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Determinants of Lending Behavior: Empirical Evidence from Iraqi Private Banks

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Abstract

This explanation investigates the determinants of lending behavior of 18 commercial banks listed in the Iraq Stock Exchange between a period of 2014-2023. The research's goal is to identify the most important things that affect how banks perform, the choices of banks to lend loans and examining how different factors affect the way banks give out loans in an economy that's affected by war, violence or political conflict. The researchers are using statistical methods or way to measure the relationship between two variables and simple regression techniques to look into the relationship between lending behavior (measured in loans and advances) and three key determinants carefully and in detail. The three ley determinants are: liquidity ratio, bank size and deposit ratio. The detailed examination is based on well-known and trusted theories that are already accepted, including credit market theory, loan pricing theory and money creation theory. The findings reveal that while all independent variables result in research that are reliable and not random variation using statistical tests with the relationships with lending behavior, the connection is relatively weak with the model explaining only 3% of difference in lending pattern. Reverse to theoretical expectations, liquidity ratio shows a bad connection with loans and advances, while deposits ratio shows positive a linkage with loan activity. The study says that classical determinants of loan activity may not fully explain Iraqi banking industry behavior, mainly because of the unstable of the political situation and economy. The research delivers key insights into banking behavior in emerging economies under external pressure and suggests that unique regional problems require more detailed approaches to banking analysis and regulation.

Keywords: Lending Behavior, commercial banks, Iraq Stock Exchange, banking behavior.
JEL Classification: G21

1. Introduction and Research Methodology

1.1 Introduction

Many other variables affect the ability and rising of the commercial banks to lend its money to its clients. Many previous studies in developed as well as developing countries seen evidences about the factors that influence on the lending behavior which regarded as determinants of the lending behavior.

Bank loans are financial instruments that enable individuals, businesses, and organizations to access capital for diverse needs including personal expenses, real estate purchases, business expansion, and educational funding. Loans fall into two primary categories: secured loans, which require collateral such as property or other valuable assets to guarantee repayment, and unsecured loans, which are granted based purely on the borrower's financial credibility and credit profile. Financial institutions generate revenue through interest charges applied to the principal amount, with borrowers typically repaying through structured monthly installments over a predetermined timeframe. The specific terms of each loan—including interest rates, repayment schedules, and approval requirements—are determined by multiple factors such as the applicant's credit score, debt-to-income ratio, employment stability, and the loan's intended purpose. This risk-based pricing model allows banks to offer competitive rates to qualified borrowers while managing their exposure to potential defaults.

Lending is the main function of commercial banks- evidenced by the volume of loans that constitute banks assets. Therefore, loan portfolio is very important for banks. the loan in banking system is the biggest asset and the primary source of bank's income. (Malede, 2014) Many factors are influencing the lending amount and guarantee setting in the process of loan decision in the banks, banks have to be careful with their loan pricing decisions. Due to fact that if banks charge too low loan rates the earnings from the interest income will not cover the costs of deposits, general expenses besides the loss of earnings from some borrower specially when they cannot repay it (default risk). In contrast, if the banks charges too high loan rates can lead to create a hidden risk problem situation and also can create a moral risk problems for the borrowers.

Based on the analysis of recent banking and lending studies, several critical research gaps have been identified that limit our understanding of modern banking practices and their economic implications.

First, most existing studies focus on short time periods and specific regions, with heavy bias toward developed economies, leaving emerging markets and long-term structural changes underexplored. **Second**, there is insufficient research on how fintech disruption and digital transformation affect traditional banking loan portfolios, risk management practices, and spatial lending patterns especially in low-income countries. **Third**, while studies like Chen & Lee (2020) identified liquidity spillovers, comprehensive systemic risk modeling that incorporates different bank ownership structures (public, private, foreign) and their interconnectedness remains limited. **Fourth**, the mechanisms through which investor sentiment translates into specific lending decisions are poorly understood, despite Agoraki et al. (2022) introducing sentiment analysis to banking research. **Fifth**, there is a lack of standardized methodologies for measuring management effectiveness across different types of financial institutions, limiting comparative analysis between traditional banks, fintech lenders, and other financial entities. **Sixth**, policy effectiveness evaluation across different government intervention strategies and economic contexts remains insufficient, with limited cross-jurisdictional comparative studies on regulatory frameworks. **Finally**, the integration of alternative data sources (social media, satellite data, high-frequency transaction data) and real-time analysis capabilities in banking research is severely underdeveloped, hindering our ability to understand rapid changes in lending behavior and market dynamics. For Iraq case, it is quite new for this kind of topics, even though that the Iraqi central bank and finance ministry are trying to impose it through various ways.

1.2. Problem Statement

There other variables affect the ability and welling's of the commercial banks to lend its money to its clients. Many previous studies in developed as well as developing countries seen evidence about the factors that influence on the lending behavior which regarded as determinants of the lending behavior whether on micro or macro level of analysis.

The lending behavior of deposit money banks is influenced largely by certain factors which are both exogenous and endogenous to their operations. Some of these influencing factors on lending behavior of these banks are, therefore, established by their directors while others arise from the regulatory actions of apex banks, deposit insurance institutions, and other regulatory authorities in the financial sector of the economy.

The implication is that some of the factors or determinants of lending by deposit money banks are subject to the whims and caprices of their directors. And since the other determinants that influence lending by these banks are exogenous, they are not subject to their control and manipulation because they are normally formulated and imposed by regulatory authorities for implementation in any given economy

According to (Richard & Okoye, 2014) there are certain factors influencing lending decisions by deposit money banks are discretionary and subject to management preferences. Bank directors and executives have considerable autonomy in determining these internal lending criteria. However, other determinants that affect bank lending are external factors beyond the banks' direct control. These exogenous variables are typically established and mandated by regulatory bodies such as central banks and financial authorities, which implement standardized policies across the banking sector within any economy.

The availability of external funding, particularly access to long-term credit and costs of credit, influences firms' investment levels in an economy. Cash flow problems, limited access to credit, and high costs of credit constrain firms' ability to fund all desired or required investment projects. Market imperfections such as underdeveloped financial and legal systems, and improper macroeconomic environments constrain firms' ability to fund investment projects.

Many studies evident that banks working in emerging economies do not have enough capability to provide long-term financial needs to private financial institutions that is required for investments' augmentation. In other words, financial barriers of local banks in emerging markets lead to low levels of investment and constrain lending to borrowers (Tomak, 2013).

- Thus, this research attempts to investigate a very important question of "What are the determinants of lending behavior in selected banks listed on the Iraq stock exchange?

1.3. Objectives of the Study

The objectives of the study include.

