

-RESEARCH ARTICLE-

ANALYZING THE PROFITABILITY INDICATORS FOR ISLAMIC BANKS IN JORDAN

Deema D. Massadeh¹

Accounting Department, Al Balqa Applied University,
Jordan

E-mail: deema.massadeh@gmail.com
<https://orcid.org/0000-0001-8734-6191>

Abdullah Yusri AL Khatib²

Islamic Banks Department, Finance and Business Faculty,
the World Islamic Sciences and Education University,
Amman – Jordan

E-mail: 1.Abdullah.Finance@gmail.com
Abdullah.Alkhatib@wise.edu.jo
<https://orcid.org/0000-0002-5861-3470>

Ibrahim Marwan Khanji³

Finance and Banking Department, Al Balqa Applied University,
Jordan.

E-mail: imkhanji@yahoo.com
<https://orcid.org/0000-0001-8268-0035>

—Abstract—

Islamic banks have shown tremendous growth in Muslim majority countries in the recent past. Islamic banking has a share of more than 15% of total banking assets in more than 15 countries including Jordan. This makes it imperative to analyze key features of Islamic banking in different countries. In this study, we examine the determinants of profitability of Islamic banks in Jordan.

Citation (APA): Massadeh, D.D., AL Khatib, A.Y., Khanji, I.M., (2021). Analyzing the Profitability Indicators for Islamic Banks in Jordan. *International Journal of Economics and Finance Studies*, 13 (1), 67-89. doi:10.34111/ijefs.202112225

This study collects data from four Islamic banks that are currently operating in Jordan from 2015 to 2019. This study employs the fixed effect model to examine the nexus among the variables. The results find a significant and positive impact of all banks specific factors on different proxies of bank profitability.

Keywords: Bank specific factors, Earnings per Share, Islamic Banks, Profitability, Return on Assets, Jordan.

JEL Classification: F65, G21, G35, G29

1. INTRODUCTION

Jordan has a robust banking and financial management system for commercial and Islamic banks. Ensuring the efficiency of the banking system can be done by conducting a financial and statistical analyses with a view to maintain the banking and financial sector ([Bashatweh & Ahmed, 2020](#)). Islamic and commercial banks are managed and monitored by the central bank of Jordan. Furthermore, banks in Jordan continue searching for ways to improve and enhance the financial and banking services, creating a positive financial and banking environment. Banks and financial institutions regularly commission reports prepared by financial analysts and forecasters to be accurate in order to help them conduct their future activities in a way as to maximize returns and earnings, thereby, increasing their credibility for investors and other stakeholders ([Sklyarova, Sklyarov, Taranova, Latysheva, & Piterskaya, 2019](#)). Furthermore, decision-making by investors can be shaped by analyzing the banks, firms, and companies' sizes and stock prices and their relationship with earnings per share and return on assets ([Boto-García, Álvarez, & Pino, 2021](#)). These indicators help determine future financial strategies of the banks and listed companies in stock markets ([Vovchak, Rudevskaya, & Holub, 2018](#)).

Moreover, companies and firms' fulfilments and performance in Jordan are studied and analyzed by [Dakhlallah, Rashid, Abdullah, and Al Shehab \(2020\)](#) who investigate multiple fields and sectors such as government, family, management, and institutional ownerships. All these variables have a positive relationship with the performance of the institutions especially in the long-term. This helps individual companies and banks managers to focus on ownerships in order to enhance the profitability and profitability indicators of banks in Jordan. For that reason, this study focuses on one part of the banking system i.e. the Islamic banking system in Jordan. Moreover, this study analyzes the determinants of profitability by measuring earnings per share and return on assets as profitability indicators. Meanwhile, banks' specific factors are analyzed and studied to determine their impact on Islamic banking profitability. This study considers internal variables in banks as specific factors of banks such as total income to all assets, the value of deposits to the value of assets, cash and investments to deposits, all credit facilities to all value of the assets as well as liquidity quick ratio as explained in the following sections.

There are four Islamic working banks currently operating in the Jordanian economy. These are, (1) Al Rajhi Bank. (2) Safwa Islamic Bank (3) Islamic International Arab Bank. (4) Jordan Islamic Bank. The objective of this paper is to discuss and analyze profitability indicators during 2015 – 2019 as financial performance indicators. For that reason, the dependent variable is profitability indicators which is measured by earnings per share (EPS) and return on assets (ROA) as cumulative values for Islamic banking sector. On the other hand, the independent variables will be bank-specific variables which are; total income to assets, deposits to the value of all assets, cash and investments to the value of all deposits; all credit facilities to the value of all assets, and lastly, liquidity quick ratio (liquidity percentage) as cumulative values for Islamic banking sector. Therefore, the significance of this research work lies in providing an analysis of profitability indicators for the Islamic banking sector in Jordan (and other countries where Islamic banking is practiced). In addition to this, this research is also a valuable addition to existing literature on the subject as it focuses on bank-specific variables without analyzing the impact of macroeconomic variables.

Banking analysis and forecasting based on this analysis is necessary for conducting future plans and achieving maximum returns and earnings which would ultimately enhance the banks reputation among the investors. Several financial indicators such as the companies' size and stock prices help guide the decisions taken by investors regarding earnings per share and return on assets. These indicators determine the financial dealings or circulation of banks or financial institutions in the stock markets (Oyewumi, Ogunmeru, & Oboh, 2018). Thus, there is a need to investigate the financial factors which could affect the financial decisions and progress of banks in the stock market. The aim of our study is to investigate the total income to total assets ratio, total deposits to total deposits, cash and investment to total deposits, and liquidity ratio earnings per share and return on assets. Several authors have addressed the impacts of the total income to total assets ratio, total deposits to total deposits, cash and investment to total deposits, and liquidity ratio earnings per share and return on assets. However, all these studies have been conducted to explore the influence of some of these factors on earnings per share and return on assets or to analyze the impacts of the total income to total assets ratio, total deposits to total deposits, cash and investment to total deposits, and liquidity ratio either on earnings per share or return on assets. However, the current study makes a novel contribution to existing literature as it throws light on the impacts of the total income to total assets ratio, total deposits to total deposits, cash and investment to total deposits, and liquidity ratio, earnings per share and return on assets at the same time. Thus, this study offers valuable and insightful guidelines for leading banks and financial institutions on how to enhance earnings per share and increase return on assets, and thus, help them achieve a better position in the stock market.

2. Literature Review

In this part, a number of previous studies and reviews of literature will be presented to familiarize readers with relevant information about banks and financial studies. One past study by [Muhindi and Ngaba \(2018\)](#) measures the ratios of the financial performance during some years for commercial banks in Kenya by analyzing each of profitability, credit and liquidity, the result was a decrease in commercial banks performance during the difficult financial situations which has a negative impact on banking performance in general. Banking profitability can be divided into external and internal determinants or factors to give a more clear image of profitability trends in the Jordanian experience ([Matar & Eneizan, 2018](#)). The profitability is measured by rate of return on each of assets and equity. The findings demonstrate a positive impact of increased lending, structured capitalized, and low risk of credit. Other important factors are management and individuals who manage banking operations in a way as to achieve higher profits during the time. Inflation and growth of economy as external factors which may positively impact bank profitability. In addition, by analyzing profitability of banks and focusing on internal variables for Saudi banks ([Banerjee, 2018](#)) it is found that there are positive and significant correlations between ROA and each of liquidity ratio, all credit facilities to the value of assets, credit to deposits but negative correlation with total investment to total assets. On the other side, there are positive and significant correlations for Saudi banks between ROA and each of total investments to total assets, liquidity ratio but negative correlations with credit to the summation of assets, and credit facilities to deposits.

