



Factors Affecting Firm Performance in Commercial Iraqi Banks

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Abstract

The purpose of this paper is to investigate the effects of several potential factors on the performance of banks in the context of a developing country, Iraq. Profitability is one of the top priorities for banks and other business, as they can maintain and sustain their financial position, expand their equity, and improve the solvency and liquidity by achieving appropriate return; thus, strengthening their ability to handle the risks and obligations they face. The study sample consists of 10 commercial banks listed on the Iraq Stock Exchange during the period 2009 -2020. The collected panel data were analyzed using Pooled Ordinary Least Square method. Bank performance is measured through the usage of ROA and ROE. The explanatory bank-specific variables are size, liquidity ratio, total loan to total asset and bank age. The explanatory economic-specific factors are GDP, inflation rate, interest rate and cash reserve rate. The results show that the considered explanatory variables affect bank performance with different level of impact.

Keywords: *Bank Performance; Bank Size; Leverage; GDP and Interest Rate*

1. Introduction

Conventional banks have been the foundation of financial sectors in both developed and developing countries. Banks are the leading financial institutions in developing and emerging market nations. Low per capita income and asset levels, inadequate accounting requirements, and a corporate sector dominated by tiny, family-owned firms characterize many countries. Because developing nations lack the essential infrastructure, it's no surprise that banks and other financial intermediaries have raised to the top of the financial sector, while capital markets have lagged behind. Banks, on the other hand, vary from other businesses in terms of their reliance on external financing. This is owing to the diversity of fund resources as well as the nature of their various operations. As a result, banks compare financial sources in terms of risks, costs, returns, time, management participation, interest requirements, and

installments. The best financial structure was obtained by optimizing the business valuation, which is important for both the debt and equity value.

Banks should act as trusted intermediaries and play their important role in the economy. However, the use of banking sector services in developing countries have limitations and barriers. Individuals possibly cannot trust banks to deposit their saving and use bank services as key financial intermediaries in their daily life and business works (Demir et al., 2019). This reality cannot be hidden in developing countries. This is because the performance of banks in developing countries is not yet strategic, and no picture has been presented to the investors to fully trust them. The organization's performance should work on improving strategies and concentrate on the tasks of better management and regain the trust and make it a competitive advantage (Budur and Poturak, 2021a).

One other major problem in the market is competition which has become much stiffer in the present era of business. Because of the high and tough competition, organizations must set a proper plan and goal for the business to sustain and grow (Poturak et al., 2020). The company's principal purpose is to enhance earnings in general (Budur et al., 2019). Firms with limited rate of profitability will struggle to meet its goals (Abdullah et al., 2020) since retained earnings would not be enough to be dependent as internal source of fund. When a company's performance improves, it may be observed in the company's constant efforts to make money. Companies with enormous sizes have the opportunity to invest in and manage existing resources as much as possible for the benefit of shareholders, based on the process of growing income profitability (Budur, 2018a; Kumar et al., 2021).

Financial sector including banks plays a key role in economic growth and financial development (Alam et al., 2021). Due to the importance of financial sector in economy, this sector has been the focus of the scholars on the factors affecting their performance (Kourtzidis and Tzeremes, 2019; Rasul et al., 2022; Rashid et al., 2020). There are a number of variables considered in the literature to have potential influence of financial performance of the firms in financial sector. These factors are mainly classified into external and internal factors (Abdullah and Tursoy, 2021). This issue worth investigating in the banking sector in the case of developing countries, particularly in the aftermath of the global financial crisis and over the period of rapid technological development implemented in the sector (Budur, 2020).

Changes in financial rules, such as the adoption of the International Financial Reporting Standard (IFRS) by stock markets, may have an impact on bank performance. The International Accounting Standard Board (IASB) created IFRS codes as an attempt to harmonize accounting information throughout the world. The goal is to create a universal business language that everyone can comprehend (Akalpler and Abdullah, 2020). Iraq banks are mandated to adopt IFRS and prepare their financial statements in accordance since the financial year 2016 (Abdullah et al., 2021).

This research focuses on the performance of commercial banks, particularly Iraqi banks. The purpose is to understand the operational environment of commercial banks in the case of a developing economy and identify factors that have potential effecting their financial performance. We consider the internal possible factors and some external factors on the economy and authority regulation levels. To the best of our knowledge, this work is one of the early empirical examination on this matter in the case of Iraq. This study contributes to the literature through highlighting the key factors affecting the performance of banking sector in Iraq after the financial crisis with considering the mandatory implementation of IFRS in 2016.

2. Literature Review

2.1. Firm Performance

Financial data can be difficult to interpret, particularly for small, unquoted enterprises where the owners' compensation schemes may have an impact on profitability. In addition, industry-specific variables may influence absolute scores on financial success criteria. In research, many measures of corporate performance should be stressed (Westhead & Howorth, 2006). In evaluating the company's successes, the capacity to earn profit from operational activities was a primary focus (Abdullah, 2021). Gain is an indicator of the company's capacity to perform its commitments to creditors and investors, as well as a role in the process of creating value for the company's future possibilities.

Firm performance is an economic indicator that assesses a company's ability to achieve its objectives via the effective use of human and material resources (Budur and Poturak, 2021b). The efficiency of utilizing business means during the manufacturing and consuming process is also taken into account when evaluating firm performance (Budur and Demir, 2022). Firm performance depicts the relationship between output results and input resources used in the process of conducting business activities (Nguyen et al., 2021).

Firm performance in developing country could be relatively high due to higher opportunity availability, less regulation restrictions, lower level of competition and some other factors (Hadziahmedovic et al., 2022). However, firms can face great risks due to political and economic instabilities. Firm performance could be a picture of management in developing countries due to their potential role in the market. As a result, the nature of the agency's work will be given a great deal of consideration (Abdullah & Aziz, 2017; Siepel & Dejardin, 2020). That means the actions of management possibly draw the picture of firm performance in the books and the in the market.

