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The Impact of Capital Structure on Jordanian Banks Performance

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Abstract:

Due to the great importance of the financing structure of banks, the impact of capital structure on the financial performance of banks listed on the Amman Stock Exchange has been examined. To achieve the objectives of this study, we have followed the experimental approach. The study relied on financial variables. The Capital Structure has been measured by the ratios of total debt to total assets and total debt to total equity. Both ratios are independent variables. The dependent variable in this study is the financial performance of banks represented by the ratio of return on assets, the ratio of return on equity, the ratio of return on investment, and the ratio of return on share.

The study community and sample consisted of twelve commercial banks listed on Amman Stock Exchange (ASE) during the period (2007-2017). Statistical Package for the Social Sciences (SPSS) software was used in testing of research hypotheses. The most important results are that the capital structure has an impact on return on assets (ROA), while it has no impact on return on equity (ROE), return on investment (ROI) and earnings per share (EPS) in Jordanian commercial banks.

Keywords:

capital structure, performance , total liability to total equity, total liability to total asset, ROA, ROE, ROI, EPS, commercial banks, Amman stock Exchange

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Introduction

Commercial banks play a key role in the international economy (Llewellyn, 1992), where banks are considered a basic building block in international trade and contribute in an effective way to economic and social development. The role of banks in economic development is highlighted by providing credit to project owners and making investments that promote economic growth. Commercial banks depend for their success on their ability to assess their assets and assess their risks (Beck, 2008). Banks should follow effective methods of assessing and facing various risks; Such as market risk, operations and various activities of the bank. Given the financing structure needed to face risks (Ça glayan, and Şak, 2010), how banks shape their financing structures is unclear, as well as the factors that affect financing behavior. (Houston et. Al., 1997) found that financial performance is an important issue among managers, investors and shareholders because financial performance is linked to the country's economic development and reinforces the decisions of depositors to keep or withdraw their money from the bank (Zarrouk, Ben Jedidia, and Moualhi, 2016). The banks have combined operational activities with investment operations (Al-Kassim, 2005). And the growth of the Jordanian economy depends to a large extent on the performance of the financial sector in general and the banking sector in particular, as it links investors and depositors and thus contributes to economic development.

The importance of this research stems from analyzing the reality of commercial banks operating in Jordan and the method they manage their operations and activities, on both theoretical aspects, by reviewing the conclusions of the previous studies and practical aspects represented in analyzing the impact of the financing structure on the performance of commercial banks operating in Jordan. Furthermore, the study demonstrates the efficiency of commercial banks performance, which provides customers with an important indicator to ensure the growth and maintenance of their savings.

Literature Review

Several previous studies have discussed the banks' financial performance, including a study of (Mujahaid, et.al, 2014) in Pakistan. The study concluded that there is a positive effect between capital structure and bank performance.

In Canada, (Bordelean and Graham, 2010) studied the relationship between liquidity and financial performance in Canadian and British banks. The most

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important findings of the study were that profitability improves in banks with low liquid assets, i.e. the relationship is reversible and non-linear.

In South Africa, (Kumbirai and Webb, 2010) studied liquidity, profitability, credit quality and the performance of commercial banks, and concluded that the global financial crisis had a negative impact on profitability, liquidity and credit quality in banks.

(Hanif et al., 2012) in Pakistan analyzed and compared the performance of Islamic banks and commercial banks to find out who works better than others do. The study concluded that commercial banks are better in terms of liquidity and profitability due to the expansion of their services and products, while Islamic banks are better in terms of credit risk management and solvency maintenance because their compliance with Islamic law.

Also in Pakistan (Jaffa & Manarvi, 2011) used CAMEL technology to compare the performance of Islamic and commercial banks and the results of the analysis showed that Islamic banks maintained their capital, asset quality and liquidity, and that commercial banks had good management quality and good profits during the study.

In Malaysia, (Zahid, Hussein, and Azizuddin, 2016) compared performance between Islamic and commercial banks and found that Islamic banks performed better than commercial banks in terms of profitability.

Several studies have discussed the impact of ownership structure on the performance, including the study of (Moscu, 2014) in Romania. The study has concluded that the performance of companies represented by return on assets, return on equity and return on equity is influenced by the financing structure of companies listed on the Bucharest Stock Exchange.

In Bangladesh, (HASAN et. al., 2014) conducted a study on the relationship between the structure of capital and the profitability of the company. The study concluded that there is no statistically significant relationship between the structure of the capital and the performance of the company.

After reviewing previous studies, we find that there is a positive relationship between the capital structure and financial performance. This study completes the previous studies through the applied study of the impact of the financing structure on the financial performance of commercial banks operating in Jordan.

