“The impact of the capital structure on Iraqi banks’ performance”

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THE IMPACT OF THE CAPITAL STRUCTURE ON IRAQI BANKS' PERFORMANCE

Abstract

The current paper aims to investigate the effect of the capital structure on the profitability of a panel of eighteen Iraqi listed banks from 2009 to 2018. Furthermore, the unbalanced panel data approach (fixed effect and random effect) is utilized to explore the influence of capital structure on banks' profitability. This study's findings point out that the banks' performance in terms of return on assets has a significant positive association with equity to assets ratio, liabilities to assets ratio, and bank size. On the other hand, long-term debt to assets ratio, short-term debt to assets ratio, and total debt to assets ratio showed a significant negative effect on banks' performance. This study highlights new facts for an enhanced understanding of the capital structure and its association with banks' performance in developing economies like Iraq. This study is considered one of the earliest studies of its types by determining the Iraqi banks' optimal structure and examining capital structure's impact on their performance. Nevertheless, the study contributes significantly to theoretical literature, policymakers, and industry so that conventional Iraqi banks can boost their performance.

Keywords banking sector, capital structure, ROA, ROE, panel data, Iraq

JEL Classification C33, G32, L25

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INTRODUCTION

The capital structure is considered a difficult issue faced by financial decision-makers because of its association with many investment decisions. The low net current value for any project planned for investment therein may result from the capital's high cost. This can happen because of the increased financial leverage, which comes from the expansion of the dependence on debt. It may lead to non-profit due to the expansion of the dependence on debt. Management needs to identify the components of capital structure positively associated with profitability (Al-Zubaidi & Salamah, 2014; Watson & Head, 2007). Nevertheless, banks differ from others like service, commercial, and industrial companies in the level of their dependence on external funds. This is due to different fund resources and the nature of their different activities. Therefore, banks resort to a comparison between finance sources regarding risks, costs, returns, time, participation in management, obligations of interest, and installments. The optimal financial structure was achieved by maximizing the business valuation, as this valuation is essential for the debt value and the equity value (Al-Zubaidi & Salamah, 2014).

In achieving optimal performance, banks can use an assortment of strategies and techniques. The main strategies are through the capital structure. The association between the capital structure and the banks' profitability is right of huge importance to all banks. The capital structure's decision is of great importance to banks in particular because

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the banks are sensitive to the change in leverage due to the decrease in their capital to total assets (Al-Kayed, Zain, & Duasa, 2014). Furthermore, banks' capital requirements are regulated, and these sets of banks are different from other firms. Moreover, it is noted from previous studies that many studies dealing with the impact of the capital structure on banks' profitability still are very small, so this study is distinguished from previous studies that it is the first study of this kind in Iraq, which examines a broad sample of the influence of capital structure on banks' performance. Meanwhile, previous studies did not address the capital structure of Iraqi banks and their importance. The current study tries to fill this knowledge gap by examining the impact of capital structure on Iraqi banks' performance.

1. LITERATURE REVIEW

The capital structure explains how the company raises its resources to extend its corporate operations. The capital structure is a mixture of property and debt funds of all kinds, based on the company's financial decisions. Decades ago, a modern theory of the capital structure was well-known after Modigliani and Miller study (Modigliani & Miller, 1963). The Modigliani and Miller theory is the cornerstone of modern company finance. The cost of bankruptcy, the cost of management, the variability of information, and the market's efficiency, company value is not influenced by how it was funded, whether by issuing shares or by getting debt from external sources. The second proposal states that the firm's leverage does not influence debt proportion to equity.

The liabilities to assets ratio (LAR) is one of the most used indicators in measuring the degree of external financing sources in the banks' financial structure and determining the amount of debt per dinar to total assets. Additionally, this proportion indicates the size of the bank's potential risks in terms of the debt burden. If this ratio is greater than 100%, this indicates that the bank's debt is greater than its assets, and this means that it will face the risks of being unable to meet its obligations, especially long-term, which exposes the bankruptcy and liquidation problems. If this percentage is low, then this indicates that in its activities, the bank relies more on self-financing than it depends on debt, and one can say that the bank has assets that exceed the value of its debt (Alhamdan & Alqadah, 2013). However, the higher LAR ratio points out that the bank is loaned up, and its liquidity is low (Mikhan & Jain, 2007). Saeed and Badar (2013) and Umar et al. (2012) discovered a significant negative association between LAR and firm performance in Pakistan. However, Alhamdan and Alqadah (2013), Abor (2005), and Khashrama and Qaqish (2000) pointed out that the LAR has a positive association with firm performance. Thus, the LAR hypothesis can be written as follows:

H1: Liabilities to assets ratio (LAR) is significantly positively related to banks' performance.