In contrast, in the experience from Pakistan ([Bashir, Fatima, Sohail, Rasul, & Mehboob, 2018](#)), banks' specific variables which are internal factors and some macroeconomic variables which are external variables are analyzed, while considering ROA, ROE, and EPS as dependent variables to represent the profitability for Islamic banking sector. Some of the results are significant showing negative impact for deposits ratio on all profitability indicators. Some studies such as a financial performance evaluation for commercial banks consider return on equity and return on assets as ratios to measure profitability but are affected by leverage ratio, financial strength, and efficiency ([Khan, 2019](#)) finding that there is a positive impact of leverage on return on assets. Some studies focus on a wide region such as finding and analyzing the financial performance determinants for all European banks in eastern and central Europe ([Fijałkowska, Zyznarska-Dworczak, & Garszka, 2018](#)) by investigating the specific variables for industry, banks, and macro-economic. The outcome of that research shows that the size of the banks has a negative impact on the earnings and the quality of assets besides liquidity and adequacy of capital, but a positive impact on inflation and businesses. Moreover, the concentration of banking operations and the growth of economy is found to have a positive impact on liquidity and capital adequacy.

Furthermore, return on assets is positively affected by profitability, liquidity, and revenues, however, firm size and leverage negatively impact on return on assets for industrial firms in Jordan, and this can be considered as analyzing the financial performance for many sectors and divisions in finance (Antoun, Coskun, & Georgiezski, 2018). In a study about the financial performance of Islamic banking in East Asia and South East Asia, the authors study the impact of the financial crisis on financial performance as measured by return on assets, operating expense ratio, and liquidity (Nomran & Haron, 2019). Some findings from that study demonstrate an impact on (ROA) while there is no impact reported on operating expense ratio, and liquidity. On the other hand, some determinants of profitability of Nigerian commercial banks are examined (Fadun & Oye, 2020), in particular, the impact of efficiency and its managerial costs and persistence role; the study findings show that there is a remarkable impact of efficiency costs on banking performance and there was a competitive business and banking industry according to that study.

In determining the impact of financial performance of non-bank financial sector (Teshome, Debela, & Sultan, 2018) on earnings per share, it is found that there is an insignificant impact of return on assets on the dependent variable in that study which represents the stock price for the sample of the study. On the other hand, food and fertilizer companies are analyzed by finding the impact of financial and operating leverages on financial behavior (Anthony, Behnoee, Hassanpour, & Pamucar, 2019), and the results show no significant impact from financial leverage but point to a negative significant impact for operating leverage. In contrast, banking performance and profitability could be measured by return on each of investments, equity and assets, and the margin of net interest (Xu & Wang, 2018). The independent variables are divided into external and internal variables with different results, for instance, growth of economy and inflation is found to have positive impact on banking performance. Besides afore-discussed profitability indicators in existing literature, there are social factors which impact on the performance and profitability of the companies and manufacturing firms as explored in one research study from Nigeria (Abubakar, Sulaiman, & Haruna, 2018) which considers ethical responsibility for social affairs with other theories for instance managerial, stakeholders, rational, and utilitarian theories, and finds that there is a positive impact of the variables on financial performance for manufacturing sector. On the basis of that study and other past studies, we can decide that there are social and economic factors and variables that have positive and negative impacts on profitability and may be considered as indicators for profitability and financial performance for banks and other financial institutions.

The literary investigation by Patel (2018) on the financial performance indicates that within the banks, many financial factors like financial policies, the deposits of the banks, source and amounts of income, investments and credits are significant indicators to measure the performance of banks or financial institutions. The study by Zyadat (2017)

on banking performance demonstrates that the evaluation of the bank deposits, credit facilities, total assets, earnings, cash and investment and liquidity are effective tools to measure the earnings per share. When the banks have higher income against each asset, their financial position is stronger, and they can pay more revenues on shares. The bank deposits determine the returns on the shares as the bank deposits enhances the institutions' ability to stimulate their banking activities like investments, credits and facilitate diversification in this regard. Thus, the total profits increase as per share they can earn more. Similarly, the way or capacity of the banks to utilize the amounts of deposits determines the banks' ability to exploit the amount of equity through shares. A large number of deposits enables banks to enhance their services, their scope, and the size of the firm. The proper use of deposits to make investments in different projects, companies, financial institutions, or banks helps the bank to generate more earnings, while the retention of deposits in the form of cash with the bank enables the institution to face contingencies in the way of achieving high return on shares as elaborated by [Al-Othman \(2019\)](#).

According to the views of [Abualrob and Maswadeh \(2020\)](#), financial evaluation of bank deposits, cash, credits, investment, profitability, equity, and assets is helpful in determining returns on assets. Different assets collectively produce earnings for = banks or other financial institutions when effective decisions are made, or when they show good trends in terms of maintenance of deposits, cash in hand or investment, grant of loans, assets distribution or the source of income. [Amanah \(2020\)](#), in their study on the performance of banks or other financial institutions, argue that return on assets indicates how profitable an institution is in relation to its total assets. Return on assets gives the analyst, manager, or investor an idea of how efficient a company's management is at using its assets to generate earnings. The more the companies earn from each asset, the more efficient is the use of assets. Deposits are the liability of the banks, but these deposits raise financial funds for the institution which are needed for rendering different services. Thus, deposits provide a chance to utilize assets for earnings. The decision of a bank on how to retain cash deposits or use them for investment affects their way of using assets for generating earnings. The analysis of banking performance by [Kusumaningrum and Iramani \(2020\)](#) indicates that use of a variety of credit services enables the banking institutions to exploit their assets and generate a larger amount of earnings from them. On the basis of existing literature, we can reach different results and viewpoints using multiple variables, diverse analytical approaches, and different sectors in more than one country or region.

3. Research Methodology

This study has examined five bank specific factors and their impact on the banks' profitability in Jordan. In Jordan, there are four Islamic working banks operating to enhance and improve the economic situations and they are (1) Al Rajhi Bank. (2) Safwa

Islamic Bank (3) Islamic International Arab Bank and (4) Jordan Islamic Bank. The data has been collected from these four banks for the period 2015 to 2019 using their financial statements. Figure 1 presents the independent variables which are five bank specific factors i.e. (1) total income to summation of all assets, (2) summation of all deposits to summation of all assets, (3) cash and investments to total deposits, (4) net credit facilities to total assets, (5) liquidity quick ratio. The figure also presents dependent variables which are two profitability indicators, and they are (1) the ratio of Earnings per Share, and (2) the ratio of Return on Assets.