Study problem

Based on previous studies, the banks aim to obtain high returns on their activities and operations and to optimize the available resources. The problem of this study is represented in:

Is there an impact of capital structure on Jordanian commercial Banks sector performance?

The following sub-questions are derived from them:

Is there impact of capital structure on Jordanian commercial Banks sector performance ROA?

Is there impact of capital structure on Jordanian commercial Banks sector performance ROE?

Is there impact of capital structure on Jordanian commercial Banks sector performance ROI?

The Objective of the Study

The research aims to study the impact of the financing structure on the financial performance of commercial banks operating in Jordan.

Hypotheses

Main Hypotheses for studying the impact of capital structure on Jordanian Banks performance.

We have tested the following hypotheses:

H01: There is no significant impact of capital structure on Jordanian commercial Banks sector performance.

Sub Hypotheses (Branched From the Main Hypotheses)

- H₀₁: There is no significant impact of capital structure on Jordanian commercial Banks sector performance ROA.
- H₀₂: There is no significant impact of capital structure on Jordanian commercial Banks sector performance ROE.
- H₀₃: There is no significant impact of capital structure on Jordanian commercial Banks sector performance ROI.
- H₀₄: There is no significant impact of capital structure on Jordanian commercial Banks sector performance EPS.

Methodology

This section demonstrates the research methodology adopted in this study. It demonstrates sample selection criteria, variables of the study, research model and the hypotheses testing.

Community of the Study

The community of this study is the commercial banks operating in Jordan listed in Amman Stock Exchange.

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The Study Sample

The study examined the financial reports of Jordanian commercial banks sector listed on ASE for the period 2011 to 2017.

Dependent Variables of the study:

1- Return on Assets (ROA):

ROA provides the readers with a measure of the profitability of a concern and the effectiveness with which the firm has used their assets (Brigham & Ehrhardt, 2005).

Return on total assets = ROA =
$$\frac{\text{Net income available to common stockholders}}{\text{Total assets}}$$

2- Return on Common Equity (ROE)

ROE shows the return on capital provided by shareholders. To calculate this important ratio, net profit is set in relation to the average shareholders' equity over the business year. In the calculation, it is important to bring in net profit and shareholders' equity after minority interest has been deducted in order to only consider figures that shareholders are actually entitled to. This ratio gives investors a figure that can be compared between different firms and investment opportunities (Brigham & Ehrhardt, 2005).

Return on common equity = ROE =
$$\frac{\text{Net income available to common stockholders}}{\text{Common equity}}$$

Common equity

3- Earning Per Share (EPS)

EPS is ratio of income after tax, divided issued common stocks. By knowing EPS we could get information to estimate how much we are going to earn as capital Investor. EPS reflects future income or capital gain or loss (Harahap,2010).

Earnings per share= net income divided by average outstanding common shares

Independent Variables of the Study

1- Total liability of total equity

Debt to equity ratio (DE) is measured by the ratio of the total liability divided by total equity.

2- Total liability to Total Assets

Debt Ratio (DR) is measured by the ratio of the debt divided by the total assets.

Regression analysis

In order to test the study hypotheses,

Linear Regression. To test the research hypotheses, the Statistical Package for Social Sciences (SPSS) program was used to prepare the table of analysis of variance (ANOVA) as shown in Table 1.

H₀₁: There is no significant impact of capital structure on Jordanian commercial Banks sector

performance (ROA).

Table 1 herein below shows the results of the analysis of the simple linear regression of the capital structure of Jordanian commercial banks, represented in total liability to total asset, total liability to total equity, combined with the performance of the Jordanian banking sector measured by the ratio of return on assets (ROA). The table shows that R (.740^a) there is a strong and positive correlation between the independent variables, which are the capital structure together, and the dependent variable, which is the performance of the Jordanian banking sector measured by the ratio of return on assets (ROA). The ratio of what is explained by the capital structure (R²) is (.547%) from the dependent variable variation, which represent the performance of commercial banks in Jordan measured by the return on asset ratio is high percentage. (F) Value derived for this relation is (48.899), which is greater than its scheduled value at significance level less than (5%), the fixed limit is (-129), beta value of the independent variable (total liability to total equity) reached (.122). P Value = (000) less than (5%). So, according to the results of analysis, the null hypothesis is rejected and accept the alternative hypothesis stating “There is a significant impact of the capital structure on the Jordanian commercial banks sector performance (ROA)”.