The high capital helps banks become quite safer during the liquidation and decrease their external fund resources, leading to their enhanced performance (Shamki, Alulis, & Sayari, 2016). Prabowo (2018), Alhamdan and Alqadah (2013) say that banks' financing costs will be few and depend on external financing to increase the profits achieved when banks are capitalized well. Many researchers examined the association between equity to assets proportion (ETA) and banks' performance was measured by ROA and ROE (Jadah, Alghanimi, Al-Dahaan, & Al-Husainy, 2020; Prabowo, 2018; Al-Farisi & Hendrawan, 2011). It is because the large size of equity will reduce capital risk. Nevertheless, the low capital ratio may affect public trust in the bank and its safety. Generally, there are many advantages to the large equity size by providing many services for the bank's customers, reflecting their increasing profitability (Bashir, 1999). It is predicted that equity to total assets ratio is significantly positively related to ROA and ROE. The previous literature found discordant findings. Jadah et al. (2020), Prabowo (2018) pointed out a positive association between ETA and banks' performance. However, Al-Farisi and Hendrawan (2011) discovered a negative association between ETA and banks' performance. Pastory, Marobhe, and Kaaya (2013) find an insignificant association between ETA and banks' performance. Hence, the ETA hypothesis is as follows:

H2: Equity to assets ratio (ETA) is positively significantly related to banks' performance.

Many studies were conducted using long-term debt to asset ratio (LTDAR) to measure the capital structure. Nevertheless, previous studies found mixed results. In his research, Abu-Rub (2012) pointed out a significant positive influence of capital structure (proportion of long-term debt to gross assets) on the Palestinian firms' profitability from 2006 to 2010. Similarly, another study carried out by Umar, Tanveer, Aslam, and Sajid (2012) pointed out that the long-term debt to assets ratio (LTDAR) is positively significantly linked to firm performance using a panel of 100 firms from 2006 to 2009. Likewise, Salteh et al. (2012) pointed out a significant positive effect of LTDAR on its profitability using a panel of 28 Iranian firms. Nevertheless, Salim and Yadav (2012), using a panel of 237 Malaysian firms from 1995 to 2011, pointed out a negative association between LTDAR and the firm performance. Similarly, Zeitun and Tian (2007) found that the long-term debt to gross assets ratio has a negative effect on the Jordanian banks' profitability. In the same vein, Abor (2005) discovers a significant adverse association between LTDAR and the profitability of companies in Ghana. Hence, the LTDAR hypothesis is written as follows:

H3: Long-term debt to gross assets ratio (LTDAR) has a significant negative association with banks' performance.

Numerous studies were carried out using short-term debt to assets ratio (STDAR) to measure the capital structure. Moreover, the influence of short-term debt to assets ratio (STDAR) on banks' performance appears to be positive in some previous studies. For example, Salteh, Ghanavati, Khanqah, and Khosroshahi (2012) discovered a significant positive influence of STDAR on Iranian firms' performance. Similarly, Arbabiyan and Safari (2009) pointed out that the STDAR is positively significantly related to banks' profitability using a panel of 100 companies from 2001 to 2007. Nevertheless, other studies discover a negative association between STDAR and banks' performance, for instance, Z. Ramadan and I. Ramadan (2015) explored a significant negative association between short-term debt ratio and a company's performance in Jordan. Likewise, Salim and Yadav (2012), using a panel of 237 Malaysian corporations from 1995 to 2011, pointed out a negative association between STDTA and firm profitability. Similarly, Zeitun and Tian (2007) discovered that the short-term debt to assets ratio is negatively associated with the banks' profitability in Jordan. Thus, STDAR hypothesis is written as follows:

H4: There is a negative association between short-term debt to assets and banks' profitability.