2.2. Banking Performance

A bank is a financial institution that takes public deposits and extends credit to those who qualify. Lending can be accomplished in two ways: directly or through the capital markets' circulation system. Banks are administered differently in various nations as a result of their crucial position in the financial security of an economy. Most economies have a uniform framework known as fragmented save banking (Anastasiou et al., 2019), in which these types of financial organizations keep liquidity resources that correspond to just a fraction of their current obligations. Even though multiple criteria are in place to ensure liquidity ratios, banks are nevertheless frequently reliant on the bare minimum of capital requirements based on a global capital assessment.

The rationale for performance evaluation is to diagnose the information contained in the financial statements in order to judge the amount of profits, their sustainability in the future, and the extent of the ability to pay the interests and outstanding debts, and a sound dividend policy. Banking performance has been defined as the bank's ability to generate sustainable profitability, and the rationale for performance evaluation is to diagnose the information contained in the financial statements in order to judge the amount of profits, their sustainability in the future, the extent of the ability to pay the interests and outstanding debts (Rasul et al., 2022). Banking performance is also characterized as a methodology for evaluating financial institutions based on five important dimensions: capital sufficiency, asset quality, management, profitability, and liquidity, with these components reflecting financial performance, operating soundness, and regulatory compliance (Nguyen et al., 2020), according to the CAMEL model.

The perspective from which commercial bank concepts are seen differs. The bank acts as a conduit between those who have extra cash and those who need it. Commercial banks can be defined in terms of the functions they perform and the services they give to their customers. As a result, they serve

as financial intermediaries, giving financial services to both surplus and deficit units. Bank-influenced enterprises should outperform independent firms if banks have access to private information that can be utilized to decrease agency costs and if firms with close bank links benefit from improved access to capital. Bank-influenced businesses should benefit from improved profitability and growth rates as a result of these ties (Abdullah, 2021). Bank influence, on the other hand, may have a detrimental impact on firm performance if banks choose to use their unique position to advance their own interests above the interests of shareholders. Banks, for example, might disclose confidential information about the company with rivals or deliberately reveal industry-specific data to benefit their own interests at the expense of the company. Additional conflicts of interest might arise if the bank tries to persuade management to take on less risky projects (Bhagat & Bolton, 2019).

Banking performance refers to a bank's ability to manage its funds in order to achieve multiple goals, such as contributing to a country's economic development or achieving profits and growth (Akaplir and Abdullah, 2020), as well as determining the bank's financial, credit, and investment position, management efficiency, and money public investment, and the ability to harmonize between the bank's aims, such as profit and growth, as well as determining the bank's financial, credit, and investment position, management efficiency, and money investment policies, and the ability by assuring efficiency and reducing losses, it improves the bank's ability to compete with both domestic and international organizations (Abdullah and Aziz, 2017).

Due to the critical role banks play in a country's economic welfare, growth, and development, banking performance continues to draw the attention of industrial experts, politicians, and academics. The most common indication of bank performance is profitability, which is measured by profit ratios such as return on assets (ROA), return on equity (ROE) (Katusiime, 2021; Abdullah and Tursoy, 2021a).

2.3. Empirical Review

Various research has been conducted investigating the potential factors affecting bank profitability in developed and emerging nations in recent decades. Despite this, very limited studies carried out examining the factors influence commercial bank performance in Iraq. In literature, factors affecting bank profitability may be separated into three categories; bank-specific variables, economic indicators, and government factors. Bank performance is influenced by a variety of bank-specific characteristics, including bank size, equity to total assets, liquidity, credit risk, and total loan to total assets (Rasul et al., 2022). Moreover, economic indicators such as GDP growth, interest rate, inflation rate, and unemployment rate as well as government factors (Jadah et al., 2020) e.g., regulatory quality, political instability, and government effectiveness are key external drivers affecting bank profitability.

Jadah et al. (2020) investigate the internal, bank-specific features, and external, macroeconomic factors and government variables, drivers of bank profitability in Iraq. The research draws on imbalanced panel data from 18 Iraqi banks across a thirteen-year period, from 2005 to 2017. A fixed effects technique is used to estimate the connection. The results reveal that bank size, equity to total assets and total loans to total assets ratios, GDP growth, and government effectiveness all have a substantial and beneficial impact on the profitability of Iraqi banks. Credit risk, inflation, interest rates, unemployment, and political unrest, on the other hand, have a considerable negative impact on bank profitability.

Moreover, Adam (2014) examines the financial performance of Erbil Bank for Investment and Finance in the Kurdistan Region of Iraq from 2009 to 2013. The study findings demonstrate that Erbil Bank's financial condition is improving, and that several of its financial factor variables are influencing the bank's financial performance. These factors include liquidity ratios, asset quality ratios, credit performance, and profitability ratios.

The technological development possibly has impact on the sector's performance (Budur et al., 2021). Chukwu, et al., 2022 examine the influence of digital banking on the performance of Nigerian commercial bank from 2010 to 2019. The Autoregressive Distributive Lag (ARDL) framework was used to explore the relationships and the findings revealed that digital banking has a positive but little influence on commercial bank performance. The study concludes that a rather stable network is necessary. They claim that there is a need to educate bank customers on the advantages of digital banking and establish a cyber security department for security purposes.

