predicting NPM**

| Model | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. |
|---|---|---|---|---|---|
| | B | Std. Error | Beta | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| 1 | (Constant) | -.636 | .690 | | -.921 | .399 |
| | Total debt | -.010 | .008 | -.483 | -1.325 | .243 |
| | LAR | .629 | .282 | .888 | 2.228 | .076 |
| | EAR | 3.139 | 2.120 | .718 | 1.480 | .199 |

Multiple Linear Regression was conducted to investigate the relative contribution of the predictors (independent variables) to the dependent variable, ROA. The model summary revealed that the model of the three independent variables explained 55% of the variance in ROA ($R^2$ =.55). Results of ANOVA revealed that the model *of total debt, LAR, and EAR was non*-significantly predictor of ROA (table 8).

**Table 8: Summary Results of ANOVA**

| Model | | Sum of Squares | df | Mean Square | F | Sig. |
|---|---|---|---|---|---|---|
| 1 | Regression | .000 | 4 | .000 | .625 | .666 |
| | Residual | .000 | 5 | .000 | | |
| | Total | .000 | 9 | | | |

As we can see in table 9, the contributions of the three independent variables to ROA were nom-significant.

**Table 9: Multiple Regression Analysis Summary for Total debt, LAR, and EAR Predicting ROA**

| Model | | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. |
|---|---|---|---|---|---|---|
| | | B | Std. Error | Beta | | |
| 1 | (Constant) | -.003 | .033 | | -.096 | .927 |
| | Total debt | .000 | .000 | -.279 | -.643 | .549 |
| | LAR | .019 | .014 | .651 | 1.370 | .229 |
| | EAR | .062 | .102 | .350 | .605 | .571 |

## Conclusion

It was observed that the relation between the independent variables and the dependent variables were non-significant. Moreover, the three dependent variables were non-significant predictors of the fourth dependent variables.summarizes the final decisions regarding the acceptance or the rejection of the null hypotheses.

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