- To identify the determinants of lending behavior of selected banks listed on the Iraq stock exchange.
- To examine which of these determinants has more influence on lending behavior.

1.4. Research Questions

The most important job of the banks is attracting more clients and lends more money as its basic

financial services. Thus, the basic questions this research attempts to answer include:

- What are the determinants of the lending behavior of selected banks listed on the Iraq stock exchange?
- Which of the determinants has more influence on the lending behavior in selected banks?

1.5. Research Hypothesis

After the variables and their measurements had been selected, the current study followed the previous studies (literature review) in driving its hypothesis that illustrates all the independent variables have a positive effect on lending behavior, and at the same time, the influence is significant.

Therefore, the study hypothesis is written as follows:

H1: Volume of Deposits has a positive and significant impact on banks' loans and advances.
H2: Bank Size has a positive and significant impact on banks' loans and advances.
H3: Liquidity Ratio has a positive and significant impact on banks' loans and advances.

1.6. Significance of the Study

This study is relevant due to Iraq's past experience with deregulated banking and the current global economic downturn, which has highlighted the persistent issue of liquidity within Iraqi banks. Furthermore, the changing financial landscape in advanced nations, particularly with new lending practices and innovative financial technologies, necessitates a reassessment of traditional liquidity tests. In addition, the most basic function of the banking sector is still giving debts to its clients, thus its ability to lend to others is determined by many variables such as its liquidity assets, types of deposits, and other non-systematic factors. In summary, the following are reasons of why this study is important:

1. Implementing the central bank of Iraq's regulations and guidance for controlling the level of the capacity of lending money.
2. One of the very few research articles that focused on related variables in Iraqi financial system.
3. Commercial banks can benefit from the results and recommendation of the research to build new plans or revise old strategies regarding loans and advances to regenerate more income and control its liquidity.

1.7. Limitation of the study

Time constraints were one of the limitations encountered in the case of the study. This is because; this study data collection was for the period of 2014-2023 and the researchers did not have enough time to properly concentrate on this particular study.

Finance was yet another problem that put a check on the extent of the investigation. Finally, there was the problem of inadequate information and unavailable information for the study, especially in Iraq there is a lack of publicly available financial and non-financial information for companies whether they are small, medium, or large companies.

1.8. Contribution of the study

This study contributes to the body of knowledge through various aspects as follows:

1. Explain the reality of Iraqi commercial bank's lending behavior.
2. Add more adequate information and analysis about the relationship between the related variables in Iraqi context to the existing literature.
3. This study add a relative contribution due to the period of the study and number and size of the selected banks.

1.9. Scope of the Study

Due to time and resources constraints the study at hand has been limited to commercial banks listed on Iraq stock exchange data. The data used in this study were quarterly (four quarter in each year) between 2014 and 2023.

1.9. Theories related to lending behavior.

The following theories are the most famous and most linked to the lending behavior and credit management in banks.

1.9.1 Credit market theory

The neoclassical credit market model assumes that credit markets operate efficiently through price mechanisms that balance supply and demand. In this model, when collateral requirements and loan covenants remain unchanged, interest rates serve as the primary pricing tool that clears the market. As demand for credit increases while the supply of available funds stays constant, interest rates rise to restore equilibrium, and conversely, rates fall when credit demand decreases. According to this framework, lenders charge higher interest premiums to borrowers who present greater default risk, with the interest rate directly reflecting the probability of loan failure. This theory have removed the unclear phrase "storms of credits clear the market", combined fragmented sentences into a coherent flow, clarified "customer supply" as "supply of available funds", explained "interest premium" in relation to default risk, used more direct language while maintaining academic tone, and structured as one cohesive paragraph as requested (Ewert et al, 2000).

1.9.2. Theory of Multiple-Lending

This theory suggests that banks are less likely to participate in loan syndication when equity markets are well-developed and after banking consolidation occurs. Both external equity financing and mergers and acquisitions enhance banks' individual lending capacity, which reduces their reliance on loan sharing for risk diversification and monitoring purposes. This theoretical framework has relevant implications for commercial banks in Nigeria, particularly following the banking sector consolidation that took place in 2005 (Ongene & Smith, 2000).

1.10. Determinants of commercial bank lending behavior

Effective management of these funding sources requires continuous monitoring of market conditions, regulatory changes, and economic indicators that could impact their availability and cost. Banks must maintain adequate liquidity ratios while optimizing the balance between risk and profitability in their lending portfolios. Furthermore, diversification of funding sources and the development of alternative revenue streams can help banks maintain financial stability even during periods of economic uncertainty or reduced lending activity. (Getahun, 2014).

Djiogap and Ngomsi (2012) undertook an investigation into the determinants of long-term loans in banking institutions. Covering the period from 2001 to 2010, their study involved a sample of 35 commercial banks from six African countries. The findings indicated that a bank's ability to provide prolonged business loans is shaped by factors such as its size, capitalization, GDP growth, and the availability of long-term liabilities.

1.11. Data Collection Techniques and Data Analysis

Data used in this study were collected from annual reported of selected 18 commerical banks from 2014 to 2023. Thus, Quantitative analysis techniques were adopted for the study which consists of

time series analysis, and Pearson correlation matrix and simple regression analysis.

The ratios and absolute data used as the determinants of lending behavior were the following:

1. Liquidity ratio (current assets on current liabilities)
2. Bank size (used total assets as proxy)
3. Deposits ratio (total deposits on total assets)

While the loans and advances absolute number was used as the lending behavior proxy.

2. LITERATURE REVIEW

When banks choosing its loan/security portfolio, they take into account not only current loan demand but also the influence of current loans extended on future loan demand" (Wood, 1974).

In their 2020 study, Chen and Lee identified evidence of liquidity spillovers characterized by spatial dependence that varied according to geographical as well as the economic proximity among banks. The findings underscored the significance of liquidity management and presented evidence of risk co-movement, suggesting a need for regulators to adopt a fresh perspective on liquidity regulation. (Chen & Lee, 2020)

Investigation of the bank-specific factors influencing nonperforming loans in Ukraine was done by (Vyshnevskyi & Sohn, 2023). Through an analysis of sample comprising 207 banks spanning the years 2008 to 2020, it is observed that the occurrence of nonperforming loans in banks is positively associated with related lending. This suggests that related lending negatively impacts the stability of bank loans. Additionally, a positive shock to nonperforming loans leads to a significant upswing in related lending. These findings underscore the importance of closely monitoring banks' lending activities to correlated parties to check overboard risk-taking behavior by banks.

