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# The impact of some internal indicators and external factors on the loan ratios granted by commercial banks in Iraq for the period 2015-2023

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تأثير بعض المؤشرات الداخلية والعوامل الخارجية على نسب القروض الممنوحة من قبل المصارف التجارية في العراق للفترة 2015 -2023

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The banking sector is one of the most important sectors contributing to economic growth through the funds it provides for lending. Loan ratios have attracted many researchers and economists to study and identify the factors that affect the volume of loans granted by commercial banks, which are directed towards supporting the economic growth process. To this end, the study aimed to determine the impact of some internal and external factors and indicators on loan ratios granted. Data was collected for a number of commercial banks for the period 2015-2023. Several banking indicators were used, including (bank size, capital adequacy, deposit volume, bank liquidity, profitability), as well as several macroeconomic variables (economic growth, interest rate, inflation rate), to demonstrate their impact on the loan granting process based on loan ratios granted.

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#### المستخلص

يعد القطاع المصرفي احد اهم القطاعات المساهمة في النمو الاقتصادي من خلال ما يوفره من اموال معدة للإقراض حيث جذبت نسب القروض العديد من الباحتين والاقتصاديين لدراسة وتحديد العوامل التي تؤثر على حجم القروض الممنوحة من قبل المصارف التجارية والموجهة نحو دعم عملية النمو الاقتصادي، و لأجل ذلك هدفت الدراسة الى تحديد اثر بعض العوامل والمؤشرات الداخلية والخارجية على نسب القروض الممنوحة. تم جمع بيانات لعدد من المصارف التجارية للفترة 2015-2023. وقد تم استخدام عدد من المؤشرات المصرفية المربحية) وكذلك عدد من متغيرات المؤشرات المصرفية وهي (النمو الاقتصادي، سعر الفائدة، معدل التضخم) وبيان اثرها على عملية منح القروض بالاعتماد على نسب القروض الممنوحة.

### Introduction

Banking systems are the economy's primary engine, providing capital to support various projects. Commercial banks act as intermediaries between surplus and deficit units. (Ahmed & et al ,2022) The bank deposits funds from customers with surplus capital and transfers them in the form of loans to customers with a deficit (Jaafar et al, 2022).

The primary objective of a bank is to provide loans to clients across various economic sectors (Tariq,2014). Commercial banks' assets are largely dependent on assets and loans, which are the primary source of interest rates. In Iraq, as is generally known, due to the weakness of financial markets, banks play a key role in providing specific funds to finance projects across various economic sectors(Omran, 2018). Consequently, (Jabbar & Mahfouz, 2021) it is crucial to focus on the loan ratios granted to the economy by commercial banks and the variables that may affect lending rates(Mishchenko et al, 2021).

It should be noted that commercial banks always plan to raise the quality of their activities by improving their lending strategy and interest rates. For its part, the regulatory body can set basic rules to confirm that banks' lending process loans can sustainably contribute to economic growth (Ahmed, 2017). In addition, the decision to grant loans is naturally influenced by economic factors. It is usual for this topic to occupy the writings of many researchers in various countries, including the study of Malede (2014).

Many studies have been conducted that address the impact of some internal banking factors and external factors represented by macroeconomic indicators on lending activity in many countries, such as the study of Salem and Fouad (2015) in Egypt, Tomac (2013) in Turkey, Rabab (2015) in Jordan, Maldi (2014) in Ethiopia, Ayad (2011) in Syria.(Kwilinski et al, 2020)

The study aimed to identify and evaluate the impact of some banking and economic variables on loan ratios in commercial banks. To achieve our goal, all annual budgets associated with many banks (20 banks) were used, whose data were collected during the period from 2015 to 2023. This data was analyzed using the statistical program Eviews.