The results of previous research are inconsistent. Some researchers have pointed out that the total debt to assets (DTA) ratio and banks' profitability have significantly negative association. Nevertheless, other researchers have discovered an insignificant association between DTA and banks' performance. In the panel of 100 companies from 2001 to 2007, Arbabiyan and Safari (2009) found that the total debt to assets ratio (DTA) is related positively to banks' performance. Likewise, Abu-Rub (2012) found a positive association between total debt to gross assets ratio (DTA) and the company's profitability. Similarly, Salteh et al. (2012) stressed that 28 Iranian companies' performance is positively linked to the DTA. Nonetheless, Taani (2013) discovered an insignificant association between the capital structure and Jordanian companies' performance. Meanwhile, a major inverse association between the proportions of debt and corporate profitability was explored in Pakistan by Memon, Bhutto, and Abbas (2012). Similarly, Muritala (2012) found that the company's debt level and income are substantially adverse in Nigeria. The same negative impacts on the banks' profitability have been documented by Zeitun and Tian (2007). Additionally, Salim and Yadav (2012) discovered a significant negative relationship between DTA and firms' profitability using 237 Malaysian firms from 1995 to 2011. Thus, the fifth hypothesis may be written as follows:

H5: There is a significant negative association between the proportion of total debt to gross assets and the Iraqi banks' performance.

2. METHODS

2.1. Data sources and sample

The current study emphasizes the capital structure effects on the commercial listed banks' prof-

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itability in Iraq Stock Exchange (ISX). The data of the current paper were manually obtained from banks' annual reports. The study utilized quantitative analysis. Furthermore, the sample size of this study comprised 18 commercial private listed banks in ISX. The data were confined to the period of 2009–2018.

2.2. Specification of the variables

As for the dependent variable, the current study used banks' performance. Moreover, following past studies, two proxies were used to measure banks' performance that is return on assets (ROA) and return on equity (ROE). Return on assets is one of the common measures used to measure banks' performance, and this measure shows how effective is the administration of banks by achieving profits through the available bank assets. Several previous studies utilized the return on assets to measure banks' performance (Jadah et al., 2020; Clash, 2019; Jadah, Murugiah, & Adzis, 2016; Jadah & Mohammed, 2016). Besides, previous studies used ROE as a measure of the banks' profitability (Jadah et al., 2020; Clash, 2019; Jadah et al., 2016). Besides, management uses the ROE to measure the effectiveness of owners' funds usage by this administration. The current study will employ both ROE and ROA as proxies of banks' performance.

Banks worked to use financing to finance their operations of capital structure that consists of a mixture of equity and debt. Previous research used the debt ratio (gross debt to gross assets) to measure capital structure (Taani, 2013). However, other studies have used gross liabilities to gross assets as a measure of capital structure (Alhamdan & Alqadah, 2013; Al-Farisi & Hendrawan, 2011), and some studies have used long-term debt to gross assets (Zeitun & Tian, 2007). Nonetheless, it is insufficient to use a single measure of capital structure because it may lead to improper conclusions regarding the banks' capital structure. For these reasons, this study utilized comprehensive capital structure measurements, five measurements to measure banks' capital structure, and tested its influence on banks' performance. The study's variables, the study's measurement, and predictable signs are demonstrated in Table 1.

2.3. Model specification

The current study utilizes the panel data approach analysis because the panel data regression was the most appropriate. After all, it considered changes over time to performance indicators, banks' samples' different characteristics, and temporary changes in the banking environment (Bortolotti et al., 2002). The multiple regression approach is utilized to analyze the association between capital

Table 1. The study variables summary

Variables	Abbreviations	Measurements	Predictable sign
Dependent variables			
Return on assets	ROA	Net profit (after taxes)/Gross assets	
Return on equity	ROE	Net profit (after taxes)/Gross equity	
Independent variables			
Liabilities to total assets ratio	LAR	Total liability/Gross assets ratio	+
Equity to assets ratio	EAR	Total Equity/Total assets ratio	+
Long-term debt to total assets ratio	LTDAR	Long-term debt/Gross assets	-
Short-term debt to total assets ratio	STDAR	Short-term debt/Gross assets	-
Debt to total assets	DTA	Total debt/Gross assets	-
Control variables			
Bank size	BSZ	Natural log of the gross assets	+
Asset growth	ASG	The current year's asset – last year's assets/current year's assets	+
Inflation	INF	The proportion yearly inflation	+