In their research (C. Liu & Varotto, 2021), they found that, in comparison to big banks, small banks demonstrated less pro-cyclical lending behavior. They exhibited evident a lending growth stability throughout periods of both credit expansion and contraction. Specifically in peripheral countries, the portfolio rebalancing of small banks toward higher public debt did not result in a reduction of their lending to the private sector. Rather than, the level of public debt seemed to serve as a liquidity barrier, positively influencing the loan growth of these banks.

Furthermore, the study provides both direct and indirect evidence indicating that these factors were more notable among State-Owned Enterprises facing higher risks of privatization (e.g., companies experiencing larger increases in tradable shares, and possessing smaller workforces). The findings suggest that banks had previously shown a preference for State-Owned Enterprises due to the perceived safety of loans under inferred government guarantees. The reform resulted in the elimination of this privilege, banks responded by allocating credits more equitably. This research contributes novel evidence on the positive outcomes of share structure reforms in alleviating credit misallocation and offers insights for policymakers seeking practical solutions to address financing inefficiencies in emerging capital markets.

In (Eichholtz et al., 2023) study, a comparison between banks with non-bank lending institutions was made to determine if the physical distance between the lender, borrower, and the collateral property influences the pricing of mortgages included in US commercial mortgage-backed securities (CMBS) from 2000 to 2017. they found that for banks, an increase in distance from the borrower—from zero to the median distance of approximately 700 miles—results in a loan spread increase of 10 basis points, especially when the collateral property is deemed riskier. In contrast, the geographical distance

does not affect the loan spread for mortgages issued by non-bank loan providers. The observed variation in loan pricing between these two types of lenders, even after accounting for essential mortgage and property features, confirms that banks and non-bank lenders operate under different motivations, utilize distinct lending technologies, or serve diverse borrower profiles.

The (Çolak & Şenol, 2021) research highlights that public bank have a lower tendency to match their lending patterns with economic cycles, unlike private and foreign-owned banks. Public banks are inclined to even out the fluctuations in credit availability throughout economic highs and lows. Their role in providing stability is especially evident during economic downturns and financial crises, where they maintain or increase credit flow more than their private and foreign counterparts. During worldwide financial crises, foreign banks' lending behaviors are similar to those of domestic private banks. However, they cut back on lending more than domestic private and public banks during local financial crises. The research indicates that although domestic private and foreign banks' lending is in sync with the economic cycle, public banks contribute to economic stability by continuing to lend during financial hardships or when the economy is at risk of becoming overheated.

An analysis of up to 521 banks from 21 European countries reveals that liquidity levels determine how bank capital affects credit growth. The findings shows that the effect of an increase in bank capital is positively associated with the level of bank liquidity, suggesting that capital exerts a significantly positive effect on European banks' credit growth after they retain sufficient liquid funds. (Thornton & Tommaso, 2020). Research by (Li et al., 2022) demonstrates that in strong housing markets, the increased demand for housing loans can crowd out business loans, thereby limiting business investment. The empirical results suggest that more able-managed banks produce higher amounts of loans. The result is held regardless of the size of the banks and period. Results are robust to different econometric specifications and alternative classifications of managerial ability. (Vo et al., 2021)

Sobarsyah and colleagues (2020) examined how loan growth and capitalization affect credit risk in Islamic banking by analyzing Islamic banks across 29 countries. Their findings showed that when Islamic banks experience rapid loan growth, they face increased credit risk in the following year. Interestingly, this risk was even more pronounced for Islamic banks that had stronger capital positions. The study concluded that simply having higher capital requirements isn't sufficient to guarantee that Islamic banks will maintain careful and responsible lending practices.

The (Caglayan et al., 2021) paper investigates lender behavior on Renrendai.com, China's premier P2P crowdlending platform, employing a dataset of approximately five million investor-loan-hour observations and high-dimensional fixed effect methodology. Herding behavior varies based on both how experienced investors are and how long their investment sessions run on the platform.

The (Luong et al., 2020) study examines the impact of Australia's Wholesale Funding Guarantee Scheme (WGS) on the funding costs and loan growth of authorized deposit-taking institutions (ADIs). Employing a difference-in-differences approach and exploiting the voluntary adoption of the WGS by ADIs, they find robust evidence that the government guarantee significantly Lower cost of capital, particularly for larger ADIs.

The role of investor sentiment in shaping bank credit and financial stability has been investigated by (Agoraki et al., 2022). The study also delves into the relationship between loan expansion and bank stability. Utilizing a comprehensive dataset of U.S. commercial banks from the first quarter of 1999 to the fourth quarter of 2015, the research employs bank-specific data. To gauge investor sentiment, two innovative and distinct text-based metrics are utilized.

Until now, the researchers did not find any related study published on Iraqi lending behavior with the same variables and in the same flow of writing.

3. DATA ANALYSIS

3.1. Summary of Independent Variables and Dependent Variable

Before analyzing the data, all variable measurement has been collected from quarter reports from the official websites of the selected banks, and the Iraqi stock market official website, then all related data has been inserted into EXCEL sheet, then the normality test has been conducted to all measurements, which showed a normal distribution as shown in the appendix (1-4). This study follows Getahun (2014) in using the measurements of both variables (independent and dependent) as shown in Table no (1). which shows that the loan and advance reflect the lending behavior variable, while other independent factors are used as reflections of the determinants of the lending behavior.

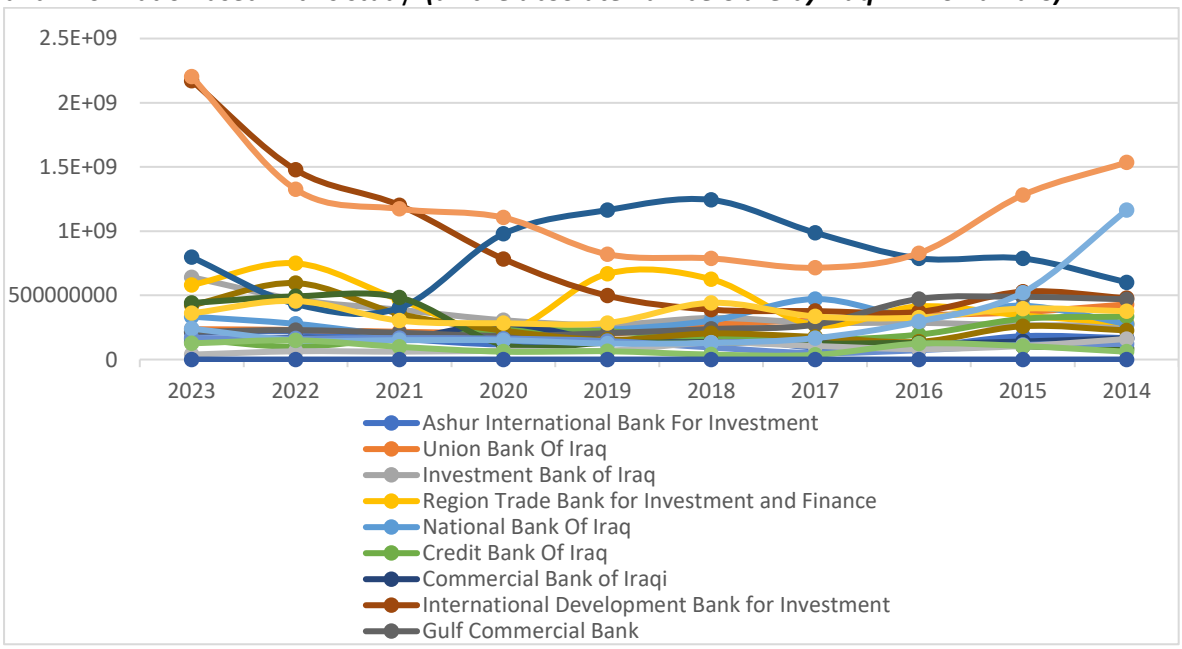
Table (1) Summary of Explanatory Variables and Dependent Variable