Banks are known for high liquidity risk and this could significantly affect their performance. Alim at al, (2021) investigated the potential of liquidity risk management on commercial bank financial performance in Pakistan over 2006-2019. The Pakistani central bank ensures that banks maintain optimal liquidity positions in order to earn the most possible benefits and greater profits. Using panel data and OLS analysis, the results show that more liquidity increases bank performance in Pakistani commercial banks. They recommend that other bank-specific factors could also play key role such as bank size and age.

Table 1: Summary of empirical review

| Author and year | Purpose | Sample | Method | Determinant factors | Results |
|----------------------|---|---|---|--|---|
| Jadah et al., 2020 | It examines internal and external, macroeconomic factors and government variables, causes of bank profitability in Iraq | 18 Iraqi banks across a thirteen-year period, from 2005 to 2017 | Unbalanced panel data method and fixed-effect model | Bank size, equity to total assets, TL/TA, GDP, government effectiveness | Bank size, equity-to-total-assets and total-loan-to-total-assets ratios, GDP growth, and government effectiveness all have a positive impact on Iraqi bank profitability. |
| Chukwu, et al., 2022 | It investigates the effect of digital banking on the performance of Commercial Banks | Commercial Banks in Nigeria over 2010-2019 period | The study applied the Autoregressive Distributive Lag (ARDL). | Point of sale machines, banking transactions performed through unstructured supplementary service data, and Web banking. | The findings of the study demonstrated that digital banking has a favorable but little impact on commercial bank performance in Nigeria. |
| Alim, et al., 2021 | The study tests the effect of liquidity risk management on financial performance | commercial banks in Pakistan from 2006 to 2019 | Using panel data and OLS analysis | Liquidity, bank size, age. | The results show that more liquidity increases bank performance in Pakistani commercial banks. |

| | | | | | |
|------------|---|--|--|---|---|
| Adam, 2014 | This study investigates the financial performance of bank using bank-specific factors | Erbil Bank for Investment and Finance, in Kurdistan Region of Iraq over 2009-2013. | analytical as well as descriptive study. | Liquidity ratios, asset quality ratios, credit performance, and profitability ratios. Profitability ratios (NPM, ROA, ROE). | The study findings demonstrate that Erbil Bank's financial condition is improving, and that several of its financial factor variables are influencing the bank's financial performance. |
|------------|---|--|--|---|---|

3. Methodology

3.1. Sample and Data

The sample consists of profitability determinants of bank initially banking Iraq we choose. Which is selected based on self-selecting sampling method. Panel data is used to examine the relationships between profitability, bank specific variables and economic factors. The study investigates annual data of the duration of 12 years from 2009 to 2020. Because we selecting data after 2009, because after the global recession of 2007 and 2008, for knowing after 2009 to 2020 how the company financial performance, and what's affecting the banks. Therefore, the research sample includes 10 banks in Iraq. And we used data in our research secondary data, because this data real and get a real result for our research, we collected data in World Bank data in Iraq. We collected data from the published financial statements of the sample banks; Bank of Baghdad, National Bank of Iraq, Babylon Bank, Commercial Bank of Iraq, Middle East Bank, Kurdistan International Bank, Investment bank of Iraq, Ashur International Bank, Al Mansour Bank and Mousl Bank for finance& investment.

3.2. Variables

3.2.1. Bank Performance

Two alternative indices of bank profitability are used in this study. The first is the return on assets (ROA), the second is the return on equity (ROE). ROA is the most important indicator of a bank's profitability. ROA is the net profit as a proportion of total assets. It represents the profits made per asset take and indicates how well the bank's assets are handled by the authorities to create money. ROA is used to assess a bank's competency and operational performance by examining the profits earned from the assets invested by the bank.

The second alternate metric of profitability is ROE, which is defined as the percentage ratio of net profits to equity capital. This is the return to shareholders on their equity capital, although it is not the best measure of profitability according to the literature. Because banks with a high amount of equity have a higher ROA but a lower ROE, this is the case. As a result, the key dependent variable in our study is ROA, however we also demonstrate.

3.2.2. Explanatory Bank-Specific Variables

Bank size

The size of the bank has an impact on bank profitability, as well as has a positive relationship with bank performance which may be because the large size of banks can provide a better profit for banks because the big banks have more market opportunities than small banks. Also the large size of bank may create negative impacts, as the increase in bank size will lead to increased costs and risk of operation and other actions (Zhang & Dong, 2011).

Liquidity ratio

Liquidity there is an effective and positive relationship with the bank and its performance because the grant is the relationship between profit and bank payment, and the profit marker in the profit scale model, ROA and NYM. The money improves the profitability of banks since banks with cash funds have less risk of becoming useless than they can withstand financial risks this is because they can reduce the price of borrowing from external sources, which in turn makes more profits.

Total loans to total assets

A bank's capital quality is measured by the total amount of loans divided by total capital (TL/TA). Since the rate grows, the quality of the bank's capital deteriorates, as banks maintain goods after credit portfolio failures. Previous research has discovered a close correlation between bank profits and total assets average loans. The ratio of total debt to total assets has little bearing on bank profits. The entire amount of debt backed up by the bank's profitability is inextricably tied.

Bank Age

It means the age of the company, to know to what extent it has an effect on the company's performance. A bank measured Age may also have an affected and significant in bank profitability and firm performance, if they effected may have had a more knowledge and more working for increasing profitability of banking.

3.2.3. Explanatory Economic Factors

GDP

The total value of currency or market all the goods and services that are produced in the borders of a country at a specified time that measure the level of national economic development and comprehensively show all external factors such as macroeconomic situation. GDP has a big and significant effect on bank profitability and performance, because it can analyze the profits of banks in a detailed and academic way.

Inflation

has a positive impact on the return of justice to local commercial banks the results with its findings however inflation is significantly and negatively related to bank profits (Tariq et al, 2014) Inflation affects the bank's profits as opposed to the fact that rising inflation affects banks' spending positively and reduces profits The increase in inflation can lead to an increase in profits that can increase banks' revenues.