Note: ROA: return on assets; ROE: return on equity; LAR: liability to total assets ratio; EAR: Equity to gross assets ratio; LTDAR: long-term debt to gross assets ratio; STDAR: short-term debt to gross assets ratio; DTA: total debt to gross assets; BSZ: bank size; ASG: asset growth; INF: inflation.

structure and banks' profitability. The panel data models are specified as follows:

$$ROA_{it} = \beta_0 + \beta_1 LAR_{it} + \beta_2 EAR_{it} + \\ + \beta_3 LTDAR_{it} + \beta_4 STDAR_{it} + \beta_5 DTA_{it} + \\ + \beta_6 BSZ_{it} + \beta_7 ASG_{it} + \beta_8 INF_{it} + \varepsilon_{it}, \quad (1)$$

$$ROE_{it} = \beta_0 + \beta_1 LAR_{it} + \beta_2 EAR_{it} + \\ + \beta_3 LTDAR_{it} + \beta_4 STDAR_{it} + \beta_5 DTA_{it} + \\ + \beta_6 BSZ_{it} + \beta_7 ASG_{it} + \beta_8 INF_{it} + \varepsilon_{it}, \quad (2)$$

where *ROA* – return on assets, *ROE* – return on equity, β_1–β_8 – coefficients of explanatory variables *LAR* – liabilities to total assets ratio, *EAR* – equity to assets ratio, *LTDAR* – long-term debt to assets ratio, *STDAR* – short-term debt to assets ratio, *DTA* – total debt to assets, *BSZ* – bank size (natural log of the total assets), *ASG* – asset growth (The current year's assets – last year's assets / current year's assets), *INF* – inflation, ε_{it} – error term.

3. RESULTS

Before the model test, the descriptive statistics, Pearson correlation, Breusch-Pagan LM test, and Hausman specification test were used to fulfill regression requirements.

3.1. Descriptive statistics

Descriptive statistics are illustrated in Table 2 for the variables of the analysis. Table 2 indicates an average ROA for the banks' sample of 0.517%, which means that 0.52% of the banks' overall assets with the highest and lowest value of 0.9% and 0.1% were registered for the banks' sample, with a minimum 0.175 variance. As far as the second dependent variable ROE is concerned, it is noted that the mean value for the banks' sample was 0.1865%, which is the standard deviation of 0.109%. LAR vector average is 4.760, with a standard deviation of 4.740%. Nevertheless, for the EAR, LTDAR, STDAR, and DTA variables, the mean was 12.909, 0.783, 0.154, and 0.781, respectively, and standard deviations were 6.166, 0.093, 0.067, and 0.082, respectively. This indicates that banks operate at a high level of debt. Regarding the control variables, bank size, asset growth, and inflation, the standard deviation was moderate during the study period from 2009 to 2018.

Table 2. Descriptive statistics

Variables	Mean	St. dev.	Max.	Min.
ROA	0.517	0.175	0.874	0.132
ROE	0.186	0.109	0.515	–0.134
LAR	4.760	4.740	9.456	0.087
EAR	12.909	6.166	18.24	3.403
LTDAR	0.783	0.093	0.943	0.530
STDAR	0.154	0.067	0.373	0.034
DTA	0.781	0.082	0.951	0.672
BSZ	8.755	2.909	14.45	–0.012
ASG	26.79	25.62	34.65	4.393
INF	2.947	1.887	6.089	1.393

3.2. Correlation

The matrix for the correlation between dependent and independent variables is used. Moreover, the association between independent variables shows there is no strong correlation between them. To study the correlation strength, Pearson correlation matrix for the sample banks' variables is discussed in Table 3.