Dependent variable	Variables Proxies and Definition
Loan and advances	Log of loan and advance
Independent variables	
Volume of Deposits	Total deposit **/** Total Asset
Liquidity Ratio	Liquid asset/ Current liabilities

Source: Getahun, A. (2014). Determinants of Lending Behavior of Banks: A Case Study on Commercial Banks of Iraq.

3.2. Data Description

Before analyzing the data used in this study, it is better to describe these data and understand its trends and movements throughout the period of this study, thus below is the description of the data and information used in this study. ***(all the absolute numbers are by Iraqi million dinars)***

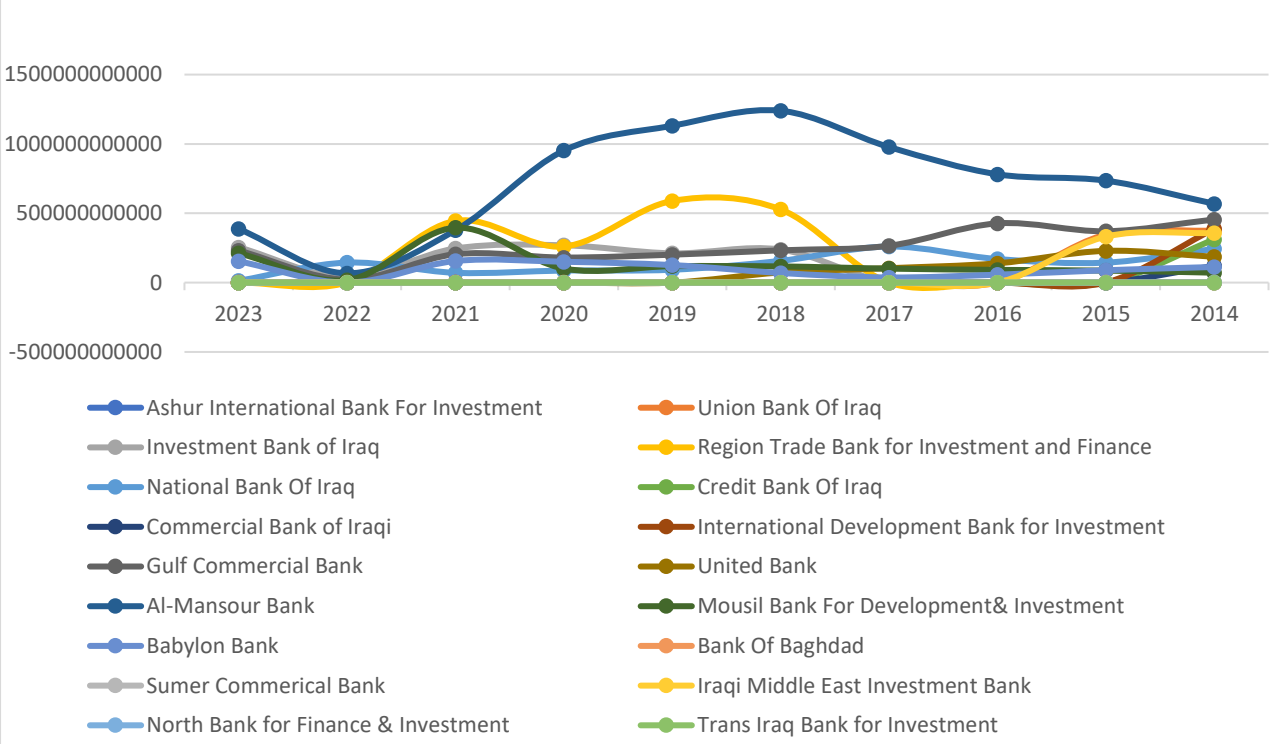


Source: prepared by the researchers based on the annual reports from selected Banks for the period 2014-2023

Figure 1. Current Liabilities of Selected Banks for the period 2014-2023

Figure no (1) shows that the current assets in the first quarter 2013 is much higher than the current liabilities, also in all quarters in year 2014 which means that the liquidity is better than the other quarters. It shows the dramatic impact of the 2014 ISIS crisis on Iraqi banking sector lending behaviour, showing a sharp decline in loans and advances across most banks from 2014-2015. Union Bank of Iraq and International Development Bank experienced the most severe drops, falling from peak lending levels of approximately 2.2 billion and 1.5 billion Iraqi dinars respectively in 2014 to significantly lower levels by 2017. This pattern reflects the broader economic and security challenges that forced banks to adopt conservative lending strategies during the crisis period.