The study was divided into several parts. The second part reviewed previous studies related to loan granting and the variables affecting them, as well as developing the study's hypotheses. The third part was devoted to the methodology used. The fourth part analyzed the descriptive study. The fifth part of the study was devoted to presenting What we have reached as a result and also the discussion of this result, and finally, the conclusion was in section six..

#### 1. Literature Review

The decision to grant loans to commercial banks is subject to numerous influences, some specific to the bank itself (internal variables) In contrast, and others are considered external conditions and factors associated with economic conditions (Andersen et al, 2013).

## 2.1 Influences specific to banks (internal variables)

## Capacity of Banks

The capacity of Banks is one factors influencing the loan ratios granted by banks. It is a subject of extensive debate, as highlighted in a study by Obuobi, (2019) which emphasized that large banks offer higher-quality loan amounts and services to customers. Also brought a study. (Malede, 2014), where he explained that the Capacity of Banks is a positive influence on the percentage of funds prepared for borrowing. (Obuobi et al, 2019)

Therefore, It was borrowed Capacity of Banks to specify funds intended for credit because it demonstrates the economies of scale a bank enjoys. (Alkhazaleh et al, 2017)

explained that large banks are distinguished from others by the financial facilities they provide to their customers through the large deposit ratios available (Ahmed et al, 2022).

In addition, Ayad (2015) indicated that large banks are more protected against negative shocks due to their increased diversification capabilities. Therefore, large banks should be less likely to reduce their credit portfolios during crises. (Cucinelli, 2013).

## H1: The Capacity of banks has a positive influence on commercial banks' credit rates.

## Capital Adequacy

Commercial banks are required to set capital ratios that are consistent with the size and nature of expected risks(Mashraqi& Al-Shihab2018). It is also necessary to provide additional capital ratios to cover unexpected losses(Al-Rawi & Khaled, 2019). Capital adequacy therefore ensures the availability of funds for lending. Berrospide & Edge (2015) hypothesized in their study that the influence of changing Bank equity ratios on the availability of funds for lending is one of the most important points of connection between financial factors and real activities (Mishchenko et al, 2021).

As well as the study of (Ibrahim and Walid, 2018) and (Kamal, 2015) believe that the huge capital of banks has a positive influence on the ratios of Funds intended for lending provided by commercial banks. From another perspective, the possibility of banks if the property rights are large provide loans with Long-term installments and high lending rates risks. Tarik (2020) found a negative influence of the percentage of funds available for borrowing (Ahmed et al,2022).

## H2: There is a positive effect of capital adequacy on the loan ratios granted by commercial banks.

## • The size of deposits

Bank deposits express the amounts deposited and kept in banks to benefit from the interest rates granted in exchange for using them in the lending process (Al-Rawi&Khaled, 2019). Therefore, they are the most common source of financing for commercial banks and represent the largest proportion of liabilities (Shaqiri et al, 2012). As mentioned above, banks act as intermediaries between surplus and deficit units to provide the necessary funds to support economic growth (Jaafar et al, 2022).

Tomola (2013) pointed out that commercial banks cannot operate without sufficient deposit ratios from bank customers (Tariq, 2014). Commercial banks rely on depositors' funds as a

source of funding for various banking operations, Therefore, we conclude that there is a close link between banks' ability to attract deposits and the loan ratios offered to customers (Kwilinski et al, 2020)

Increasing bank deposits is likely to improve a bank's ability to lend more money to its customers. A study by Akinyomi & Enahoro (2014) found a positive and significant relationship between deposit size and loan ratios granted by commercial banks(Jabbar & Mahfouz, 2021). In addition, Salem (2015) found that higher deposit growth increases commercial bank lending rates in Egypt (Obuobi et al, 2019)

## H3: There is a negative effect of deposits on loan ratios granted by commercial banks.

## • Liquidity

Banks' liquidity is generally considered to be their ability to meet their cash obligations when they fall due. Myers (Myers and Rajan) defined liquidity as the ability to finance a bank's assets and meet its obligations. Liquidity can also be described as the ability of banks to obtain liquidity through assets with the lowest loss rate (Aest & Nhat, 2020). Liquidity management is one of the most important aspects of a bank. If available funds are not used properly, the bank may incur losses because cash generates no returns (Al-Sakini, 2019).