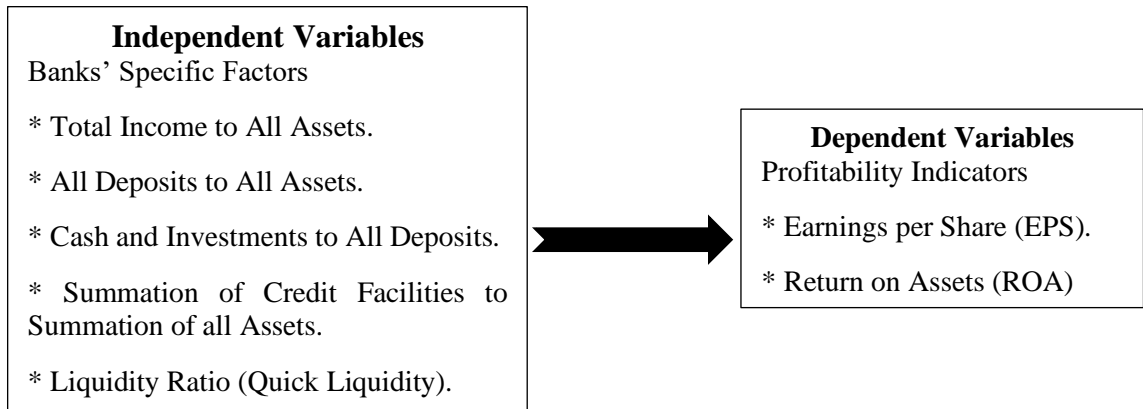


Figure 1: Research Framework

Based on the above framework, the current study has developed the following statistical equations by using understudy variables:

$$EPS_{it} = \alpha_0 + \beta_1 TITA_{it} + \beta_2 TDTA_{it} + \beta_3 CITD_{it} + \beta_4 CFTA_{it} + \beta_5 LR_{it} + e_{it} \quad (1)$$

$$ROA_{it} = \alpha_0 + \beta_1 TITA_{it} + \beta_2 TDTA_{it} + \beta_3 CITD_{it} + \beta_4 CFTA_{it} + \beta_5 LR_{it} + e_{it} \quad (2)$$

Where,

EPS	=	Earnings per Share
ROA	=	Return on Assets
i	=	Bank
t	=	Time Period
TITA	=	Total Income to Total Assets
TDTA	=	Total Deposit to Total Assets
CITD	=	Cash and Investment to Total Deposits
CFTA	=	Credit Facilities to Total Assets
LR	=	Liquidity Ratio

Measurements of the Variables

This section provides an assessment of the variables such as earnings per share which is measured as the net income of shareholders divided by number of subscribed shares. In addition, ratio of return on assets is measured as the pure income divided by summation of all assets. Moreover, assets turnover has been measured as the summation of all income divided by summation of all assets while bank deposit ratio is measured as the summation of all deposits divided by summation of all assets. In addition, liquid assets with respect to deposit have been measured as the cash and investments to total deposits while credit facilities have been measured as the net credit facilities to total assets and liquidity ratio is measured as the liquid assets divided by current assets. These measurements are shown in Table 1.

Table 1: Measurements of Variables

S#	Variables	Measurements
01	Earnings Per Share	Net income pertains to shareholders divided by number of subscribed shares
02	Return on Assets	Pure income divided by summation of all assets
03	Assets turnover	Summation of all Income divided by summation of all assets
04	Bank deposit	Banks and financial institutions deposits + customers current accounts + unrestricted investment accounts) ÷ total assets
05	Cash & Investment to Deposits	Money and cash at central bank + accounts of banks and other institutions of finance + investments accounts in banks and other depositing institutions + assets of finance at value of other comprehensive income + assets of finance at the value of the joint investment's accounts holders' equity + net of assets of finance at their costs + assets of finance at their value by profiting or losing + investments of affiliates
06	Credit Facilities	Net of deferred sales receivables and other receivables + net of renting (Ijara) assets + net of finance investments + net of Qard Hassan loans) ÷ total assets
07	Liquidity Ratio	Money and cash at central bank + accounts with banks and institutions of finance + investments accounts in banks plus banking establishments + assets of finance at their value by profiting or losing) ÷ (banks and financial institutions deposits + customers current accounts + unrestricted investment accounts

This study outlines descriptive statistics in the results section along with correlation among the variables that show correlation among the variables. In addition, the present study also checks the variance inflation factor (VIF) to determine the multicollinearity in the model. The equations for VIF are given as under:

$$R^2_Y = \alpha_0 + \beta_2 X_{2it} + \beta_3 X_{3it} + \beta_4 X_{4it} + \beta_5 X_{5it} + e_{it} \quad (3)$$

$$j = R^2_Y, R^2_{X1}, R^2_{X2}, R^2_{X3}, R^2_{X4}, R^2_{X5} \quad (4)$$

$$VIF = \frac{1}{Tolerance}; Tolerance = 1 - R^2_j \quad (5)$$

To examine the nexus among the variables, the present study uses the appropriate model and executes the Hausman test for this purpose. In addition, the present study uses the fixed effect model (FEM) to test the relations among variables. The estimation equation for the FEM is given as under:

$$Y_{it} = \alpha_0 + \beta_1 X_{1it} + \beta_2 X_{2it} + \beta_3 X_{3it} + \beta_4 X_{4it} + \beta_5 X_{5it} + u_{it} \quad (6)$$

The subscript (i) shows the individual bank and made the different banks according to their characteristics. FEM allows the researchers to control for all time invariant omitted constructs, it is essential when the variables which are impossible to observe. The estimation equations for FEM with current research variables are given as under:

$$EPS_{it} = \alpha_0 + \beta_1 TITA_{it} + \beta_2 TDTA_{it} + \beta_3 CITD_{it} + \beta_4 CFTA_{it} + \beta_5 LR_{it} + u_{it} \quad (7)$$

$$ROA_{it} = \alpha_0 + \beta_1 TITA_{it} + \beta_2 TDTA_{it} + \beta_3 CITD_{it} + \beta_4 CFTA_{it} + \beta_5 LR_{it} + u_{it} \quad (8)$$

4. Research Findings

In this section, there are seven figures (Figure (2) to (8) which illustrate the trend of research variables. Figure (2) represents the earnings per share during 2015 to 2019 and there is an increase seen in EPS from 2015 to 2016 and from 2018 to 2019 because the researcher could not find variables' values for 2019, on account of which an optimistic expectation was given for these values. On the other hand, there is a sharp decline in return on assets as cumulative value for Islamic banks in Jordan from 2016 to 2018 as can be noticed from figure (3) return on assets during 2015 – 2019 and there is an increase in the value of that variable from 2015 to 2016 and 2018 to 2019 as well.

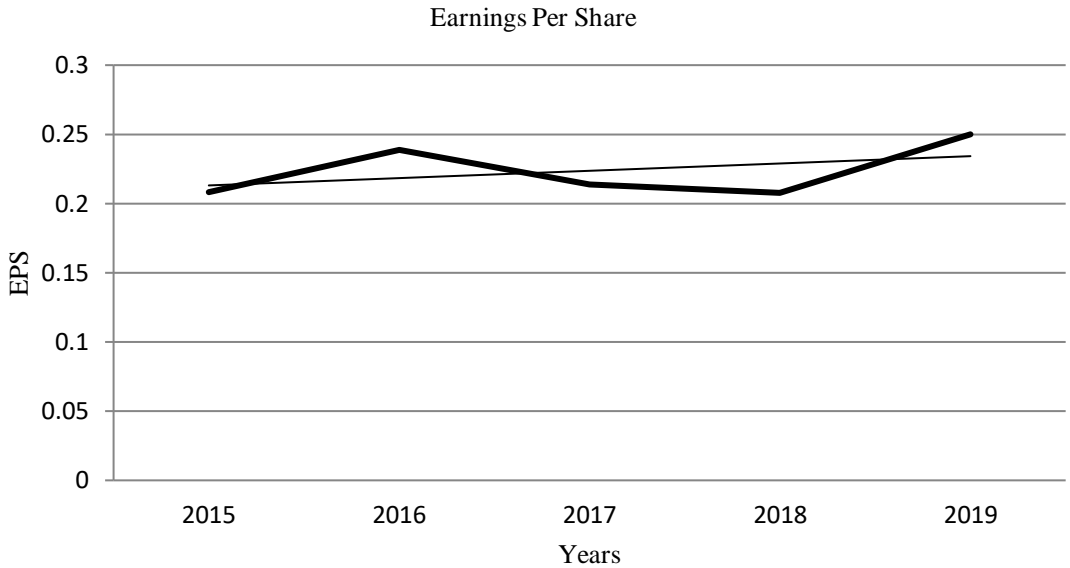


Figure 2: Earnings per Share (EPS) during 2015 – 2019.