Interest Rate

The profit rate has a significant effect on ROE. Higher real interest rates could lead to higher bank profits due to higher rates of return on assets such as loans, and the low price will be a decline in capital. That's why there is a positives and significant profit rate and bank profit and bank performance (Mbekomize& Mapharing, 2017).

Cash Reserve Rate

The reserve ratio is the percentage of a commercial bank's deposits that it must retain in cash as a reserve in case of mass client withdrawals, as determined by the central bank. The reserve ratio is a key monetary policy tool used by the Federal Reserve in the United States to boost or decrease the money supply of the economy. When the Fed needs to reduce the money supply and control inflation, it lowers the reserve ratio to give banks more money to lend and boost the economy. When the Fed needs to reduce the money supply and control inflation, it raises the reserve ratio.

Table 2: Measurement of variables

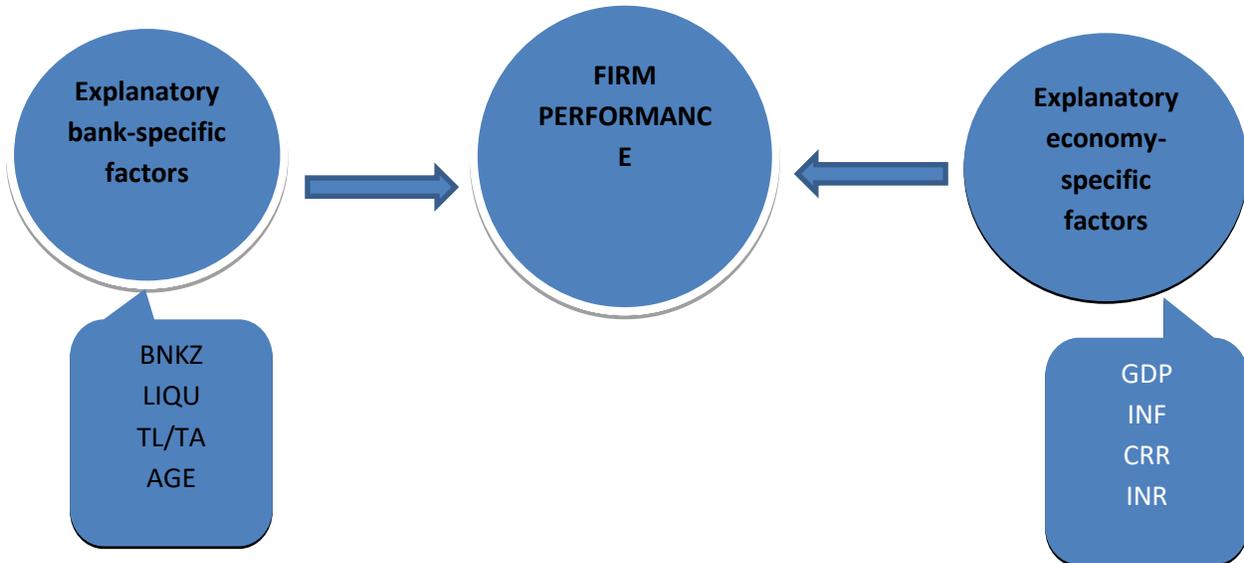
| Type | Abbrev. | measurement | Definition and equation |
|--|---------|--------------------------|---|
| Dependent variable | ROA | Return on assets | is defined as net profit before taxes to total assets |
| | ROE | Return on equity | is net profit before tax over total equity |
| Explanatory bank-specific variables | BNKZ | Bank size | Natural log of total assets |
| | TL/TA | Total loans/Total assets | Proportion of total loans to total assets |
| | LIQU | Liquidity ratio | Proportion of liquid assets to total assets |
| | BAGE | Bank Age | = Observation year-establishment year+1 |
| Explanatory economic factors | GDP | Growth Domestic Product | Economic Development Index |
| | INFR | Inflation rate | Personal Consumption Expenditures Price Index |
| | INRA | Interest rate | Real interest rate |
| | CRR | Cash Reserve rate | = legal capital reserve rate with central banks |

2. 3.3 Model

$$FP_{(t)j} = \beta_0 + \beta_1BNKZ + \beta_2\frac{TL}{TA} + \beta_3LIQU + \beta_4BAGE + \epsilon_j$$

$$FP_{(t)j} = \beta_0 + \beta_1GDP + \beta_2INF + \beta_3CRR + \beta_4INR + \epsilon_j$$

Figure 1 model of the study



4. Research Finding

4.1. Descriptive Statistics

Table 3 present a summary of the descriptive statistics for variable as proxies of firm performance, Explanatory bank-specific variables and Explanatory economic factors. The averages of TL/TA generally explain 52.5%, ranging between 18.2% and 87.6% and standard deviation is 18.3%. The mean value of the LNLIQ is 2597.8% ranging between 2394.9% and 2741.1%. The mean of LNBS is 2598.8% ranging between 1986.7% and 22823.45 and the standard deviation is 229%.the mean of BAGE 1670% ranging between 400% and 2900% and the standard deviation is 632.5%. The mean of GDP is 544780.7% ranging between 3853835 and 707655.2% and GDP also have a higher standard deviation is 544780.7%. The mean of INF is 238.6% ranging between -19.9% and 687.4%. The mean of CRR is 12.3% ranging between 13% and 25%. The mean of INR is 1312.8% ranging between 1195% and 1616% and the standard deviation is 125.45%. Mean value of ROA is -5.4% with a ranging between -908.6% and 6.9%, mean value of ROE is 4.7% with a range between -126% and 159%. the standard deviation of ROA is 83.2% and for ROE is 13.1%. And about probability BAGE has a highest probability is 12.4%, then TL/TA is 9.35 and GDP is 0.7%.

we have tested for our results, in the period before 2016 and after 2016, meaning that a pre IFRS with post IFRS adoption, has been that the prophecy in the post IFRS adoption is slow, it means that the performance of these partnerships has not increased.