It can be argued that high ratios Through the funds that the bank owns and keeps, it will use them. Lead to lower ratios of funds allocated for lending. (Shaqiri et al, 2012) It is known that loan ratios are non-liquid funds. In lending ratios, It means the increase in the percentage of non-cash money in the bank's Assets. Rahab (2016) found in her study of some commercial banks in Jordan that the percentage of funds available for lending decreases when the liquidity ratio of banks increases. (Alkhazaleh et al, 2017)

Salem (2015) also confirmed that the liquidity ratios maintained by banks negatively impact loan ratios. Moreover, the studies of (Musa and Shadiya, 2016) and (Amidu, 2014) also provide strong evidence that liquidity negatively affected loan ratios.

## H4: Liquidity has a negative impact on loan ratios granted by commercial banks.

## • Profitability

Profitability is a bank's ability to generate profits. Profit is the remaining income after deducting all costs and expenses associated with generating the income. (Alkhazaleh et al, 2017).

The profit ratio is considered a strong indicator of a bank's performance over a given period. The profits generated enable commercial banks to extend more loans as well as the process of producing a high level of income. (Mishchenko et al, 2021).

Ahmed (2019) and Musa (2018) found that earnings in asset have It will have a good effect on loan ratios. The study (Anthony and Nasri, 2015) also provided empirical evidence of a It should be noted that there is a good effect of high loan ratios on profit ratios (El Khoury, 2015).

H5: It is possible to say that there is a positive correlation between realized profits and loan ratios granted by commercial banks(Jaafar et al, 2022).

#### 2.2 Influences of external factors

## • Economic growth

The Economic Growth rate is considered one of the most important indicators to measure the rates of positive change in the production of goods and services over a specific period(Shaqiri et al, 2012). Economic growth is measured by the gross domestic product (GDP) ratio, which is used to determine bank loan ratios.

The Economic Growth rate is considered one of the most important indicators. These indicators are ratios of loans granted, through high rates of economic growth, which is an indicator of economic activity and thus an increase in the ratios of loans granted (Andersen et al., 2013)

A study (Constant & Ngomsi, 2012) examined the same long-period borrowing mechanism Which includes quite a few financial institutions (banks), finding a positive and significant relationship between GDP and bank loan ratios. Similarly, a study (Amin, 2018) demonstrated an increase in loan ratios as a result of increases in GDP. (Muhammad & Ibrahim, 2013). It is worth noting that Amin and Nashat (2017) explained that bank loans in Syria are linked to increased growth in real GDP, which in turn increases the demand for bank financing by various sectors, as well as individual wages. (Lajuni et al, 2022).

This will boost domestic deposits. Consequently, this will improve bank liquidity and enable banks to provide more loans to meet investment needs(Ahmed et al, 2022).

## H6: There is a positive impact of economic growth on commercial banks' bank loan ratios.

## • Benefits of borrowing

Benefits of borrowing include the of additional amounts charged to customers for loans granted by commercial banks(Shaqir et al, 2012).

These rates are important for commercial banks, as they constitute their primary source of income. Furthermore, the interest rate is considered one of the methods of applying monetary trends. Through it, the volume of money in the financial markets is determined. Money circulating in the markets (Anthony & Nasri, 2015).

It should be noted that high interest rates encourage commercial banks to grant customers the loans required to achieve a high level of profits. Empirically, Richard's study (2014), which he conducted on a sample of Malaysian banks, showed that higher interest rates will lead to an increase in the percentage of loans provided by commercial banks(Imran & Nishat, 2013)

Speaking about a study (Swami, 2012) based on a sample of Indian banks during the period 2016-2021, he emphasized that the interest rate has a positive effect on the percentage of Credits granted by financial institutions banks during (the period before the recession and the period of economic recovery) (Andersen et al, 2013)

H7: There is a positive relationship between interest rates and loan ratios granted by commercial banks.