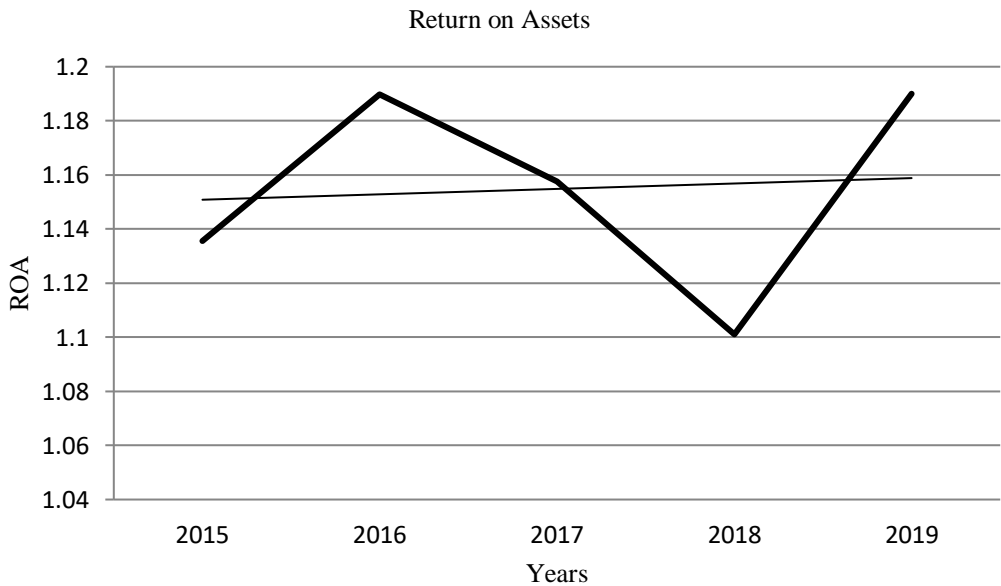


Figure 3: Return on Assets (ROA) during 2015 – 2019.

While previous paragraph explains the trend seen with respect to dependent variables, in the coming paragraphs independent variables' trends will be explained. From Figure

(4) we can understand the increase in total assets which reflects on the volatility of the trend during 2015 until 2019. Also, Figure (5) shows total deposits to total assets and Figure (7) net credit facilities to total assets because the dominator is total assets for the cumulative values of Islamic banks.

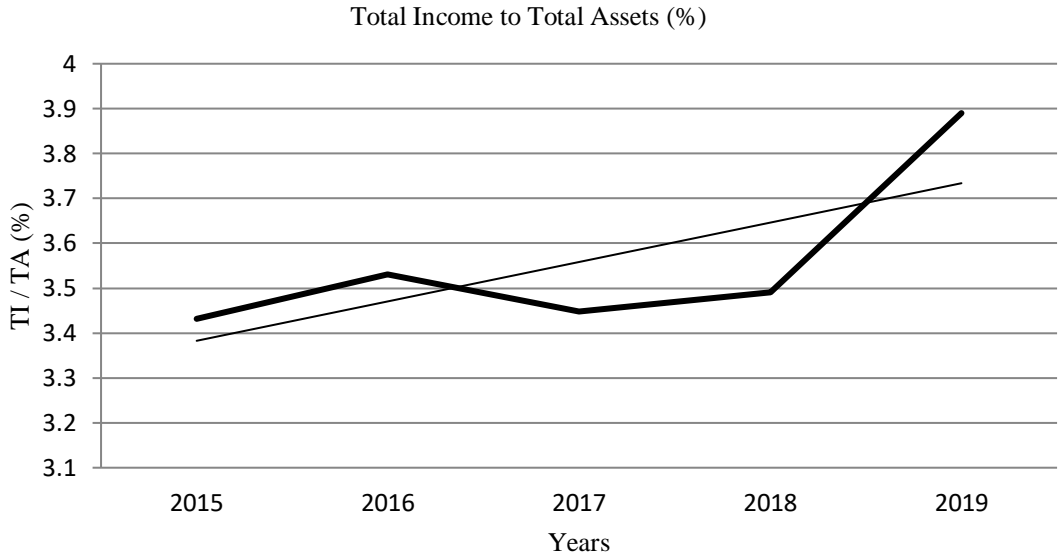


Figure 4: Total Income to Total Assets during 2015 – 2019.

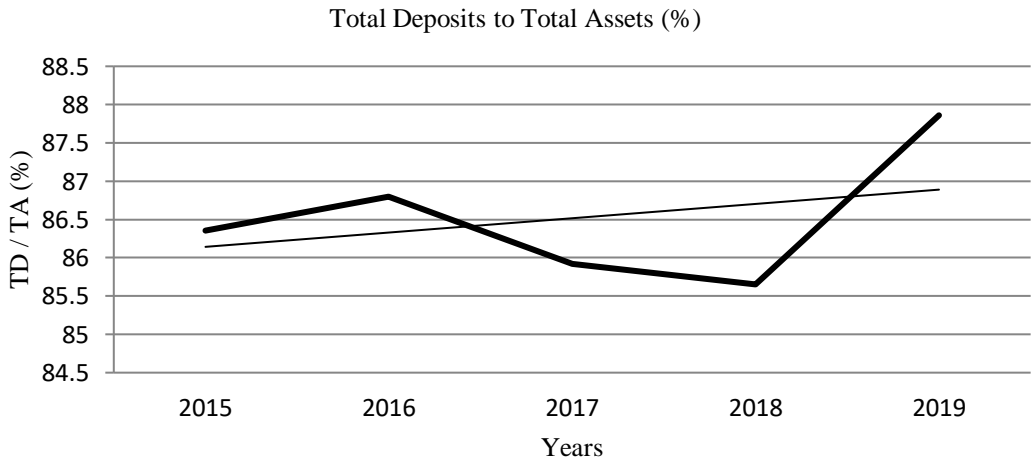


Figure 5: Total Deposits to Total Assets during 2015 – 2019.

Figure (6) describes cash and investments to total deposits during 2015 to 2019 and it is found that there is an increase in the values of cash and investments to total deposits

from 2015 to 2017, followed by a decline in this value from 2017 to 2018. This happened because of increasing in total deposits more than total increase in cash and investments.