Table 3: Discreptive statistics

| | ROA | ROE | TLTA | LNLIQ | LNBS | BAGE | GDP | INF | CRR | INR |
|--------------|-----------|-----------|-------|--------|--------|--------|----------|--------|--------|--------|
| Mean | -0.054 | 0.047 | 0.525 | 25.978 | 25.988 | 16.700 | 5447.807 | 2.386 | 0.163 | 13.128 |
| Std. Dev. | 0.832 | 0.131 | 0.183 | 0.602 | 2.290 | 6.325 | 1057.678 | 2.413 | 0.040 | 1.254 |
| Maximum | 0.069 | 0.159 | 0.876 | 27.411 | 28.234 | 29.000 | 7076.552 | 6.874 | 0.250 | 16.160 |
| Minimum | -9.086 | -1.260 | 0.182 | 23.949 | 19.867 | 4.000 | 3853.830 | -0.199 | 0.130 | 11.950 |
| Jarque-Bera | 68343.890 | 34279.580 | 4.756 | 20.744 | 96.241 | 4.182 | 9.810 | 16.630 | 58.722 | 22.902 |
| Probability | 0.000 | 0.000 | 0.093 | 0.000 | 0.000 | 0.124 | 0.007 | 0.000 | 0.000 | 0.000 |
| Observations | 120 | 120 | 120 | 120 | 120 | 120 | 120 | 120 | 120 | 120 |

4.2. Correlation Matrix

Table 4 shows the correlation analysis between variables used in the regression models. The result show that none of the correlations seem to be at a problematic level between the explanatory variables. The strong correlations 92.6% is found between the two used dependent variables in the study ROA and ROE. The correlation coefficients of ROA and ROE with TL/TA, 12.7% and 33.2% respectively. TL/TA has significant relationship with ROA, 16.8%, but TL/TA is insignificant with ROE. These results indicate that TL/TA is positively correlated to a firm's financial performance. LNLIQ has a negative correlation with ROA and ROE, -4.7% and -1.5%. LNBS has a negative correlation with ROA, -2.2% and positive correlation with ROE 8.1%. Finally, BAGE has the lowest correlation between ROA, 3.0% and yet the relationship is positive. The economic factors have a correlation with firm performance. GDP has a positive correlation with ROA and ROE, 6.9% AND 7.8%. GDP is negatively correlated with TL/TA and BAGE. Also GDP has significant affected with firm performance. INF has a positive correlation with ROA and ROE its 4.7% and 26%, also has a higher correlation with TL/TA, 43.4%. INF has a significant affected with firm performance. CRR has a positive correlated with ROA and ROE, 3.8% and 22.7%, and has a higher correlation with INF, 51.5%. CRR has negative correlated with LNLIQ, BAGE, and GDP. Finally, INR has a positive correlation with ROA and ROE, 7.2% and 31.8%, but INR has a highest correlation in INF and CRR, 88.3% and 79.8%.

Table 4: Correlation matrix between the variables

| Correlation | ROA | ROE | TLTA | LNLIQ | LNBS | BAGE | GDP | INF | CRR | INR |
|-------------|--------|--------|--------|--------|--------|--------|-------|-------|-----|-----|
| Probability | 1.00 | | | | | | | | | |
| ROA | 1.00 | | | | | | | | | |
| | ----- | | | | | | | | | |
| ROE | 0.926 | 1.00 | | | | | | | | |
| | 0.000 | ----- | | | | | | | | |
| TLTA | 0.127 | 0.332 | 1.00 | | | | | | | |
| | 0.168 | 0.000 | ----- | | | | | | | |
| LNLIQ | -0.047 | -0.155 | -0.455 | 1.00 | | | | | | |
| | 0.608 | 0.091 | 0.000 | ----- | | | | | | |
| LNBS | -0.022 | 0.081 | 0.072 | -0.024 | 1.00 | | | | | |
| | 0.813 | 0.378 | 0.433 | 0.799 | ----- | | | | | |
| BAGE | 0.030 | -0.137 | -0.066 | 0.064 | -0.225 | 1.00 | | | | |
| | 0.743 | 0.137 | 0.476 | 0.485 | 0.014 | ----- | | | | |
| GDP | 0.069 | 0.078 | -0.022 | 0.078 | 0.099 | -0.029 | 1.00 | | | |
| | 0.454 | 0.397 | 0.815 | 0.394 | 0.282 | 0.756 | ----- | | | |
| INF | 0.047 | 0.260 | 0.434 | -0.484 | 0.256 | -0.466 | 0.069 | 1.00 | | |
| | 0.612 | 0.004 | 0.000 | 0.000 | 0.005 | 0.000 | 0.455 | ----- | | |

| | | | | | | | | | | |
|-----|-------|-------|-------|--------|-------|--------|--------|-------|-------|-------|
| CRR | 0.038 | 0.227 | 0.387 | -0.453 | 0.134 | -0.403 | -0.447 | 0.515 | 1.00 | |
| | 0.682 | 0.013 | 0.000 | 0.000 | 0.145 | 0.000 | 0.000 | 0.000 | ----- | |
| INR | 0.072 | 0.318 | 0.502 | -0.536 | 0.236 | -0.500 | -0.123 | 0.883 | 0.798 | 1.00 |
| | 0.436 | 0.000 | 0.000 | 0.000 | 0.009 | 0.000 | 0.179 | 0.000 | 0.000 | ----- |