Table 3. Pearson correlation matrix

Variables	ROA	ROE	LAR	EAR	LTDAR	STDAR	DTA	Bank size	Asset growth	Inflation
ROA	1									
ROE	0.098	1								
LAR	0.095	0.095	1							
EAR	0.349	0.270	–0.098	1						
LTDAR	–0.131	–0.039	–0.065	0.134	1					
STDAR	–0.638	–0.202	0.018	–0.419	0.070	1				
DTA	–0.432	–0.354	0.230	0.276	0.098	0.065	1			
Bank size	0.125	0.058	0.021	–0.054	–0.075	0.185	0.354	1		
Asset growth	0.175	0.054	0.188	–0.230	0.182	0.149	0.153	–0.178	1	
Inflation	0.456	0.290	0.023	–0.192	0.182	0.114	0.452	–0.216	0.092	1

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Table 3 demonstrates a correlation matrix for all study variables. The highest correlation was short-term debt to assets ratio at 0.638. For all study variables, Table 3 illustrates a correlation matrix. The short-term debt to assets ratio had the highest correlation of 0.638. It is found that the ROA is positively associated with liabilities to gross assets ratio, equity to assets ratio, bank size, asset growth, inflation, etc. However, ROA is negatively associated with the long-run debt to assets ratio and the short-run debt to gross assets ratio. Table 3 also illustrates that the ROE has been negatively correlated with long-term debt to gross assets ratio, short-term debt to gross assets ratio, total debt to gross assets ratio. Nevertheless, ROE was positively correlated with liabilities to gross assets proportion, equity to assets ratio, bank size, asset growth, inflation.

3.3. Regression analysis

Several diagnostic tests have been used to estimate the panel's regression model, such as the normality test, serial correlation test, multicollinearity test, and heteroscedasticity test. In addition to Breusch-Pagan LM test and Hausman specification test to select the appropriate model from the three types: regular combined small square (pooled OLS), fixed effects (FE), and random effects (RE) models. These models are important to determine bank impacts, time effects, and certain factors of the capital structure in Iraq.

3.3.1. Regression analysis with ROA

This segment has used panel data multiple regressions to test the association between capital structure and ROA: normality test, serial correlation test, multicollinearity test, and heteroscedasticity test for ROA model. The output of the diagnostic tests indicates that there is no issue with the data. Moreover, the Breusch-Pagan LM test and Hausman test were used to fulfill the requirements of regression. The findings of diagnostic tests show that this model does not suffer from any problems. Furthermore, the outputs of Breusch-Pagan LM test show that the *p*-value is lower than 0.05. This indicates that the FE model or RE is appropriate. Furthermore, the Hausman test shows that the *p*-value is lower than 0.05. This shows that the FE model is a suitable methodology to run the ROA model. The panel FE for ROA results are illustrated in Table 4.

3.3.2. Regression analysis with ROE

In this subsection, panel data multiple regressions are utilized to test the association between capital structure and ROE: normality test, serial correlation test, multicollinearity test, and heteroscedasticity test for ROE model.

The output of the diagnostic tests indicates that there was no issue with the data. Moreover, the Breusch-Pagan LM test and Hausman specification test were used to fulfill the requirements of

Table 4. The influence of the capital structure on banks' performance measured by ROA

Variable	Coefficient	t-statistic	Prob.
LAR	3.5706**	4.1680	0.0001
EAR	0.7352**	3.9189	0.0001
LTDAR	–0.12949**	–2.6231	0.0096
STDAR	–0.35964*	–2.3707	0.0190
DTA	–1.9776*	–2.1318	0.0346
BSZ	0.0825*	2.3723	0.0189
ASG	0.0390	0.3262	0.7447
INF	0.1764	0.9989	0.3194
C	2.5267	3.2973	0.0012
R-squared	0.9394		
F-statistic	296.765		
Prob. (F-statistic)	0.0000		
Breausch-Pagan LM test		34.6312	0.0342
Hausman test		12.6364	0.0492

Note: **, * show significance at 1% and 5% level, respectively.

regression. The findings of diagnostic tests refer to this model does not suffer from any problems. Furthermore, the outputs of the Breusch-Pagan LM test show that the *p*-value is lower than 0.05; this indicates that the fixed effect approach or random effect approach is suitable. Furthermore, the Hausman test shows that the *p*-value is higher than 0.05. This indicates that the random effect approach is a suitable methodology to run the ROE model. The panel random effect for ROE results is illustrated in Table 5.