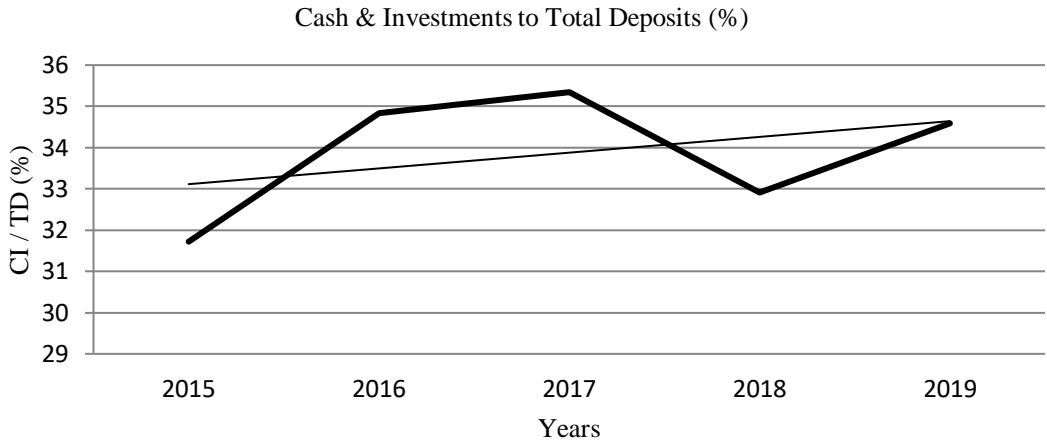


Figure 6: Cash & Investments to Total Deposits during 2015 – 2019.

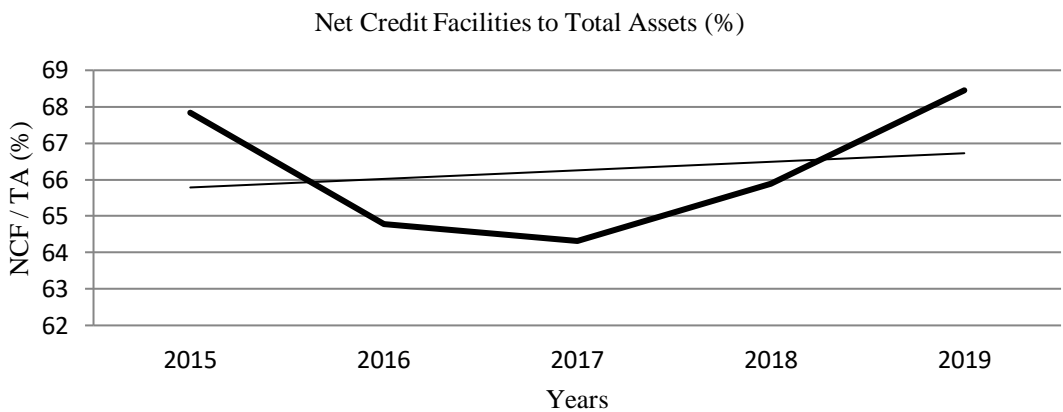


Figure 7: Net Credit Facilities to Total Assets during 2015 – 2019.

According to the values of liquidity quick ratio for Islamic banks during 2015 to 2019, there is a stable trend in the values from 2015 to 2017 as shown in Figure (8), followed by a decline in this ratio from 2017 to 2018 because the decreasing of balances, money, and cash at central bank, accounts with banking facilities and institutions of finance, investments accounts at banking facilities and institutions of banks, and assets of finance at their value by profit or loss. Also, banking and institutions of finance deposits, customers' current accounts, and unrestricted investment accounts are seen to increase as well.

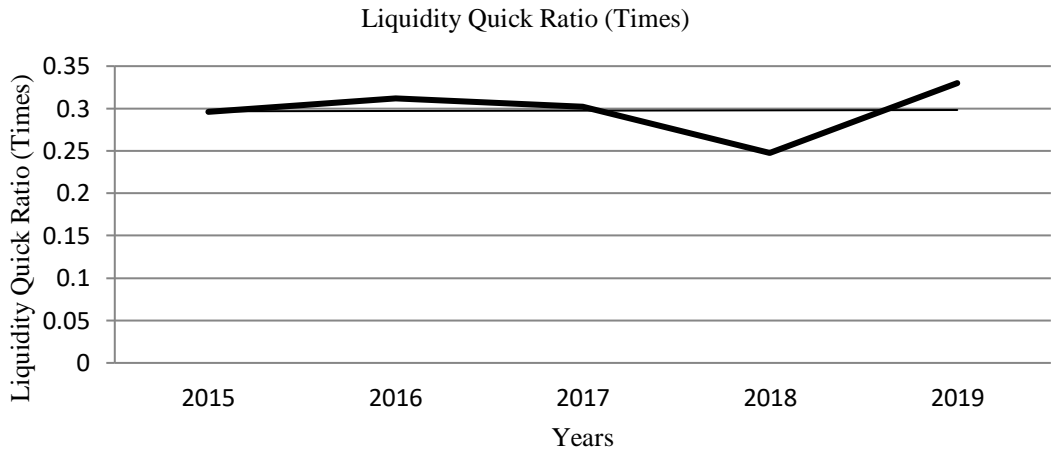


Figure 8: Liquidity Quick Ratio (Times) during 2015 – 2019.

Descriptive statistics will be shown from Table (2) and Table (4) for dependent variables i.e., earnings per share and return on assets, on the other hand the independent variables which are total income divided by summation of all assets, summation of all deposits to summation of all assets, cash and investments to summation of all deposits, the final result of credit facilities to the summation of all assets, and liquidity percentage as well. There are five observations against every variable for the period of this study 2015 – 2019. Also, the mean of earnings per share is (0.2237) and standard deviation is (0.01951) and for return on assets, the mean is (1.1548) and standard deviation is (0.03784) and the rest of the values are presented in the tables.

Table 2: Descriptive Statistics for EPS and Banks' Specific Factors

	Mean	Std. Deviation
EPS	.2237	.01951
ROA	1.1548	.03784
TITA	3.5583	.18943
TDTA	86.5163	.86765
CITD	33.8775	1.51389
CFTA	66.2541	1.83001
LR	.2975	.03074

Moreover, as shown in Table (3), correlations between earnings per share and banks' specific factors are found to be positive and significant at (0.05) significance level between earnings per share and each of total income to total assets, and total deposits to total assets. Also, there are positive correlations with each of cash, money, and

investments to summation of all deposits, total of credit facilities to summation of all assets, and liquidity percentage as well. In addition, there is positive and significant correlation at (0.05) between final income to summation of all assets and summation of all deposits to summation of all assets but not significant correlations with each of cash, money, and investments to summation of all deposits, total of facilities of credit to summation of all assets, and liquidity percentage.

Summation of all deposits to all assets value have significant and positive correlation at (0.05) level with liquidity percentage but insignificant positive correlations with each of cash, money, and investments to all deposits, and total of credit facilities to assets value. Meanwhile, there is a negative insignificant correlation found between cash, money, and investments to deposits value and the value of credit facilities to assets value but positive insignificant correlation with liquidity percentage. Finally, there is a positive, insignificant correlation observed between total of credit facilities to assets value and liquidity percentage as well.

Table 3: Correlations between EPS and Banks' Specific Factors

	EPS	TITA	TDTA	CITD	CFTA	LR
EPS	1					
TITA	.843*	1				
TDTA	.913*	.886*	1			
CITD	.575	.337	.292	1		
CFTA	.249	.582	.591	-.519	1	
LR	.773	.576	.829*	.514	.250	1
*. Significant Correlation at 0.05 levels (1-tailed).						