4.3. Regression Analysis

One of the most extensively utilized statistical methods for determines a bank’s profitability is regression analysis. Regression models were commonly utilized by data analysts in sectors such as science and technology, as well as social science, economic, and finance (Budur et al., 2018). According to the research hypotheses, the findings of the regression analysis are provided based on bank profitability metrics as dependent variables for this study. Also include are the results from the pooled sample. To evaluate the direction and magnitude of the explanatory variables impact on the dependent variables, we must run a regression model for the tow research model (ROA and ROE) with particular previously collected data.as a result; we can pinpoint the variables that influence bank profitability in Iraq. Regression analysis was used in testing the relationship between ROA with Explanatory bank-specific variables and Explanatory economic factors, and also relationship between ROE with Explanatory bank-specific variables and Explanatory economic factors.

Table 5 shows the regression analyses between the variables. The results show the impact on profitability measured by (ROA and ROE) from the Explanatory bank-specific variables of (BNKZ, LIQU, TL/TA, AGE). Model 1 show that TL/TA could positively influence ROA in a way that every 1% increase in TL/TA can result an increase ROA by 0.14%. Similarly the outcomes of model 2 illustrate that every 1% increase in previous TL/TA lead to increase in ROE of 0.24%. As can be observed, the impact of the TL/TA is relatively large on ROA compared to ROE. The standard errors for both coefficient in model 1 and 2 are small, with 0.040 and 0.009, respectively. moreover 1% increase in BAGE can lead to increase in ROA by 0.001%. Similarly the outcomes of model 2 illustrate that every 1% increase in previous BAGE lead to decrease ROE of -0.002%. LIQU and BNKZ cannot correlate the ROA and ROE to increase the results.

Table 5: Regression analysis results, Bank-specific factors

| Variable | Model 1 Dependent variable ROA | | | | Model 2 Dependent variable ROE | | | |
|---------------------------|-----------------------------------|------------|-------------|-------|-----------------------------------|------------|-------------|-------|
| | Coefficient | Std. Error | t-Statistic | Prob. | Coefficient | Std. Error | t-Statistic | Prob. |
| TLTA | 0.144 | 0.040 | 3.645 | 0.000 | 0.243 | 0.009 | 25.998 | 0.000 |
| LIQU | 0.000 | 0.000 | 2.828 | 0.006 | 0.000 | 0.000 | 8.217 | 0.000 |
| BNKZ | 0.000 | 0.000 | -2.032 | 0.044 | 0.000 | 0.000 | -5.679 | 0.000 |
| BAGE | 0.001 | 0.000 | 1.839 | 0.068 | -0.002 | 0.000 | -6.427 | 0.000 |
| C | -0.087 | 0.033 | -2.637 | 0.010 | -0.050 | 0.008 | -6.568 | 0.000 |
| R-squared | 0.170903 | | | | 0.892198 | | | |
| Adjusted R-squared | 0.142064 | | | | 0.888449 | | | |
| S.E. of regression | 0.588749 | | | | 1.006218 | | | |
| F-statistic | 5.926265 | | | | 237.9437 | | | |
| Prob(F-statistic) | 0.000226 | | | | 0 | | | |

Table 6 shows the regression analyses between the variables. The results show the impact on profitability measured by (ROA and ROE) from the Explanatory economic factors of (GDP, INF, CRR, INR). Model 1 and model 2 show that GDP has affected in ROA and ROE but very week. Similarly the outcomes of model 1 illustrate the INF has a negative impact with ROA and ROE. The coefficients of the

INR variable are positive at the 1% significant level in ROA and ROE, is 24.1% and 67.5%. CRR has a negative impact with ROA and ROE.

Table 6: Regression analysis results, Economy-specific factors

| Variable | Model 1 Dependent variable ROA | | | | Model 2 Dependent variable ROE | | | |
|--------------------|-----------------------------------|--------------|-------------|-------|-----------------------------------|------------|-------------|-------|
| | Coefficient | Std. Error | t-Statistic | Prob. | Coefficient | Std. Error | t-Statistic | Prob. |
| GDP | 0.000 | 0.000 | 2.192 | 0.030 | 1.270E-05 | 0.000 | 2.924 | 0.004 |
| INF | -0.067 | 0.018 | -3.762 | 0.000 | -1.434E-02 | 0.004 | -3.265 | 0.001 |
| INR | 0.241 | 0.050 | 4.813 | 0.000 | 6.755E-02 | 0.012 | 5.498 | 0.000 |
| CRR | -2.612 | 0.968 | -2.697 | 0.008 | -3.911E-01 | 0.238 | -1.645 | 0.103 |
| C | -2.818 | 0.491 | -5.735 | 0.000 | -8.119E-01 | 0.121 | -6.729 | 0.000 |
| R-squared | 0.291665 | | | | 0.541537 | | | |
| Adjusted R-squared | 0.267027 | | | | 0.52559 | | | |
| S.E. of regression | 0.994419 | | | | 1.015349 | | | |
| F-statistic | 11.83815 | | | | 33.95948 | | | |
| Prob(F-statistic) | 0 | | | | 0 | | | |

Conclusion and Discussions

The main goal of this research is to determine the relationship between company success and bank profitability. We all know that if you have a business, you should have a strategy for success and increased profitability, and you should choose the aspects that might affect your firm. In this study, we discuss banks and bank profitability in Iraq, as well as the factors that have an impact on our business. The research's major purpose was also to look at the elements that influence the profitability of the Iraqi banking system. The notion of profitability and its ramifications, as well as the most essential elements influencing it, were explored, and we may conclude that profitability is a goal-setting strategy. Regardless of the many forms, we discover that they all flow into a single idea that measures the bank's efficacy and efficiency. Profitability ratios are also tied to the bank and everybody who has a contact with it.