Table 5. The impact of the capital structure on banks' performance measured by ROE

Variable	Coefficient	t-statistic	Prob.
LAR	1.2631**	6.0048	0.0000
EAR	2.3601**	6.8553	0.0000
LTDAR	–1.9860**	–3.0345	0.0028
STDAR	–2.5440**	–3.4249	0.0008
DTA	–0.3649*	–2.3547	0.0198
BSZ	0.0671*	2.0921	0.0381
ASG	0.1764	0.9989	0.3194
INF	0.5925	1.4420	0.1513
C	9.6449	11.19486	0.0000
R^2	0.8674		
F. Statistic	143.91		
Prob. (*F.* Statistic)	0.0000		
Breausch-Pagan LM Test	67.742	0.0034	
Hausman Test	2.0934	0.5532	

Note: **, * show significance at 1% and 5% level, respectively.

3.4. Robustness check

To improve the robustness of the research findings, the association between the structure of capital and bank performance was analyzed further. It needs to be mentioned that the tables are not viewed because they would occupy so much space. Firstly, the authors also check if the relationship between capital structure and banks' performance is non-linear. Here, all the variables are quadratically described in Eq. (1) and Eq. (2). In the not tabulated findings, the fixed effect and random effects guesses of amended Eq. (1) and modified Eq. (2), respectively, with the quadratic terms, find insignificant coefficients on any of the quadratic capital structure variables. This result suggests then that the association between the capital structure and banks' profitability is linear. Secondly, we used alternative measures for bank performance. Thus, the authors use alternative measures for ROA and ROE, measured as return (before tax) on total assets and return (before tax) on equity, respectively. Finally, the authors re-test the primary model's regressions by using alternative the proportion of total debt to gross assets, with debt to capital proportion. The key results are closed to those reported in these cases found in Tables 4 and 5.

4. DISCUSSION

Tables 4 and 5 indicate that the total ratio (LAR) liabilities have a significant positive association with both banks' performance measures (ROA and ROE). This outcome does not support *H1*. Moreover, these results consistent with the findings of Alhamdan and Alqadah (2013), Abor (2005), and Khashrama and Qaqish (2000). Nevertheless, this result contrasts with other studies (Saeed & Badar, 2013; Umar et al., 2012) who found negative influences. The plausible reason for this result is that increased use of this debt to finance investments in banks will increase the level of profit. Furthermore, the positive influence of a higher liability to gross assets ratio on profitability operates solely through the influence of leverage (because the low proportions of lending are artificial). Profitability eventually is an accounting concept that reflects efficiency levels as much as redistributive or economic policies.

The outcomes of Tables 4 and 5 point out a significant positive influence of the proportion of equity on Iraqi banks' performance (ROE, ROA). The benefits of equity funding are that the corporation does not need collateral, and the risk of financial loss is not raised by additional share funding. These findings indicate that the second hypothesis of this study is supported. Moreover, this finding corresponds to previous research (Jadah et al., 2020; Prabowo, 2018), which showed that highly profitable banks are more likely to rely on internally generated funds and share capital as their financing source. In practice, well-capitalized banks face lower bankruptcy costs, which reduces the cost of financing or has fewer external financing needs resulting in higher performance. Furthermore, this finding's plausible reason is the high proportion of capital to assets; the return on assets will also increase. This indicates that the capital used is required for the internal bank for operating activities

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in generating operating income and other investment activities. This result is supported by Sufyan's argument (2011) that banks face lower costs when well-capitalized then financing costs and dependence on external financing to generate a higher decline in profitability. According to Shamki et al. (2016), high capital makes banks relatively safer in liquidation, reducing dependence on external financing and hence increasing profits. To sum up, the main sign of the positive coefficient estimate for equity-to-assets indicates the efficient management of banks' capital structure.

Based on the findings illustrated in Tables 4 and 5, LTDAR has a significant negative relationship with ROA and ROE. These findings indicate that the third hypothesis of this study is supported. These findings agreed with the earlier studies (Salim & Yadav, 2012; Zeitun & Tian, 2007; Abor, 2005) that showed a negative influence. Nonetheless, the result contradicted the works of Abu-Rub (2012), Umar et al. (2012), Salteh et al. (2012) who identified a positive influence. This indicates that the rise in the long-term debt ratio is linked to reduced profitability. This shows that long-term debt is relatively expensive, which leads to reduced banks' profitability using high rates of long-term debt. Furthermore, the LTDAR ratio is compatible with other leverage metrics and suggests a loss of earnings by rising long-term debt. Besides, banking should be funded by internal funds that affirm the principle of pecking order (Myers & Majluf, 1984). Long-term debt is not likely to be important to such banks to produce income, which could be consistent with the Modigliani and Miller (1958) theorem of irrelevance in the capital structure. On the other hand, it may be important to the banks' decision-making but is considered a source of insufficient funding to increase profits.