Table (4) represents the correlations between return on assets and banks' specific factors, showing a positive and significant correlation at (0.01) significance level between ROA and liquidity ratio but positive insignificant correlations with each of total income to total values of assets, summation of all values of deposits to total values of assets, investments and cash to total values of all deposits, and pure credit loans to total values of assets. Moreover, there are positive and insignificant correlations found between total income to total values of assets and each of summation of all deposits to total values of all assets, cash, money, and investments to total of all deposit's values, and pure credit facilities to summation of all asset's values, and liquidity percentage as well.

Table 4: Correlations between ROA and Banks' Specific Factors

	ROA	TITA	TDTA	CITD	CFTA	LR
ROA	1					
TITA	.572	1				
TDTA	.798	.886*	1			
CITD	.682	.337	.292	1		
CFTA	.032	.582	.591	-.519	1	
LR	.942**	.576	.829*	.514	.250	1
**. Significant correlations at the 0.01 levels (1-tailed).						
*. Significant Correlations at the 0.05 levels (1-tailed).						

The VIF of the current study has been checked to consider the multicollinearity in the model and the values of VIF are lower than five that show no issue of multicollinearity. Table 5 shows the VIF values.

Table 5: Variance Inflation Factor (VIF) with EPS and Banks' Specific Factors

	VIF	1/VIF
EPS	2.408	0.610
TITA	2.343	0.645
TDTA	2.125	0.789
CITD	2.114	0.798
CFTA	2.111	0.800
LR	2.151	0.720
Mean VIF	2.220	.

The VIF of the current study has been checked to consider the multicollinearity in the model and the values of VIF are lower than five which shows that there no issue of multicollinearity. Table 5 presents the VIF values.

Table 6: Variance Inflation Factor (VIF) with ROA and Banks' Specific Factors

	VIF	1/VIF
ROA	1.208	0.790
TITA	1.643	0.755
TDTA	1.925	0.829
CITD	1.514	0.828
CFTA	1.411	0.950
LR	1.811	0.820
Mean VIF	1.420	.

The results of Hausman test help the study identify the most appropriate model for examining the nexus among the variables. The results show that the probability value is higher than 0.05 that show FEM model is appropriate. Table 7 shows the results of the Hausman test.

Table 7: Hausman Test

	Coef.
Chi-square test value	7.331
P-value	0.197

The results of the FEM demonstrate significant and positive impact of all banks' specific factors on earnings per share because the beta values have positive signs and t-values are higher than 1.64 while p-value are lower than 0.05. The R square (0.436) shows that the 43.6 percent variation in the EPS due to the all-banks' specific factors. Table 8 shows the FEM for EPS.

Table 8: Fixed Effect Model for EPS

EPS	Beta	S.D.	t-value	p-value	L.L.	U.L.	Sig
TITA	1.622	0.327	4.96	0.000	2.974	4.270	***
TDTA	0.862	0.167	5.17	0.000	1.194	2.531	***
CITD	0.742	0.366	2.03	0.035	1.468	3.016	**
CFTA	0.277	0.145	1.91	0.049	2.011	4.565	**
LR	0.014	0.003	4.66	0.000	1.003	3.010	***
Constant	4.899	1.187	4.13	0.000	3.544	7.254	***
R-squared	0.436		Number of obs		20.000		
F-test	10.447		Prob > F		0.000		
*** $p < .01$, ** $p < .05$, * $p < .1$							

The results of the FEM show significant and positive impact of all banks' specific factors on return on assets because the beta values have positive signs and p-value are lower than 0.05. The R square (0.645) shows that the 64.5 percent variation in the ROA due to the all-banks' specific factors. Table 9 shows the FEM for ROA.

In summary, as shown in Table 10, positive and significant correlations are found between earnings per share and both of total income to total assets and total deposits to total assets. Moreover, there are significant and positive correlations for earnings per share and all of investments and cash to total all deposits values, net facilities of credit to total assets values, and liquidity quick percentage. In addition, return on assets has a positive and significant correlation with liquidity quick percentage, and also positive and significant correlations with each of total income to all values of assets, summation of

all values of deposits to value of total assets, investments and cash to total of all deposit's values, and net facilities of credit to total of all values of assets.

Table 9: Fixed Effect Model for ROA

ROA	Beta	S.D.	t-value	p-value	L.L.	U.L.	Sig
TITA	2.522	0.952	2.65	0.005	1.974	2.270	***
TDTA	1.762	0.541	3.27	0.001	0.194	1.531	***
CITD	1.625	0.102	15.93	0.000	0.468	1.016	**
CFTA	1.324	0.324	4.09	0.000	0.011	2.565	**
LR	1.369	0.214	6.39	0.000	0.003	1.010	***
Constant	6.321	3.021	2.09	0.006	2.544	6.254	***
R-squared		0.645	Number of obs		20.000		
F-test		15.234	Prob > F		0.000		
*** $p < .01$, ** $p < .05$, * $p < .1$							

Table 10: Summary of Hypotheses Testing for All Variables

Variables	Earnings per Share	Return on Assets
Total Income to Total Assets	Positive, Significant	Positive, Significant
Total Deposits to Total Assets	Positive, Significant	Positive, Significant
Cash and Investments to Total Deposits	Positive, Significant	Positive, Significant
Net Facilities of Credit to Total Assets	Positive, Significant	Positive, Significant
Liquidity Quick Ratio	Positive, Significant	Positive, Significant

5. Discussions, Conclusion and Recommendations

The study results indicate that the total income to total assets ratio has a positive association with the earnings per share. These results are in line with the previous study of [Jasman and Kasran \(2017\)](#), which states that a higher income on the total available assets enhances the amounts of profit to be distributed per share. The study results also indicate that the total deposits to total assets have a significant positive impact on earnings per share. These results are supported by the previous study of [MASWADEH \(2020\)](#), which shows that banks which have higher deposits have more capacity to earn more and pay more on the shares. It has also been revealed by the study results that cash and investment to total deposits have a positive link with earnings per share. This corroborates findings from a previous study by [Turakpe and Fiwe \(2017\)](#), which shows that the cash in hand and the amount of money invested by the banks or financial institutions determine the banks' or financial institutions' ability to enhance earnings on shares. The study results have also shown that the credit facilities to total assets have a positive relationship with earnings per share. These results are supported by the past studies of [Musa and Al-Swiety \(2017\)](#), according to which when the banks have

favorable credit facilities to total assets ratio, they report a higher return on shares. The study results further indicate that the liquidity ratio is linked with the earnings per share in a significantly positive manner. The previous study of [Mangla and Goel \(2017\)](#) supports these study results by demonstrating the significant role of high liquidity in getting high earnings on the shares.