The outcomes of this study show that a variety of bank specific feature may have an impacted on the banking sectors profitability in Iraq. we draw our conclusion based on the result of fixed effect regression analysis since its more accurate based on the control for cross aspect in panel data and is widely supported and used in literature.

We relied on two important factors of bank performance: ROA, ROE, with a branch of other factors may have affected in bank profitability (Explanatory bank-specific variables and Explanatory economic variables). we have collected and analyzed the data, we found ROA and ROE with bank specific variable, TL/TA has a positive and significant affect with both ROA and ROE is 3.645% and 25.998%.

The regression analysis for this study shows the result of liquidity, has a positive impact on both ROA and ROE but very week, also liquidity has a significant impact with both ROA and ROE, liquidity impact on bank profitability, 2.828% and 8.217%. We found bank size has a positive impact on two measures of profitability but weaker, also bank size has positive and significant impact on profitability in bank. Age has a positive and non-significant impact on ROA can impact on bank profitability, but Age has a negative and significant impact on bank profitability ROE.

And we found ROA and ROE with economic variables; GDP has a positive and significant impact on the measures of profitability ROA and ROE, 2.192% and 2.924%. Interest rate has a positive and significant impact on profitability bank in Iraq, has a good result for our research in INR has a good result and good opportunity impact on ROA and ROE, and is 4.813% and 5.498%. Inflation rate has a negative impact with ROA and ROE and inflation rate has a significant impact with both ROA and ROE. Also Cash reserve rate has a negative and significant impact on measuring of bank profitability ROA, and CRR has a negative and non-significant impact with ROE. As a result, we found Explanatory bank-specific variables have a more profitability and significant impact on measuring profitability of banking Iraq, ROE, according to R-squared (0.85).

Reference

- Abdullah, H. (2021). Profitability and Leverage as Determinants of Dividend Policy: Evidence of Turkish Financial Firms. *Eurasian Journal of Management & Social Sciences* 3(2), 15-30.
- Abdullah, H. A., Awrahman, H. G., & Omer, H. A. (2021). Effect of Working Capital Management on The Financial Performance of Banks: An Empirical Analysis for Banks Listed on the Iraq Stock Exchange. *Qalaai Zanist Scientific Journal*, 6(1), 429-456.
- Abdullah, H., & Aziz, H. (2017). Impact of Just-In-Time manufacturing on profit maximization. *International Business Management*, 11(7), 1462-1468.
- Abdullah, H., & Aziz, H. (2017). Impact of Just-In-Time manufacturing on profit maximization. *International Business Management*, 11(7). 1462 – 1468.
- Abdullah, H., & Fatah, N. (2020). The effect of the COVID-19 pandemic on capital stock gains: evidence of large stock exchanges. In *Third scientific international conference of Al-Mustansiriyah University, Baghdad*.
- Abdullah, H., & Tursoy, T. (2021). Capital structure and firm performance: evidence of Germany under IFRS adoption. *Review of Managerial Science*, 15(2), 379-398.
- Abdullah, H., & Tursoy, T. (2021a). Capital structure and firm performance: a panel causality test. *Munich Personal RePEc Archive*, MPRA Paper No. 105871.
- Adam, M. H. M. (2014). Evaluating the Financial Performance of Banks using financial ratios-A case study of Erbil Bank for Investment and Finance. *European Journal of Accounting Auditing and Finance Research*, 2(6), 162-177.
- Akalpler, E., & Abdullah, H. (2020). The Impact of IFRS Adoption as Control Variable on the Stock Market-Growth Nexus: Model Countries Germany and Poland. *PROCEEDINGS E-BOOK*, 143.
- Alabboodi, A. S. (2019). The effect of customer satisfaction on service quality: The case of Iraqi banks. *International Journal of Applied Research*, 5(1), 146-152.
- Alam, M., Rabbani, M. R., Tausif, M. R., & Abey, J. (2021). Banks' performance and economic growth in India: A panel cointegration analysis. *Economies*, 9(1), 38.
- Alim, W., Ali, A., & Metla, M. R. (2021). The Effect of Liquidity Risk Management on Financial Performance of Commercial Banks in Pakistan. *Journal of Applied Economics and Business*, 9(4), 109-128.
- Anastasiou, D., Louri, H., & Tsionas, M. (2019). Nonperforming loans in the euro area: A re core-periphery banking markets fragmented?. *International Journal of Finance & Economics*, 24(1), 97-112.
- Bhagat, S., & Bolton, B. (2019). Corporate governance and firm performance: The sequel. *Journal of Corporate Finance*, 58, 142-168.