#### • Inflation Rate

Inflation is an inevitable consequence of poor implementation of monetary policy, which leads to a decline in Cash availability of money, which is accompanied by a general increase in the levels of specified amounts various services and products in the market(Troug & Sbia, 2015) Naturally, inflation is measured as a percentage of the general consumer price index(Kwilinskiet al, 2020)

As inflation rates increase, banks also increase their borrowing costs to maintain a cushion against inflation, thus increasing market interest rates (Basem, 2021). Consequently, as inflation rates increase to a certain level, bank loans decline (Uyagu & Osuagwu, 2015). A study by Thaer (2015) found a negative relationship between inflation and bank loans(Mashraqi & Al-Shihab, 2018). Therefore, an increase in inflation increases the rate of bank loans and reduces customer demand for credit (Jabbar & Mahfouz, 2021). We can say, Ahmed (2017) He concluded from the study that he conducted that there is a positive correlation between the measured inflation rate and the financial institutions in the study sample.. (Alkhazaleh et al, 2017)

H8: There is a negative relationship between inflation and loan ratios granted by commercial banks. (Jaafar et al, 2022).

## 2. Methodology

## 3.1Study samples and data used

The sample used consisted of 20 Iraqi commercial banks. Financial data (The income statement and budget for the financial institutions under study) from that bank were used for the duration 2015-2023, including information from the Central Bank of Iraq, the banks' official websites, and the Department of Statistics and Planning. (Alkhazaleh et al, 2017)

## 3.2 Measuring the variables

The step that precedes defining our study model is describing the study variables, concerning studies that used these indicators.

## 3.2.1 Dependent Variable

Bank loans are one of the most important indicators used in many studies to measure bank lending ratios as a dependent variable (Al-Sakini, 2019).

These bank loans, which are divided into long-term, medium-term, and short-term, are among the most important financial services provided by commercial banks to customers in general(Al-Rawi & Khaled, 2019). In our study model, bank loans were measured using the logarithm of total loans. This measure has been used by Rabab (2017), Amin (2014), and Ahmed (2021).

## 3.2.2 Special indicators for clarification

The Tools: Special indicators for clarification are retained. To reach results, the indicators must be interpreted broadly, as well as the principles relied upon in the explanation are listed in the following table.

**Table (1) Presentation of Special Indicators** 

Internal Indicators	Symbo 1	measurement	Source
Size	S	Total Assets	Rabab (2015), Malek (2014)
Capital Adequacy	C		Ahmed (2021)
	Equity to Total Assets		Hassan and Asmaa (2018)
Deposits	D	Deposits to Total Assets	Salem (2015)
Liquidity	L	Liquid Assets to Total Assets	Azira and Abu Bakr (2018)
Profitability	N	Net Interest Margin to Total Assets	Musa (2016)
External indicator			
Economic growth	G	Real annual growth rate of gross domestic product	Adel, Zaki, Mamdouh(2012)
Interstate	I	The real interest rate on borrowing	Richard (2014) and Sally (2012)
Inflation rate	INF	Inflation rate	Rabab (2015)

Source: Prepared by the researcher

## 3.3 Model Specifications

To analyze the study's hypotheses and identify the factors that could explain commercial bank loans, the linear regression method was chosen over the years of banking. (Jabbar& Mahfouz, 2021)

Through the above, we can formulate our study model as follows:

$$L_{it} = \beta_0 + \beta_1 S_{it} + \beta_2 C_{it} + \beta_3 D_{it} + \beta_4 L_{it} + \beta_5 N_{it} + \beta_6 G_{it} + \beta_7 I_{it} + \beta_8 I N_{it} + \epsilon_{it}$$

## **Descriptive Study**

This section includes descriptive statistics related to the dependent variable and the internal and external independent variables (Ahmed & et al, 2022).