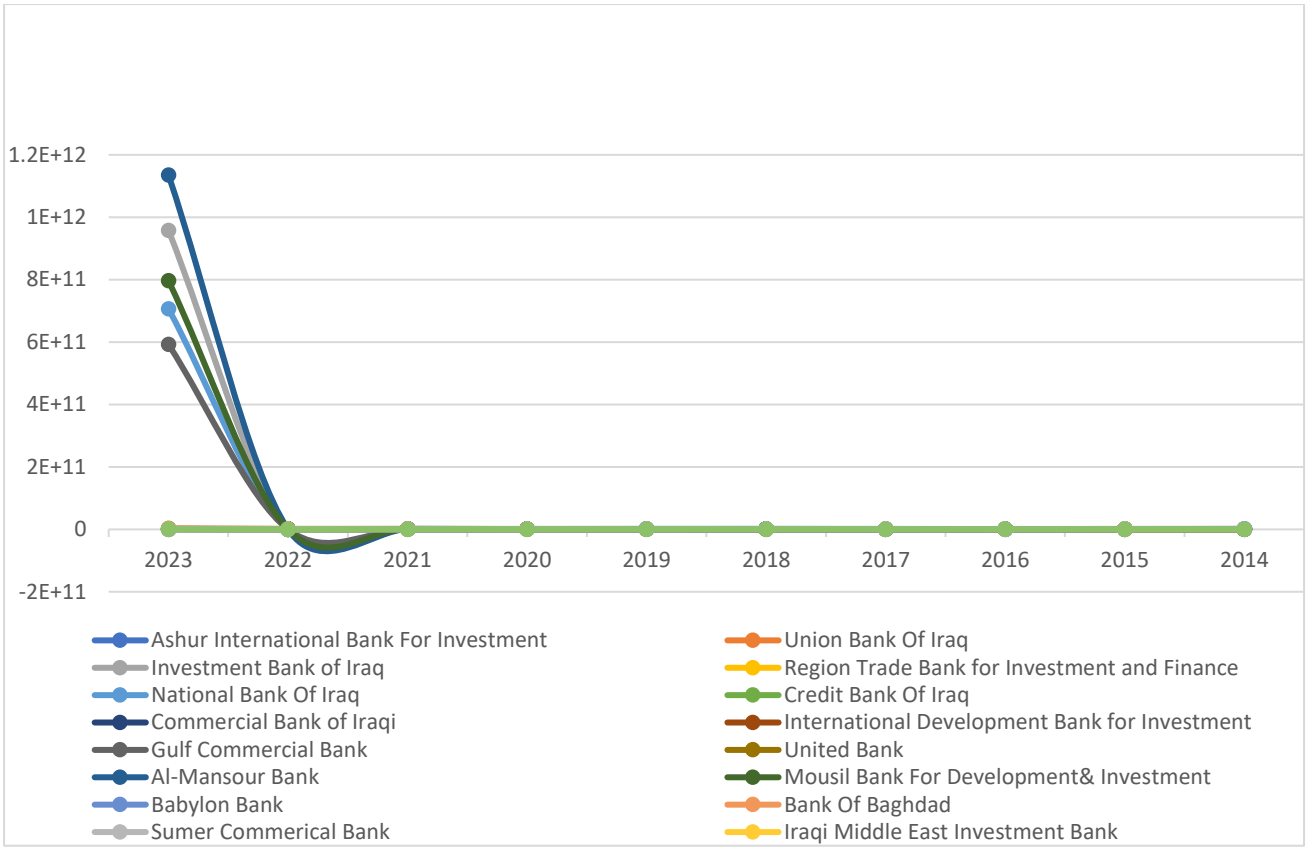
The recovery phase from 2018-2023 shows divergent paths among banks, with some institutions like Union Bank of Iraq achieving substantial recovery to pre-crisis levels, while others maintained more modest, stable lending volumes. Commercial Bank of Iraqi demonstrated relative stability throughout the entire period, maintaining lending levels between 500 million to 1 billion dinars. This variation in recovery patterns supports the research findings that individual bank characteristics and risk management strategies significantly influence lending behavior beyond traditional determinants, particularly in conflict-affected economies.



Source: prepared by the researchers based on the annual reports from **selected Banks** for the period 2014-2023

Figure 2. Total Deposits of Selected Banks for the period 2014-2023

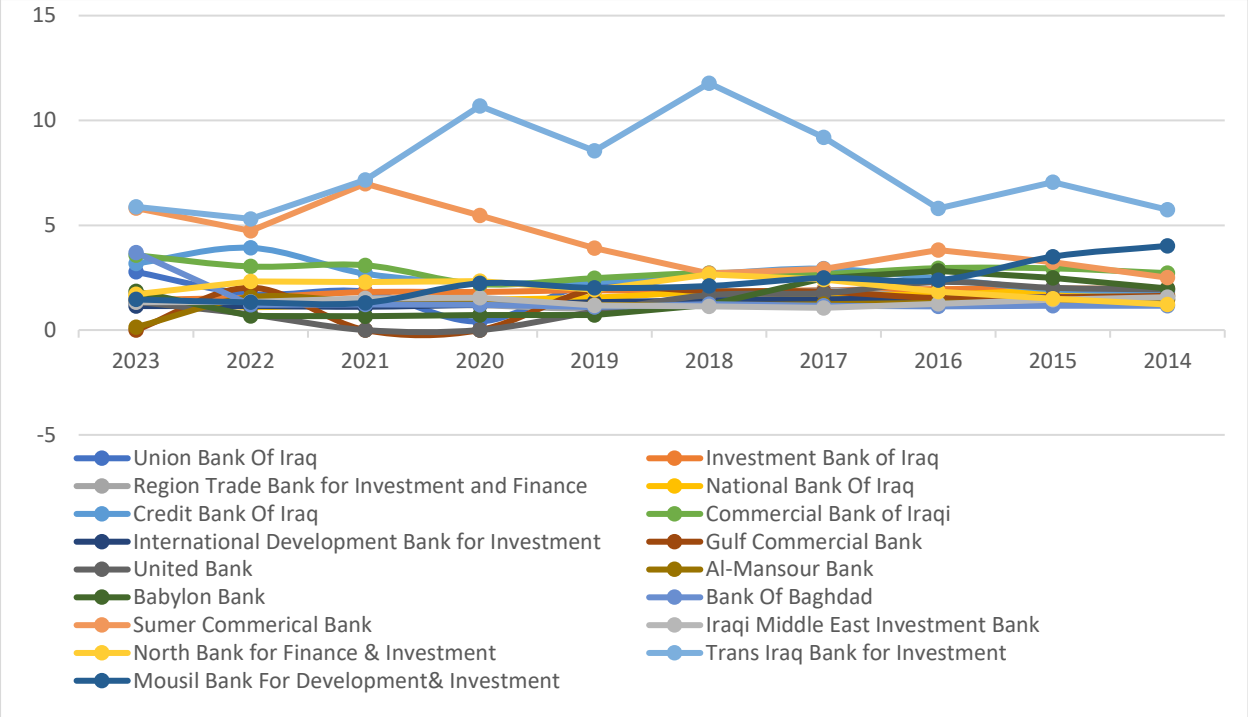
This figure no (2) illustrates the financial performance of various Iraqi banks from 2014 to 2023. Each bank is depicted with a unique colored line, as identified in the legend. Notably, Ashur International Bank for Investment shows a striking upward trend, peaking dramatically around 2020. In contrast, other banks such as United Bank and Mousil Bank exhibit relatively low or declining performance throughout the period. Some banks, like the National Bank of Iraq and Credit Bank of Iraq, display more stable financial trends. The Region Trade Bank and International Development Bank also demonstrate notable gains, though not as steep as Ashur's. Overall, the figure captures the diverse trajectories of financial health among Iraqi banks. This type of visual analysis is useful for investors, analysts, and policymakers interested in Iraq's banking sector.