Moreover, the results indicate that the total income to total assets ratio has a positive association with the return on assets. These results are in line with the previous study of [Orumo \(2018\)](#), which states that the favorable ratio of total income to total assets shows that the institution has a larger amount of returns on assets. The results have shown that the total deposits to total assets have a significant positive impact on the number of returns received on assets. These results are in accordance with the previous study of [Ozili \(2017\)](#), which shows that banks which have higher deposits have more capacity to earn more on assets. It has also been revealed by the study results that cash and investment to total deposits has a positive association with the returns on assets. The study findings also reveal that cash and investment to total deposits has a positive impact on returns on assets. These findings have been supported by the previous study of [Al-Homaidi, Tabash, Farhan, and Almaqtari \(2019\)](#), which shows that when banks have a large amount of cash in hand and significant investments, they could earn more return on assets. It has also been shown by the results that the credit facilities to total assets have a positive relationship with the returns on assets. These results are supported by the past studies of [Poh, Kilicman, and Ibrahim \(2018\)](#), which posit that when banks have favorable credit facilities to total assets ratio, they have more returns on assets. It is shown by the results that the liquidity ratio has a positive relationship with the returns on assets. These results are supported by the past study of [Bawa, Goyal, Mitra, and Basu \(2019\)](#) which posits that high liquidity plays a significant role in ensuring high returns on assets.

Total values of deposits to total of all assets values is found to have a positive and significant correlation with liquidity percentage and also significant positive correlations with each of cash, money, and investments to total values of all deposits, and pure facilities of credit to the values of all assets. Meanwhile, positive and significant correlation is found between cash, money, and investments to total values of all deposits and net facilities of credit to summation of all asset's values but a positive insignificant correlation is found with respect to liquidity percentage. Finally, there is a positive and significant correlation between net facilities of credit to total values of all assets and liquidity percentage.

This study focuses on two indicators for profitability which are earnings per share and return on all assets. Summation of all deposit's values to total values of assets and liquidity quick percentage are found to be determinants for profitability which have an impact on profitability indicators. Meanwhile, the rest of the determinants such as total

income to total assets, cash and investments to total deposits, and net credit facilities to total assets are found to have no impact on profitability indicators which means the sample and design of this study should focus on and analyze significant determinants during this time. These results can be compared with an analysis of the financial performance for Jordanian firms (Saidat, Silva, & Seaman, 2019) which particularly focuses on services and industrial sectors by considering market share as a measure for profitability, and found that an increasing number of managers and board size has a negative effect on profitability but the rest of that study variables are found to have no considerable effect. Therefore, we can analyze the financial performance and profitability indicators from managerial and financial viewpoints. In general, banking performance in Jordan is acceptable (Alabdullah, 2018) even if the studies focus on sensitive to market risks, liquidity, earnings, management issues, assets quality, and capital adequacy for Jordanian banks. Other studies choose to focus on return on equity instead of earnings per share to analyze the profitability indicators with return on assets (Mohammad, Abdullatif, & Zakzouk, 2018) by analyzing other factors such as assets turnover, profit margin, net income, and equity multiplier. These factors had different levels of significant and different results according to the sectors and divisions.

In conclusion, analyzing profitability and its determinants is essential for Islamic and commercial banks, especially for Islamic banks in Jordan which must prepare and plan for a sound financial future. This study focuses on two indicators for profitability which are earnings per share and return on all assets. Summation of all deposits values to total all values of assets and liquidity quick percentage are determinants for profitability and found to have an impact on profitability indicators. This study recommends researchers and banks' developers to expand the time period of their studies and enrich data by analyzing macroeconomic and banks' specific determinants and variables to give a more comprehensive picture of banking profitability indicators such as using return on equity, dividends per share, profits before and after tax, and distributed profits for banks and shareholders. Moreover, it is further recommended to perform statistical analyses in future studies for the insignificant variables in this study to qualify or measure their impact on the profitability indicators. Moreover, it is desirable to expand the study sample i.e., the number of Islamic and commercial banks identified for data collection and analysis. Generally, the study urges researchers and financial analysts to conduct financial and statistical analyses to explore the effect of local and foreign investors on enhancing banking performance and profitability, and to measure the efficiency of banking and financial institutions performance. Furthermore, it is recommended that future research work should take stock of additional financial profitability indicators for foreign and local commercial and Islamic banks.

Conducting statistical and financial analysis as performed in this study can be done for multiple sectors for example, the financial sector which contains commercial banks, Islamic banks, all banks in general, commercial insurance, Islamic insurance, all

insurance companies, diversified financial services, and real estate sector. Moreover, services sector includes health care services, educational services, hotels and tourism, transportation, technology and communication, media, utilities and energy, and commercial services. Moreover, the same analysis can also be done in the context of industrial sector including, pharmaceutical and medical industries, chemical industries, paper and cardboard industries, printing and packaging, food and beverages, tobacco and cigarettes, mining and extraction industries, engineering and construction, glass and ceramic industries, textiles, leathers, and clothing, finally, electrical industries.

REFERENCES

- Abualrob, L. A. R., & Maswadeh, S. N. (2020). The Effect of Financial Ratios Derived From Operating Cash Flows on Jordanian Commercial Banks Earnings per Share. *International Journal of Financial Research*, 11(1), 394-404. doi:<https://doi.org/10.5430/ijfr.v11n1p394>
- Abubakar, A., Sulaiman, I., & Haruna, U. (2018). Effect of firms characteristics on financial performance of listed insurance companies in Nigeria. *African Journal of History and Archaeology*, 3(1), 1-9.
- Al-Othman, L. (2019). Income smoothing in banks and insurance companies and its impact on earnings per share—evidence from Jordan. *Banks and Bank Systems*, 14(4), 126-136. doi:[http://dx.doi.org/10.21511/bbs.14\(4\).2019.12](http://dx.doi.org/10.21511/bbs.14(4).2019.12)
- Al-Homaidi, E. A., Tabash, M. I., Farhan, N. H., & Almaqtari, F. A. (2019). The determinants of liquidity of Indian listed commercial banks: A panel data approach. *Cogent Economics & Finance*, 7(1), 161-179. doi:<https://doi.org/10.1080/23322039.2019.1616521>
- Alabdullah, T. T. Y. (2018). The relationship between ownership structure and firm financial performance. *Benchmarking: An International Journal*, 25(1), 319-333. doi:<https://doi.org/10.1108/BIJ-04-2016-0051>
- Amanah, A. (2020). Determinant Return on Assets on Rural Banks in Indonesia. *JEJAK: Jurnal Ekonomi dan Kebijakan*, 13(2), 447-459. doi:<https://doi.org/10.15294/jejak.v13i2.26458>
- Anthony, P., Behnoee, B., Hassanpour, M., & Pamucar, D. (2019). Financial performance evaluation of seven Indian chemical companies. *Decision Making: Applications in Management and Engineering*, 2(2), 81-99. doi:<https://doi.org/10.31181/dmame1902021a>
- Antoun, R., Coskun, A., & Georgiezski, B. (2018). Determinants of financial performance of banks in Central and Eastern Europe. *Business and Economic Horizons (BEH)*, 14(1232-2019-853), 513-529.
- Banerjee, A. (2018). Can ratios predict the financial performance in banks: A case of national banks in United Arab Emirates (UAE). *International Journal of Accounting and Financial Reporting*, 8(4), 2162-3082. doi:<https://doi.org/10.5296/ijaf.v8i4.13802>