Table (2) Systematic data for the dependent indicator and the Illustrative indicator

Variables	Maximum	Minimum	Average	Standard
				Deviation
Loans	28.53282	22.01993	25.50396	1.607731
Volume	28.88149	23.31551	25.99963	1.517249
Capital Adequacy	0.8024162	0.0453072	0.209937	0.1439236
Deposits	0.9279415	0.1721859	0.6794994	0.1576868
Liquidity	0.7940337	0.0405953	0.2485086	0.1513205
Profitabiliy	0.0727329	0.0056605	0.0329158	0.0133258
Economic Growth	0.072	0.02	0.047	0.0199093
Interest Rate	0.0889	0.0195	0.04646	0.0187263
Inflation Rate	0.1545	-0.0865	0.03475	0.071301

Prepared by the researcher based on a statistical program

From the table above, we note that the percentage of loans Commercial financial institutions (banks) used in our study sample to their customers during the study period amounted to 25.50, or 119.2 billion dinars. The highest and lowest rates of funds available for lending and receivables granted by analysis of the duration of study amounted to 28.53 (2464.03 billion dinars) and 22.01 (3.66 billion dinars), respectively, which indicates a high standard deviation value (160.77%).

The same applies to the independent variables (Mishchenko et al, 2021).

The bank's size or smallness is determined by its total assets, was 26, with a very high standard deviation. The average capital adequacy ratio (C) was 0.20, indicating that the average equity ratio exceeds 20% of total assets, with a minimum value of 4% and a maximum of 80%, and a standard deviation of more than 14%.

The average deposit value (D) is approximately 0.70, meaning that an average of 70% which is a proportion of bank assets value is funded by customer deposits, ranging Of the lower percentage 17.21% From the highest percentage of 92.79%, Using the standard deviation scale of 0.15.

The percentage of average profits earned ratio, determined by net interest percentage margin to percentage of total assets, is 3.3%, for a low fluctuation rate. Liquid funds ratios, on the other hand, represent a Medium for 24.85%, using the standard deviation scale, more than 15%. About to economic indicators (external factors), the data shows that the average real GDP growth rate was 4.7% during the period 2015-2023. The gross domestic product increase in Iraq slowed in a greater way 5.6% in 2015 to 2.4% in 2023. (Kwilinski et al, 2020)

That, if anything, explains our economy's increasing dependence on oil, and there is no good alternative that can reduce the loss ratio. The same applies to the interest rate, which averaged 3.48% In duration under study, It is noted that the relative increase in the dispersion ratio is noticeable (Andersen et al, 2013).

Profita Interest Econo Capital Liquidit Inflation Rate mic bility **Deposit** Adequacy Volume Loans Rate y S Growth Loans 1.0000 Volume 1.0000 0.9878\* Capital 1.0000 0.8147 -0.8003 Adequacy Deposits 0.7823\* 0.7750\* 1.0000 0.8620 Liquidity 1.0000 -0.2966 0.3048\* -0.4360 -0.5466 Profitability 1.0000 -0.0357 -0.3027 0.2655\* -0.3573 -0.3000 Economic 1.0000 0.0812 0.0940 -0.2190 -0.1462 -0.1412 -0.1459Growth Interest Rate 1.0000 0.1160 0.0850 0.0569 -0.0361 0.0164 -0.0333 -0.0470Inflation 1.0000 -0.2093 -0.2318 0.1624\* 0.0442 0.1569\* -0.0993 0.1095 0.1080 Rate

**Table (3) Correlation Matrix** 

(\*): Determines the significance level of 5%.

Source: Statistical program outputs.