From the above, the equation of the simple linear regression of the impact of the capital structure on the performance of the Jordanian commercial banking sector as measured by the ratio of return on assets (ROA) can be formulated as follows:

$$ROA = -.129 + .708 \text{ total liability to total equity} + .122 \text{ total liability to total asset} + e$$

Table 1
The results of simple linear regression analysis of the impact of
Capital structure on the performance of commercial banks sector in Jordan
through ROA

Beta	Coef.	F		R ²	R
		Sig.	Value		
-	Constant	.024	5.290	.547	.740 ^a
.129-	total liability to total equity				
.708					
.122	total liability to total asset				

For testing the second null hypothesis stating :

H02: “There is no significant impact of capital structure on Jordanian commercial Banks sector performance ROE.”

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Table 2
The results of simple linear regression analysis for the impact of capital structure
On the performance of Jordanian commercial banks through ROE

Beta	Coef.	F		R ²	R
		Sig.	Value		
8.087	Constant	.183	1.737	.041	.203 ^a
-.180	total liability to total equity				
.131	total liability to total asset				

Table (2) shows the results of the simple linear regression analysis of the impact of capital structure, represented by the two ratios (total liability to total asset ratio and total liability to total equity ratio) together on the performance of the Jordanian commercial banks measured by the return on equity ratio (ROE). R (.203) shows that the correlation between the independent variables, combined capital structure ratio and the dependent variable, which is the performance of the Jordanian commercial banks measured by Return on Equity Ratio is weak and positive. The percentage of the impact of the independent variable, capital structure (R²) was (.041%) on the variation of the dependent variable, which the performance of the commercial banks in Jordan measured by the Return on Equity is low interpretation percentage. (F) value derived for this relation was (1.737), which is less than its scheduled value at the significance level, less than (5%). The fixed limit value was (8.087). Beta value for the independent variable, total liability to total equity, was (0.180). Beta value of the independent variable, total liability to total asset, was (.131). P value was (.193) greater than 5%.

According to the above analysis results, the null hypothesis, stating: “there is no significant impact of the capital structure on the Jordanian commercial banks sector performance ROE” is accepted.

Table 3
The Results of the analysis of the simple linear regression of the impact of the capital structure on the performance of the Jordanian commercial banking sector through return on investment (ROI)

Beta	Coef.	F		R ²	R
		Sig.	Value		
1.320	Constant	.848	166	.004	.065 ^a
-.065	total liability to total equity				
.019					

	total liability to total asset				
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Table 3 shows the results of the simple linear regression analysis of the impact of the capital structure represented in total liability to total asset and total liability to total equity total combined on the performance of the Jordanian commercial banking sector measured by the ratio of return on investment (ROI). R (.065) shows us that the correlation between the independent variables of the combined capital structure ratio and the variable of the performance of the Jordanian commercial banking sector measured by the ratio of return on investment (ROI) is weak and positive. The ratio of what is explained by the capital structure (R2) is (.004%) of the dependent variable of the performance of the Jordanian commercial banking sector measured by the ratio of return on investment is low. The table shows that "F" value extracted for this relationship was 166, which is less than its scheduled value at a significance level, less than (5%). The fixed limit value was 1.320. The beta value of the independent variable total liability to total equity was (.065). The beta value of the independent variable (total liability to total asset) was (.019) and (P) value was (.848), which higher than 5%. According to these results of the analysis, the null hypothesis, stating "There is no significant impact of capital structure on Jordanian commercial banks sector performance ROI" should be accepted.

H04: There is no significant impact of capital structure on Jordanian commercial Banks sector performance EPS.

Table 4

The results of simple linear regression analysis of the impact of capital structure on the Performance of Jordanian commercial banks sector through EPS

Beta	Coef.	F		R ²	R
		Sig.	Value		
210 .033 .141	Constant total liability to total equity total liability to total asset	.396	.937	.023	.150 ^a

Table 4 shows the results of the analysis of the simple linear regression of the impact of the capital structure, represented in total liability to total asset ratio and total liability to total equity total ratio combined on the performance of the Jordanian commercial bank sector measured by earning per share ratio. The (R (.150) shows the correlation between the independent variables ratios of the structure of capital combined and the variable of the performance of Jordanian commercial banks measured by earning per share ratio is weak and positive. The Capital structure (R2) interpretation is that the percent of the independent variable was (.023%) of the variation of the dependent variable, which is the performance of the Jordanian commercial banking sector measured by the ratio of earning per share is low. (F) value extracted for this relationship was (.937),

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which is below its scheduled value at the significance level less than (5%). The value of the fixed limit was 210. The beta value of the total liability to total equity was (0,033) and the beta value of the independent variable total liability to total asset was (.141). P-value = (396), which higher than 5%. According to these results of the analysis, the null hypothesis "There is no significant impact of capital structure on Jordanian commercial banks sector earning per share" should be accepted.