Source: prepared by the researchers based on the annual reports from selected Banks for the period 2014-2023

Figure 3. Total Assets of Selected Banks for the period 2014-2023

This figure shows the total assets of Iraqi banks from 2014-2023, revealing significant variations in bank sizes and growth patterns. Commercial Bank of Iraqi and Investment Bank of Iraq maintained the highest asset levels, consistently holding between 8-12 billion Iraqi dinars throughout the period. Ashur International Bank and National Bank of Iraq showed relatively stable asset positions in the 6-8 billion range. United Bank displayed the most dramatic pattern, experiencing substantial growth from near-zero assets in 2014 to peak levels around 12 billion in 2017-2018, followed by a sharp decline back to minimal levels by 2023. Several smaller banks including Credit Bank of Iraq and Region Trade Bank maintained modest asset bases below 5 billion dinars. The post-2018 period shows a general declining trend across most banks, with total assets decreasing significantly. Gulf Commercial Bank and Al-Mansour Bank demonstrated moderate asset levels with gradual changes over time. This asset volatility reflects the challenging operating environment and varying business strategies adopted by different institutions. The overall pattern suggests consolidation and restructuring within the Iraqi banking sector during the study period.

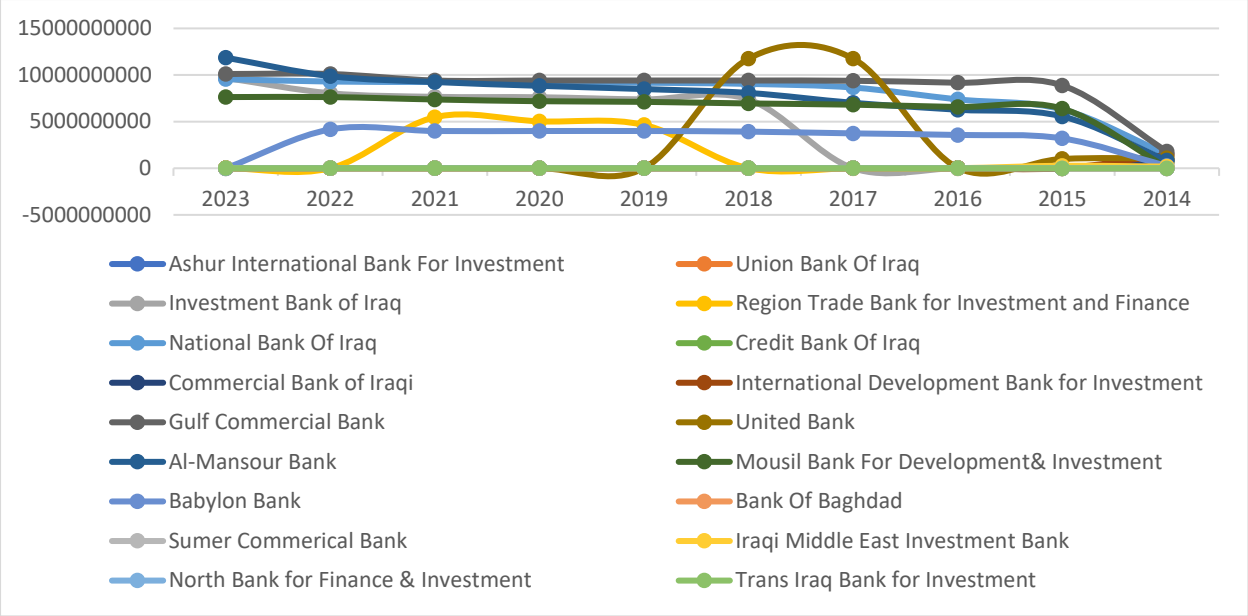


Source: prepared by the researchers based on the annual reports from selected Banks for the period 2014-2023

Figure 4. Liquidity Ratio of Selected Banks for the period 2014-2023

Figure no (4) displays the liquidity ratios of Iraqi banks from 2014-2023, showing significant volatility particularly for Union Bank of Iraq (blue line) which experienced extreme fluctuations ranging from approximately 6 to 12. The bank's liquidity ratio peaked around 2018 at nearly 12, then declined sharply to about 6 by 2016-2017, before recovering to moderate levels. Investment Bank of Iraq (orange line) also showed considerable variation, with ratios fluctuating between 2-7 throughout the period, demonstrating the challenging liquidity management environment following the 2014 crisis.

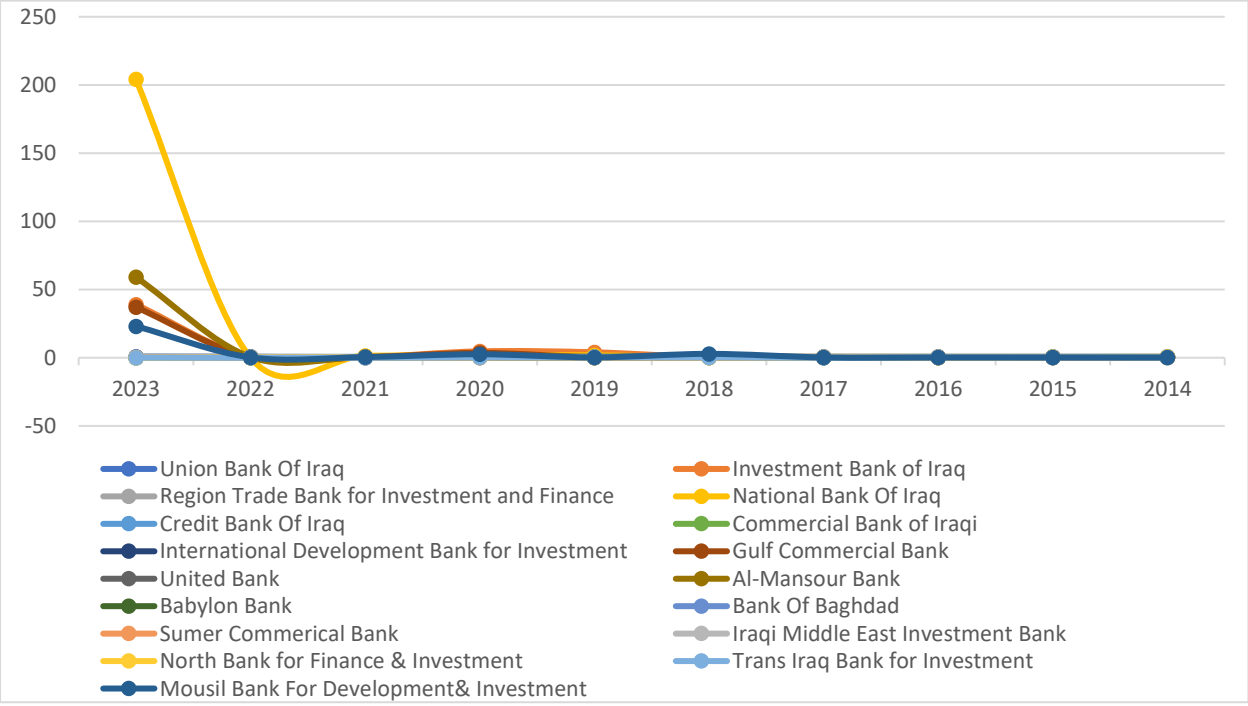
Most other banks maintained relatively stable liquidity ratios between 1-4 throughout the study period, suggesting more conservative liquidity management strategies. This pattern aligns with the research findings that liquidity ratio showed a negative correlation with lending behavior, as banks with higher liquidity ratios may have been holding excess liquid assets rather than extending loans. The extreme volatility in some banks' liquidity ratios reflects the unstable operating environment and varying risk management approaches adopted by different institutions during the post-crisis recovery period.