Average inflation during the study period was 4.64%. To analyze the correlation between indicators and demonstrate multicollinearity, it is necessary to conduct a coefficient analysis. Through the table above, the correlation matrix indicates that there is a negative correlation between capital adequacy ratios, liquidity ratios, profitability, and economic growth. Bank loans are positively and significantly correlated with deposits and bank size. (Mashraqi & Al-Shihab, 2018) It also indicates a clear and important connection, both Proportions of positives and negatives in some illustrative indicators(Al-Sakini, 2019).

## Conclusions and their analysis

Through the conclusions of the statistical explanation and the extracted analysis, the first stage was to verify the homogeneity or heterogeneity of the data generation process, which allows us In order to arrive at the general homogeneity ratio of the model (Jaafar et al, 2022).

From the above analysis we conclude indicated the result was obtained through Fisher's analysis. 1% (Prob> F = 0.0000). Based on the above, the hypothesis H0 is access denied, and a constant-influences (fixed or random) model is more appropriate (Shaqiri, et al 2012). To differentiate between stability effects and the random-effects model, the Hausman specification test was used, and the results indicated that this test had a probability of less than 5% (Prob>chi2 = 0.0002), confirming the presence of a fixed single effect (Mishchenko et al, 2021).

This restricts the random effects model. To estimate our model, for this purpose determined the existence of a Mistakes test for Mistakes. We conducted the Automatic linking test according to (Al-Sakini, 2019), His zero-sum hypothesis states that there is no Automatic linking for Mistakes. The results of this test indicate the presence of serial Automatic linking (Prob> F = 0.0045, lower than 5%). In the end, we conducted a zero-sum hypothesis test. It is necessary to follow the steps of the statistical program EViews. (Obuobi et al, 2019)

In this context, the null hypothesis is ideal. The conclusions of this analysis indicated a zero-sum hypothesis (Prob>chi2) of less than 5%. Therefore, the panel-corrected standard errors (PCSE) method was used (Jabbar & Mahfouz, 2021).

"Estimating the same model using the feasible generalized least squares (FGLS) method yields Similar conclusions, except for the GDP variable, which loses its significance." This method was taken into account due to defining the analytical problem helps us to choose the alternative and determine the indicators and certainly the minimum.

Below are the regression conclusions after making corrections to them. (Kwilinski et al, 2020).

` '	0	
Variables	Coefficient	<b>Expected Proportions</b>
Size	0.9987649	+
Size	0.000***	·
Comital Adamson	0.2543825	+
Capital Adequacy	0.030**	·
Di4-	-0.3769998	+
Deposits	0.003***	,
Liquidity	-1.497662	-

Table (4) Linear regression results for the variables

	0.000***	
Duo fitobility	3.863239	+
Profitability	0.000***	
Economic Growth	0.6040812	+
Economic Growth	0.054*	
Inflation Rate	-0.4275785	_
Illiation Rate	0.153	
Interest Rate	0.0704117	+
interest Kate	0.453	
Disadvantagas	-0.4917086	
Disadvantages	0.125	

source: Statistical Program Outputs

\*\*\*At a statistical standard.5% standard, \*\* statistical at the 4% threshold, \* statistical at the 9.9% threshold.

Analyzing the results of the overall significance test, through the above analysis, we note that the analytical ability of the model is good (Prub>0.0000). The test results also indicate that Bank volume ratios have had good and important positive effects on the lending rates provided by commercial banks' loans granted by commercial banks. (Troug & Sbia, 2015).

Therefore, it can be said, based on the results, that as the volume of the bank increases, the quantity of Bank loan ratios increases. This result is based on the control of large banks over funding sources for economic sectors (Jaafar et al, 2022).