Statistical Analysis

This section demonstrates the results of descriptive statistics for the study variables.

Table 5
Independent Variables Ranking Among Jordanian Commercial banking Sector

Bank Name	Rank Total Liability to Total Equity	Rank Total Liability to Total Asset
JORDAN COMMERCIAL BANK	10	11
JORDAN INVESTMENT & FINANCE BANK	3	1
THE HOUSING BANK FOR TRADE AND FINANCE	1	12
JORDAN KUWAIT BANK	9	5
ARAB BANKING CORPORATION /(JORDAN)	6	6
JORDAN AHLI BANK	12	10
ARAB JORDAN INVESTEMENT BANK	11	7
CAIRO AMMAN BANK	7	9
ARAB BANK	5	4
BANK OF JORDAN	2	3
BEIT AL-MAL SAVING&INVESTMENT FOR HOUSING	4	2
UNION BANK FOR SAVING & INVESTMENT	8	8

By reviewing Table 5, we found that the Housing Bank For Trade and Finance has the lowest Total Liability to Total Equity and Jordan Ahli Bank has the highest. In addition, we find that the Jordan Investment & Finance Bank has the lowest Total Liability to Total Asset and the Housing Bank For Trade and Finance has the highest.

Table 6
Dependent Variables Ranking Among Jordanian Commercial banking Sector

Bank Name	Rank ROA	Rank ROI	Rank ROE	Rank E/Share
JORDAN COMMERCIAL BANK	2	1	2	1
JORDAN INVESTMENT & FINANCE BANK	10	9	7	4
THE HOUSING BANK FOR TRADE AND FINANCE	11	8	11	11
JORDAN KUWAIT BANK	3	10	9	9
ARAB BANKING CORPORATION /(JORDAN)	8	6	8	3
JORDAN Ahli BANK	1	2	5	12
ARAB JORDAN INVESTEMENT BANK	7	7	10	5
CAIRO AMMAN BANK	9	11	12	8
ARAB BANK	4	3	3	10
BANK OF JORDAN	12	12	1	7
BEIT AL-MAL SAVING&INVESTMENT FOR HOUSING	6	5	4	2
UNION BANK FOR SAVING & INVESTMENT	5	4	6	6

By reviewing Table 6, we found that the Jordan Ahli Bank has the lowest ROA and Bank of Jordan has the highest. In addition, we find that the Jordan Commercial Bank has the lowest ROI and Bank of Jordan has the highest. We also find that the Bank of Jordan has the lowest ROE and the Cairo Amman Bank has the highest. We also find that the Jordan Commercial Bank has the lowest EPS and the Jordan Ahli Bank has the highest.

Results and Recommendations

The study conclusions through the results of the statistical analysis of examining the impact of the financing structure on the performance of Jordanian banks listed on the Amman Financial Market were as follows:

There is a statistically significant impact on the capital structure represented by the two ratios "Total Liability to Total Asset and Total Liability to Total equity" on the return on assets (ROA). The result consists with the study conducted by Mujhid in Pakistan, Bordelean study in Canada and MOSCU study which concluded that there is an impact on the structure of financing on the return on assets.

There is no statistically significant impact on the financing structure represented in total Liability to Total Asset, Total Liability to Total equity on the performance of banks represented by the return on equity.

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The result is inconsistent with the study of Moscu, which concluded that the financing structure has an impact on the ROE and it is consistent with Hassan Study, which concluded that there is no statistical significant impact between the capital structure and the company' performance represented in ROE. It is also inconsistent with Kumbirai study, which concluded that the financing structure has negative impact on the company's performance.

Total liability to total asset and total liability to total liability to total equity ratios have no statistically significant impact on return on investment (ROI). This finding is inconsistent with MOSCU study, which concluded that financing structure has an impact on return on investment.

There is no statistically significant impact of total liability to total asset and total liability to total equity on EPS. This finding is inconsistent with MOSCU study, which concluded that there the structure of the financing effects EPS.

Recommendations

In light of the above, the researcher recommends:

Commercial banks should increase their assets by increasing deposits that positively affect their performance, giving a positive indicator to customers as they rise to meet their clients' goals and the banks objectives that positively affect the economy.

The diversity of services provided by the Bank to its customers, which help them in funding their projects, leading to the development of the economic growth, as Jordan's economy depends heavily on the banking sector.

A Recommendation for conducting further studies

Based on the study, findings, and recommendations, researchers should conduct further studies on the relationship between the capital structure and performance ratios for other economic sectors, especially at the present time with the corona pandemic.

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