From the estimation results of Tables 4 and 5, one can see that both ROA and ROE are adversely affected by short-term debt to gross assets ratio. These findings are in line with the study's prediction of a negative association between short-term debt to gross asset ratio and the bank's profitability. Moreover, this finding agreed with prior works of Z. Ramadan and I. Ramadan (2015), Salim and Yadav (2012), Zeitun and Tian (2007) who found a negative influence. This indicates that there is lower profitability in connection with the rise to the short-term debt ratio. This shows that short-term debt is more costly than equity, and therefore the use of a large share of short-term debt decreases the banks' profitability. The significant negative association discovered in the current research in line with the pecking-order theory (Myers & Majluf, 1984).

The findings of Tables 4 and 5 show that the association between total debt to gross assets and ROA and ROE calculate bank profitability are statistically negative. Therefore, the fifth hypothesis of this study will be confirmed. In Iraq, therefore, banks typically benefit more from lower leverage. This means that commercial banks can reduce overall debt and use domestic funds in particular to finance higher profitability. The results of this analysis thus correspond to Myers and Majluf's (1984) pecking-order theory. Moreover, this result is in harmony with Muritala (2012), Salim and Yadav (2012). This shows these banks with a high debt ratio collect borrowing costs. This decreases net profit, which results in a reduction in return on assets and return on equity.

As for control variables, the regression results in Tables 4 and 5 of this study illustrate that bank size positively significantly influenced both banks' profitability measures (ROE and ROA). This finding is in the same line with the work of Jadah et al. (2016). Bank size is generally used as a measure of the economy of scale of the banking industry. The plausible reason behind the positive influence of bank size on banks' performance is that the banks benefit from the economy of scale. Nevertheless, asset growth and inflation do not have any influence on banks' performance.

CONCLUSION

In financial management, capital structure is a highly delicate issue, which affects profitability. The key objective of the current paper is to analyze the debt calculated the capital to assets ratio, equity to gross assets ratio, overall debt to gross assets ratio, and the proportion of short-term debt to overall assets on

banks' performance measured by return on assets and return on equity. A panel of 18 banks listed is ISE from 2009 to 2018 is used, following bank size controls, asset growth, and inflation. The results point out that the banks' performance measures are substantially responsive to measures of capital structure. The capital structure plays a significant role in the understanding of Iraqi banks' performance.

This work indicates that capital structure is important to Iraqi banks. The current research outcomes illustrate that banks' profitability (ROA and ROE) is affected positively by the proportion of liability to assets and the proportion of equity to assets. On the other hand, banks' performance has a significant reverse impact on the proportion of long-term debt to gross assets, short-term debt to gross assets ratio, and gross debt to gross assets ratio. In line with the optimal capital structure results, the research's conclusion guides Iraqi banks' managers to raise capital dependent on equity and undistributed profits to boost their profitability.

The findings of the current study illustrated that the banks' adoption of the internal financing test sample and undistributed profits positively affect Iraqi banks' performance. In the current research, debts of different kinds, short-term and long-term, have a negative impact on Iraqi banks' profitability. However, other tests were utilizing a wider sample and are expected to confirm the results obtained by the analysis using both Iraqi banks and other Iraqi financial and non-financial institutions. Furthermore, the current research outputs confirm that banks' financial managers should rely on financing their portfolios of retained earnings instead of relying on long-term and short-term debts. However, financial managers can finance the capital structure through debt as a last resort. To maximize bank profits, managers must make every effort to reach the optimum capital level and make exceptional efforts to support it.

The most important of the main suggestions for this study is to conduct many long-term studies using a wider sample of Iraq listed banks and non-listed banks and conduct global studies using more variables for measuring the capital structure. Moreover, comparative studies between domestic and foreign banks are also an opportunity for future researchers to study suitable capital structure for banks.

AUTHOR CONTRIBUTIONS

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