In Iraq, the size of banks is closely linked to the proportion of loans provided to various economic sectors (Ahmed, 2017). The Central Bank indicated in its latest financial report that banks provide, on average, more than 86% of the loan ratios granted to economic sectors, thus confirming hypothesis (H1). This result is consistent with those obtained by Rabab (2015) and Malik (2014).(Kwilinski et al, 2020)

It should be noted that the capital adequacy ratio significantly and positively affects the ratios of bank loans provided by commercial banks, and this means that high capital ratios increase the ability of banks to provide loans (Al-Rawi & Khaled, 2019). As a result, we confirm the validity of hypothesis (H2). Indeed, increasing capital ratios increases banks' ability to face the risks associated with granting loans, and in turn, banks can provide more loans. The conclusions of our research are consistent with the results of Bassem (2018) and Kamal and Malek (2015).(El Khoury, 2015).

Similarly, about bank liquidity, it became clear, according to our hypothesis (H4), based on what has been reached, we note that there are negative effects and contain statistical correlation among ratios of bank loans granted and the liquidity ratios. High liquid asset ratios in financial institutions lead to a low percentage of loans provided by banks (Ahmed et al,2022).

This can support the idea that a The high percentage of cash assets held by banking institutions will lead to a decrease in bank loan ratios. Because loans are considered monetary assets. This finding is consistent with those found by Rabab (2015), Salem (2015), Musa (2016), and Ahmed (2014). (Lajuni et al, 2022).

The results confirmed that profitability ratios are positively and significantly related to the ratios of bank loans granted. This means that an increase in the ratios of loans granted by commercial banks is associated with an increase in interest rates. This result supports the idea that profitable, productive banks can provide loans to customers, which in turn leads to an increase in the rate of income. Therefore, Hypothesis (5H) was confirmed. These conclusions are consistent with Ahmed (2017). Musa (2016), Rossi, Boroni, Biva, and Libi (2019), Wathiq (2019), and Anthony and Nasri (2015).

Referring to the conclusions reached in previous studies, Kamal (2012), Amir (2014), and Imran and Nashat (2013), we note that economic growth rates have a significant and positive influence on the loan ratios provided by banks. Conclusions reinforce the idea proposed by Al-Khaury (2015), which states that economic activity positively impacts banks' financial activity, with demand for bank lending being highest during periods of prosperity and declining during periods of recession (Jaafar et al, 2022).

Therefore, during expansion and the rate of profitable investments raises the percentage of funds available for borrowing. (Amani, 2014). Thus, the hypothesis related to GDP growth (H8) was verified. The results of this study also indicate that interest rates and inflation rates have no significant impact on banks' credit provision (Mishchenko et al, 2021).

The study aimed to identify the interior and exterior variables and indicators that determine the rates of bank loans granted by banks, based on statistical and financial data for the banks under study during the period 2015-2023.

The Eviews statistical program was used to analyze the collected data, and loan ratios were used as the dependent variable. Some Implied indicators (Volume, Capital efficiencies, the deposited funds, liquidity, and profitability) and some external variables were used. (Gross domestic product, interest rate, and inflation rate).

We have reached several conclusions from this study: Capital efficiencies, the deposited funds, profitability, and economic growth have a positive and significant impact on bank loan ratios, while liquidity has a negative impact (Al-Rawi & Khaled, 2019). We note that interest rates and inflation do not have a significant impact on bank loans.

It should be noted that this study may become of interest to many financial researchers in the banking sector(Shaqiri et al, 2012). Furthermore, examining some of the variables affecting loan ratios granted by the study has become a reference and source for bank management. In making the necessary decisions and setting appropriate policies in the area of credit granting, which will lead to improved bank profitability.

#### Conclusion

- 1. Conclusions reached by statistical analysis explain the bank size. There are positive implications for the amount of Bank funds intended for lending.
- 2. Furthermore, an increase in the percentage capital ratios increases the percentage of loans provided by banks to customers.

- 3. Regarding profitability, it also increases bank loan ratios. However, liquidity ratios have a negative effect on bank loans, as increasing liquidity ratios negatively impact the amount of loans granted.
- 4. Economic activity positively impacts banking and financial activity. Demand for bank lending is highest during boom times and lowest during recessions.
- 5. Interest rates and inflation rates do not significantly impact bank credit provision.