Source: prepared by the researchers based on the annual reports from selected Banks for the period 2014-2023

Figure 5. Cash Reserve Required of Selected Banks for the period 2014-2023

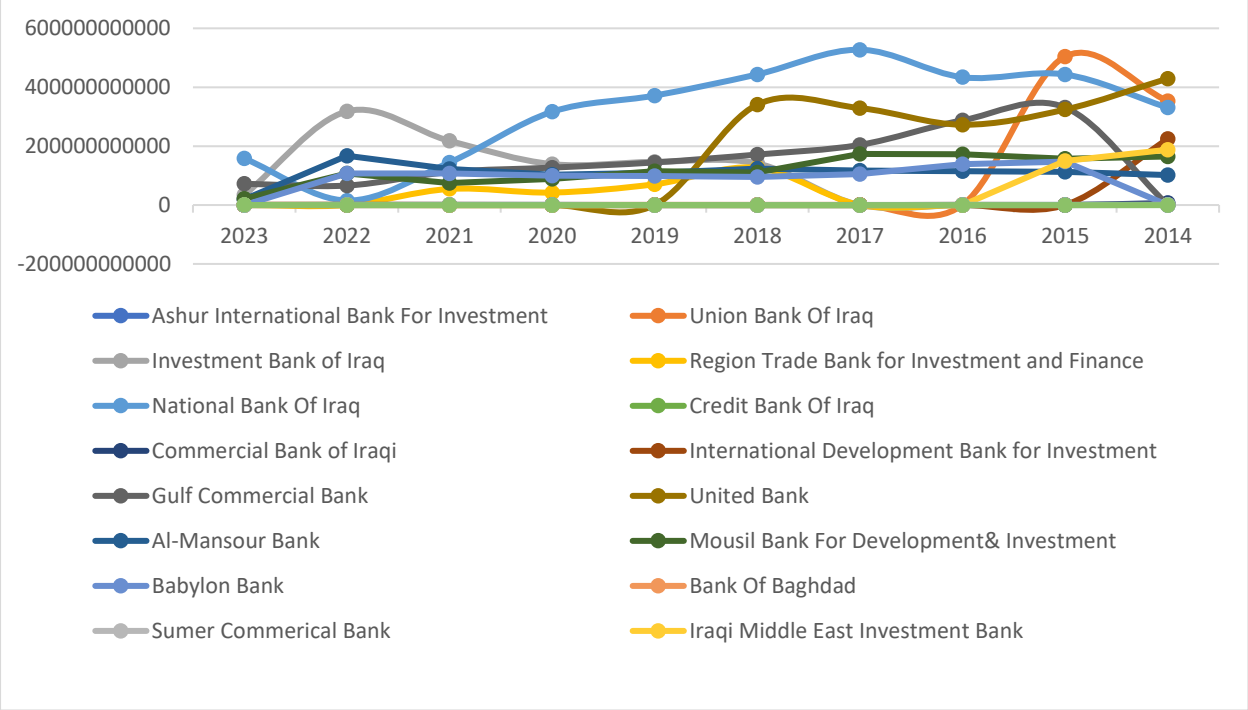
This figure presents the financial trends of several Iraqi banks over a ten-year span from 2014 to 2023. A striking spike occurs in 2023 for all listed banks, suggesting a major financial event or intervention during that year. In contrast, the period from 2021 back to 2014 shows relatively flat or near-zero financial data. Each bank is represented by a different color, such as blue for Ashur International Bank and green for the Commercial Bank of Iraq. Despite the sudden rise in 2023, there is a visible drop in 2022, creating a sharp V-shaped pattern. This anomaly suggests a temporary financial surge or accounting adjustment. Notably, no individual bank dominates the chart before 2023, indicating consistent performance trends across the sector. Such patterns may reflect broader economic or regulatory shifts rather than individual bank strategies. The graph highlights the need for deeper analysis to interpret the causes behind this unusual financial behavior.



Source: prepared by the researchers based on the annual reports from selected Banks for the period 2014-2023

Figure 6. Deposits Ratio of Selected Banks for the period 2014-2023

This figure illustrates the performance trends of seven Iraqi banks from 2014 to 2023. Most banks—including Union Bank of Iraq, Investment Bank of Iraq, and Region Trade Bank—exhibit relatively stable values near zero throughout the decade. However, the standout feature is the National Bank of Iraq, which shows a dramatic spike to 200 in 2023 after a consistent baseline performance. This surge suggests a significant one-time financial gain or strategic breakthrough during that year. Interestingly, the sharp rise is not sustained, with the metric returning to zero by the following year. The other six banks demonstrate minimal fluctuation, indicating steady or stagnant performance without substantial improvement or decline. The absence of a chart title or labeled metric leaves the exact nature of the trend open to interpretation—possibly net profits, equity growth, or investment returns. Despite that, the contrast in trajectories is clear: one bank soared while others plateaued. This graph could prompt further investigation into what triggered the sudden spike for the National Bank of Iraq and whether it reflects a broader industry trend or an isolated success



Source: prepared by the researchers based on the annual reports from **selected Banks** for the period 2014-2023

Figure 7.Total Loans & Advances of Selected Banks for the period 2014-2023

This figure illustrates that most banks showing decrease in the loans and advances, while only Sumer commercial bank showing an relatively increase in the loans and advances from year 2020 until 2022, then as all the banks face decline to its loans and advances, which could indicate an overall problem that is facing the banking sector in Iraq.