- Budur, T. (2018). Analytic Hierarchy Process to Evaluate Corporate Image, Trust, and Switching Cost of GSM Operators: A Case of Kurdistan Region of Iraq. *International Journal of Social Sciences & Educational Studies*, 5(2), 241-250
- Budur, T. (2020). Impact of Transformational Leadership on Customer Satisfaction: Mediating effects of Employee Performance and Organizational Citizenship Behaviors. (Unpublished doctoral dissertation). International Burch University.
- Budur, T., & Demir, A. (2022). The relationship between transformational leadership and employee performance: Mediating effects of organizational citizenship behaviors. *Iranian Journal of Management Studies*.
- Budur, T., & Poturak, M. (2021a). Transformational leadership and its impact on customer satisfaction. Measuring mediating effects of organisational citizenship behaviours. *Middle East Journal of Management*, 8(1), 67-91.
- Budur, T., & Poturak, M. (2021b). Employee performance and customer loyalty: Mediation effect of customer satisfaction. *Middle East Journal of Management*, 8(5), 453-474.
- Budur, T., Demir, A., & Cura, F. (2021). University Readiness to Online Education during Covid-19 Pandemic. *International Journal of Social Sciences and Educational Studies*, 8(1), 180-200.
- Budur, T., Faraj, K. M., & Karim, L. A. (2019). Benchmarking operations strategies via hybrid model: A case study of café-restaurant sector, 8, 842-854.
- Budur, T., Rashid, C. A., & Poturak, M. (2018). Students perceptions on university selection, decision making process: A case study in Kurdistan Region of Iraq. *International Journal of Social Sciences & Educational Studies*, 5(1), 133-144.
- Chukwu, K. O., & Molokwu, S. R. Effects of Digital Banking on The Performance of Commercial Banks in Nigeria 2010-2019. *International Journal of Multidisciplinary Research and Analysis*, 5(1), 133-148.
- Demir A, Shawkat S, Majeed BN, Budur T. 2019. Fuzzy AHP and VIKOR to select best location for bank investment: case study in Kurdistan Region of Iraq. In *Effective Investments on Capital Markets*, Tarczyn'sk W, Nermend K (eds). Springer: Cham; 485-510.
- Hadžiahmetović, N., Demir, S., & Budur, T. (2022). Leadership Style and Affective Commitment at Family Businesses. *International Journal of Social Sciences & Educational Studies*, 9(1), 318-335.
- Jadah, H. M., Alghanimi, M. H. A., Al-Dahaan, N. S. H., & Al-Husainy, N. H. M. (2020). Internal and external determinants of Iraqi bank profitability. *Banks and Bank Systems*, 15(2), 79-93.
- Jadah, H. M., Hameed, T. M., & Al-Husainy, N. H. M. (2020). The impact of the capital structure on Iraqi banks' performance. *Investment Management & Financial Innovations*, 17(3), 122.
- Katusiime, L. (2021). COVID 19 and Bank Profitability in Low Income Countries: The Case of Uganda. *Journal of Risk and Financial Management*, 14(12), 588.
- Kourtzidis, S., & Tzeremes, N. G. (2019). Investigating the determinants of firm performance: a qualitative comparative analysis of insurance companies. *European Journal of Management and Business Economics*, 29(1), 3-22.
- Kumar, V., Thrikawala, S., & Acharya, S. (2021). Financial inclusion and bank profitability: Evidence from a developed market. *Global Finance Journal*, 100609.
- Lateef, S. H., & Mohammed, A. T. (2021). Liquidity and Banking Performance and their Impact on the Profits of the Banking Sector in the Iraqi Stock Exchange for the Period 2015-2018. *Revista Geintec-Gestao Inovacao E Tecnologias*, 11(4), 4838-4853.

- Mbekomize, C. J., & Mapharing, M. (2017). Analysis of determinants of profitability of commercial banks in Botswana. *International Journal of Academic Research in Accounting, Finance and Management Sciences*, 7(2), 131-144.
- Mohammed, S. S., Suleyman, C., & Taylan, B. (2020). Burnout Determinants and Consequences Among University Lecturers. *Amazonia Investiga*, 9(27), 13-24.
- Nguyen, A. H., Nguyen, H. T., & Pham, H. T. (2020). Applying the CAMEL model to assess performance of commercial banks: Empirical evidence from Vietnam. *Banks and Bank Systems*, 15(2), 177-186.
- Nguyen, V. H., Nguyen, T. T. C., Nguyen, V. T., & Do, D. T. (2021). Internal Factors Affecting Firm Performance: A Case Study in Vietnam. *The Journal of Asian Finance, Economics and Business*, 8(5), 303-314.
- Poturak, M., Mekić, E., Hadžiahmetović, N., & Budur, T. (2020). Effectiveness of Transformational Leadership among Different Cultures. *International Journal of Social Sciences & Educational Studies*, 7(3), 119–129.
- Rashid, C. A., Salih, H. A., & Budur, T. (2020). The Role of Online Teaching Tools on the Perception of the Students during the Lockdown of Covid-19. *International Journal of Social Sciences & Educational Studies*, 7(3), 178–190.
- Rasul, R., Isiksal, A., & Abdullah, H. (2022). Dividend policy and firm value: evidence of financial firms from Borsa Istanbul under the IFRS adoption. *Spanish Journal of Finance and Accounting*. Accepted for publication.
- Regehr, K., & Sengupta, R. (2016). Has the relationship between bank size and profitability changed. *Economic Review*, 1612387(101), 2.
- Siepel, J., & Dejardin, M. (2020). How do we measure firm performance? A review of issues facing entrepreneurship researchers. *Handbook of Quantitative Research Methods in Entrepreneurship*, Edward Elgar Publishing.
- Tariq, W., Usman, M., Mir, H. Z., Aman, I., & Ali, I. (2014). Determinants of commercial banks profitability: Empirical evidence from Pakistan. *International Journal of Accounting and Financial Reporting*, 4(2), 1-22.
- Torlak, N. G., Demir, A., & Budur, T. (2019). Impact of operations management strategies on customer satisfaction and behavioral intentions at café-restaurants. *International Journal of Productivity and Performance Management*. Vol. 69 No. 9, pp. 1903-1924.
- Westhead, P., & Howorth, C. (2006). Ownership and management issues associated with family firm performance and company objectives. *Family Business Review*, 19(4), 301-316.
- Yüksel, S., Mukhtarov, S., Mammadov, E., & Özsarı, M. (2018). Determinants of profitability in the banking sector: an analysis of post-soviet countries. *Economies*, 6(3), 41.
- Zhang, C., & Dong, L. (2011). Determinants of bank profitability: evidence from the US banking sector.

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