#### Recommendations

- 1. Work to increase the number of operating banks, which in turn increases the ability to support various economic sectors through the loan ratios they provide.
- 2. It is necessary to provide high capital ratios that give confidence to customers and attract new customers, which in turn gives banks new deposits that will enhance the ratios of loans granted.
- 3. Compatibility between the liquidity ratios prepared to face sudden depositors' withdrawals and the ratios of loans granted.
- 4. Take into account the prevailing economic conditions during the loan-granting period, most importantly inflation or economic recovery.
- 5. Provide the largest possible amount of funds available for lending to boost economic activity in the country and work to set appropriate interest rates.

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#### References

- 1. Andersen, T. G., Bollerslev, T., Christoffersen, P. F., & Diebold, F. X. (2013). Financial risk measurement for financial risk management. In *Handbook of the Economics of Finance* (Vol. 2, pp. 1127-1220). Elsevier.
- 2. Al Ayub Ahmed, A., Rajesh, S., Lohana, S., Ray, S., Maroor, J. P., & Naved, M. (2022, June). Using Machine Learning and Data Mining to Evaluate Modern Financial Management Techniques. In *Proceedings of Second International Conference in*

- Mechanical and Energy Technology: ICMET 2021, India (pp. 249-257). Singapore: Springer Nature Singapore.
- 3. Alkhazaleh, A. M. K. (2017). Factors may drive the commercial banks lending: evidence from Jordan. *Banks and Bank Systems*, *12*(2), 31.
- 4. Al-Sakini, S. A. (2019). The impact of disclosure of the financial statements at the level of information asymmetry between investors: An empirical study on the commercial banks in Jordan. *Academy of Accounting and Financial Studies Journal*, 23(6), 1-17.
- 5. Al-Sakini, S. A. (2019). The impact of disclosure of the financial statements at the level of information asymmetry between investors: An empirical study on the commercial banks in Jordan. *Academy of Accounting and Financial Studies Journal*, 23(6), 1-17.
- 6. El Khoury, R. (2015). Liquidity in Lebanese commercial banks and its determinants. Academy of Accounting and Financial studies journal, 19(3), 57-74.
- 7. Imran, K., & Nishat, M. (2013). Determinants of bank credit in Pakistan: A supply side approach. *Economic Modelling*, *35*, 384-390.
- 8. Jaafar, Z., Fadel, A., & Salih, H. (2022). The Impact of the Asymmetric Behavior of the Costs on the Degree of Accounting Reservation in the Financial Reports of Iraqi Industrial Companies a Field Study of a Sample of Iraqi Industrial Companies. *American Journal of Economics and Business Management*, 5(6), 201-220.
- 9. Kwilinski, A., Dzwigol, H., & Dementyev, V. (2020). Model of entrepreneurship financial activity of the transnational company based on intellectual technology. *International Journal of Entrepreneurship*, 24, 1-5.
- 10. Lajuni, N., Wellfren, A. C., & Samsu, S. H. (2022). Financial Literacy/Knowledge Through Financial Education: A Bibliometric Analysis. *Labuan Bulletin of International Business and Finance (LBIBF)*, 20(2), 66-80.
- 11. Malede, M. (2014). Determinants of commercial banks lending: evidence from Ethiopian commercial banks. *European Journal of Business and Management*, 6(20), 109-117.
- 12. Mishchenko, S., Naumenkova, S., Mishchenko, V., & Dorofeiev, D. (2021). Innovation risk management in financial institutions. *Investment Management & Financial Innovations*, 18(1), 190.
- 13. Obuobi, B., Nketiah, E., Awuah, F., & Amadi, A. G. (2019). Recapitalization of banks: Analysis of the Ghana banking industry. Open Journal of Business and Management, 8(01), 78.