- Bashatweh, A. D., & Ahmed, E. Y. (2020). Financial performance evaluation of the commercial banks in Jordan: Based on the CAMELS framework. *International Journal of Advanced Science and Technology*, 29(5), 985-994.
- Bashir, U., Fatima, U., Sohail, S., Rasul, F., & Mehboob, R. (2018). Internal corporate governance and financial performance nexus: A case of banks of Pakistan. *Journal of Finance and Accounting*, 6(1), 11-17. doi:<https://doi.org/10.11648/j.jfa.20180601.12>
- Bawa, J. K., Goyal, V., Mitra, S., & Basu, S. (2019). An analysis of NPAs of Indian banks: Using a comprehensive framework of 31 financial ratios. *IIMB Management Review*, 31(1), 51-62. doi:<https://doi.org/10.1016/j.iimb.2018.08.004>
- Boto-García, D., Álvarez, A., & Pino, J. F. B. (2021). The effect of Euribor on banking profitability: evidence from the Spanish banking system. *European Journal of Government and Economics*, 10(1), 5-29. doi:<https://doi.org/10.17979/ejge.2021.10.1.7083>
- Dakhlallah, M. M., Rashid, N., Abdullah, W. A. W., & Al Shehab, H. J. (2020). Audit committee and Tobin's Q as a measure of firm performance among Jordanian companies. *Jour of Adv Research in Dynamical & Control Systems*, 12(1), 28-41. doi:<https://doi.org/10.5373/JARDCS/V12I1/20201005>
- Fadun, O. S., & Oye, D. (2020). Impacts of operational risk management on financial performance: a case of commercial banks in Nigeria. *International Journal of Finance & Banking Studies*, 9(1), 22-35. doi:<https://doi.org/10.20525/ijfbs.v9i1.634>
- Fijałkowska, J., Zyznarska-Dworczak, B., & Garszka, P. (2018). Corporate social-environmental performance versus financial performance of banks in Central and Eastern European countries. *Sustainability*, 10(3), 772. doi:<https://doi.org/10.3390/su10030772>
- Jasman, J., & Kasran, M. (2017). Profitability, earnings per share on stock return with size as moderation. *Trikonomika*, 16(2), 88-94. doi:<http://dx.doi.org/10.23969/trikononika.v16i2.559>
- Khan, M. (2019). Corporate sustainability practices impact on firm financial performance: Evidence from the Banking Sector of Pakistan. *City University Research Journal*, 9(2), 427-438.
- Kusumaningrum, D. R., & Iramani, I. (2020). Effect of Financial Performance on Stock Price with Return on Assets as an Intervening Variable in State-Owned Banks in Indonesia. *International Journal of Multicultural and Multireligious Understanding*, 7(2), 321-336. doi:<http://dx.doi.org/10.18415/ijmmu.v7i2.1485>
- Mangla, R., & Goel, M. (2017). The impact of financial leverage and earnings on dividend policy: A study of banking sector in India. *Asian Journal of Management*, 8(3), 379-383. doi:<http://dx.doi.org/10.5958/2321-5763.2017.00060.9>

- MASWADEH, S. N. (2020). How Investment Deposits at Islamic and Conventional Banks Effect Earnings Per Share? *The Journal of Asian Finance, Economics, and Business*, 7(11), 669-677. doi:<https://doi.org/10.13106/jafeb.2020.vol7.no11.669>
- Matar, A., & Eneizan, B. M. (2018). Determinants of financial performance in the industrial firms: Evidence from Jordan. *Asian Journal of Agricultural Extension, Economics & Sociology*, 22(1), 1-10. doi:<https://doi.org/10.9734/AJAEES/2018/37476>
- Mohammad, S. J., Abdullatif, M., & Zakzouk, F. (2018). The effect of gender diversity on the financial performance of Jordanian banks. *Academy of Accounting and Financial Studies Journal*, 22(2), 1-11.
- Muhindi, K., & Ngaba, D. (2018). Effect of firm size on financial performance on banks: Case of commercial banks in Kenya. *International Academic Journal of Economics and Finance*, 3(1), 175-190.
- Musa, S. N., & Al-Swiety, I. A. (2017). The Prediction of Earnings per Share through the Models of Random Walk and Random Walk with Drift: A Case Study of Jordan. *International Journal of Managerial Studies and Research*, 5(2), 56-64. doi:<http://dx.doi.org/10.20431/2349-0349.0502006>
- Nomran, N. M., & Haron, R. (2019). Dual board governance structure and multi-bank performance: a comparative analysis between Islamic banks in Southeast Asia and GCC countries. *Corporate Governance: The International Journal of Business in Society*, 19(6), 1377-1402. doi:<https://doi.org/10.1108/CG-10-2018-0329>
- Orumo, J. I. (2018). Ownership structure and return on assets of commercial bank in Nigeria. *American Finance & Banking Review*, 2(2), 20-33. doi:<https://doi.org/10.46281/amfbr.v2i2.134>
- Oyewumi, O. R., Ogunmeru, O. A., & Oboh, C. S. (2018). Investment in corporate social responsibility, disclosure practices, and financial performance of banks in Nigeria. *Future Business Journal*, 4(2), 195-205. doi:<https://doi.org/10.1016/j.fbj.2018.06.004>
- Ozili, P. K. (2017). Bank profitability and capital regulation: Evidence from listed and non-listed banks in Africa. *Journal of African Business*, 18(2), 143-168. doi:<https://doi.org/10.1080/15228916.2017.1247329>
- Patel, R. (2018). Pre & post-merger financial performance: An Indian perspective. *Journal of Central Banking Theory and Practice*, 7(3), 181-200. doi:<http://dx.doi.org/10.2478/jcbtp-2018-0029>
- Poh, L. T., Kilicman, A., & Ibrahim, S. N. I. (2018). On intellectual capital and financial performances of banks in Malaysia. *Cogent Economics & Finance*, 6(1), 145-168. doi:<https://doi.org/10.1016/j.iimb.2018.08.004>

- Saidat, Z., Silva, M., & Seaman, C. (2019). The relationship between corporate governance and financial performance. *Journal of Family Business Management*, 9(1), 54-78. doi:<https://doi.org/10.1108/JFBM-11-2017-0036>
- Sklyarova, Y. M., Sklyarov, I. Y., Taranova, I., Latysheva, L., & Piterskaya, L. Y. (2019). The main directions of development the banking and financial management system: theory and practice. *Indo American Journal of Pharmaceutical Sciences*, 6(3), 5615-5619. doi:<https://doi.org/10.5281/zenodo.2596653>
- Teshome, E., Debela, K., & Sultan, M. (2018). Determinant of financial performance of commercial banks in Ethiopia: Special emphasis on private commercial banks. *African Journal of Business Management*, 12(1), 1-10. doi:<https://doi.org/10.5897/AJBM2017.8470>
- Turakpe, M. J., & Fiiwe, J. L. (2017). Dividend policy and corporate performance: A multiple model analysis. *Equatorial Journal of Finance and Management Sciences*, 2(2), 1-16. doi:<https://dx.doi.org/10.2139/ssrn.2947308>
- Vovchak, O., Rudevskaya, V., & Holub, R. (2018). Peculiarities of ensuring financial sustainability of the Ukrainian Banking System. *Banks & bank systems*(13, Iss. 1), 184-195.
- Xu, J., & Wang, B. (2018). Intellectual capital, financial performance and companies' sustainable growth: Evidence from the Korean manufacturing industry. *Sustainability*, 10(12), 4651. doi:<https://doi.org/10.3390/su10124651>
- Zyadat, A. A. H. (2017). The impact of sustainability on the financial performance of Jordanian Islamic banks. *International Journal of Economics and Finance*, 9(1), 55-63. doi:<http://dx.doi.org/10.5539/ijef.v9n1p55>