Table 2. Correlations Matrix between the Variables

		Loans Advances	Liquidity	Deposit Ratio
Loans Advances	Pearson Correlation	1	-.152*	.060
	Sig. (2-tailed)		.045	.432
	N	173	173	173
Liquidity	Pearson Correlation	-.152*	1	-.147
	Sig. (2-tailed)	.045		.052
	N	173	176	176
DepositRatio	Pearson Correlation	.060	-.147	1
	Sig. (2-tailed)	.432	.052	
	N	173	176	180

*. Correlation is significant at the 0.05 level (2-tailed).

Source: Organized by the researchers as results from SPSS

Table no (2) presents correlations between study variables, the test results show that the correlation is not significant and not very powerful for the variables, thus even if we use the next test which is the multiple regression analysis to understand the effect of the independent's variables on the dependent variables, it may not have any meaningful information.

3.3. Results of the Correlations Matrix between the Variables

To test the study's hypothesis, this study has to test the relationship between the variables used in this study. The dependent variables used in this study are loan and advances as an absolute number. While, the independent variables used in this study are:

1. Loans and Advances (Absolute number)
2. Liquidity Ratio
3. Deposits Ratio

Correlation analysis is used when the researchers pursue to describe the direction, significance, and strength of the linkage between the variables used in the study (Sekaran, 2003). Thus, to test the hypotheses, correlation analysis is used to test the degree of the relationship between the variables. This study followed the explanations of Cohen's (1988) for such a correlation between the 0 and 1.0 criterion. Cohen (1988) illustrated that the relationship is considered strong when (r) is above ±0.50. While, the association is regarded as medium when (r) is in the range ±0.30 and ±0.49, and the relationship is described as small when (r) is between ±0.10 and ±0.29.

Table 3. Descriptive Statistics

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
Tassets	180	483117.00	1135360000000.00	23929523935.4000	141591981270.24365
LAdvances	173	178616.00	527296835380.00	71399901871.0751	118234207772.33757
Liq	180	0.65	9.34	2.1573	1.20884
DeptRatio	180	0.00	204.21	2.4861	16.30919
Valid N (listwise)	173				

Source: Organized by the researchers as results from SPSS

The above table shows that there is difference between the variables in terms of data collected (observations) because the banks did not provide sufficient raw data in their annual reports.

3.4. Results of the Simple Regression Analysis

To test the study's hypothesis, this study has to test the influence effect between the variables used in this study (independent variables and the dependent variables).
Regression analysis is used normally to test the hypotheses and look into the association between the variables (Hair, Black, Babin, Anderson & Tatham, 2006).

Table 4. The Influence of the Independent Variables on Loans and Advances

Sig	F Test	R^2	0β		Loans and Advances		Dependent Variable Independent Variables
0.393	**1.003**	**1.7%**	**Sig**	**T.**	**Sig**	**T. Test**	**Bank Size**
			0.001	**Test**	0.383	- 0.875	
				5.016	**Sig**	**T. Test**	**Liquidity**
					0.185	- 1.331	
					Sig	**T. Test**	**Deposit Ratio**
					0.011	0.991	
					p≤ 0.05 (*)		N=180

Source: organized by the researchers as results from SPSS

3.5 Analyzing the Influence of Independent Variables on Loans and Advances

Table no (4) shows the influence degree of the independent variables. This illustrates that all the independent variables of the study have positive and significant effects on the Loans and Advances because the significance of the study (0.000) is less than 0.05, while the R^2 Adjusted assures that the power of the influence is 3% which regards a good degree of the influence and indicates of the accurate using of the variable's measurements for this study.

3.6. Discussion:

This research provides valuable insights into banking behaviour in a conflict-affected economy, contributing to understanding how external crises impact financial institutions' lending decisions. The study is particularly relevant for policymakers and bank managers in emerging markets facing similar challenges. The findings suggest that while traditional banking theories provide a framework for understanding lending behaviour, the unique political and economic circumstances in Iraq require more nuanced approaches to banking analysis and regulation.

The correlation between variables was significant but not very powerful, suggesting weak relationships between the studied factors, while regression analysis unfold that all independent variables showed positive effects on lending behavior, with statistical significance ($p < 0.05$), in addition the explanatory power analysis unfold that the model explained only 3% of variance in lending behavior ($R^2 = 0.03$), indicating other factors not included in the study significantly influence lending decisions.

4. CONCLUSIONS AND RECOMMENDATIONS

4.1. Conclusions

In the Iraqi financial system and Iraq stock exchange the commercial banks remain dominant sector in terms of their shares of total assets and deposit liabilities. Their total loans and advances, a major component of total credits to the private sector are still on the increase despite the major constraints posted by the government regulations, institutional constraints, and other macroeconomic factors. (Rosa et al., 2022, p. 12)

The results of the correlation test between the variables used in this study show that the correlation is significant but not very powerful between the variables. Based on multiple regression analysis, the results shows also that all the independent variables of the study have a positive and significant effect on the dependent variable (Debts & Advances) because the significance of the study (0.000) is less than 0.05, which a good degree of the influence and indicates of the accurate using of the measurements of the variables for this study.

4.2. Recommendations

1. The researchers recommend that the banks in Iraq attempt to increase its debts and advances in the coming years to increase its clients and thus its profitability.
2. The development of credit procedures, policies, and analytical capabilities should evolve into comprehensive credit management frameworks that encompass origination, approval, monitoring, and problem management processes tailored to individual institutional needs, should be a very priority of the commercial banks.
3. Commercial banks should strategize on how to attract and retain more deposits to further improve their lending performance.
4. For more detailed analysis, future research must include more measurements for both variables (the independent and dependent) with different periods of study.
5. The researchers recommend that future researchers expand the study period and include more tests and analyses for better results and more robust results.

6. For better results and analysis, a comparison study is needed for checking the good and bad ratios between at least two or more banks in the same context for better benchmark using a longer time frame.

7. For future researchers, they must minimize the limitation from this study especially in terms of (data availability) Limited publicly available financial information in Kurdistan region, (time constraints) restricted study period, (sample size) limited to banks listed on Iraq stock exchange, and (external factors) Political instability and economic disruptions affected data consistency

8. The researchers recommend the management of selected banks control their debts and advances more accurately and carelessly to decrease their bad influence on the net profits in the future.

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