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THE IMPACT OF CREDIT ASSET QUALITY ON MARKET VALUE AND TRADING VOLUME: AN ANALYTICAL STUDY OF A SAMPLE OF IRAQI BANKS FOR THE PERIOD 2014-2023

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Abstract
Since the Great Financial Crisis, non-performing loans have received significant attention and have been the focus of discussions in the financial sector. In this study, we attempt to demonstrate the size of the non-performing loan ratio for a sample of operating commercial banks. We also attempt to demonstrate the relationship between these ratios and market indicators (trading volume and market value) using simple linear regression and the Pearson correlation coefficient. The study concluded that the impact of credit asset quality (non-performing loan ratio) on market value is not constant, as a statistically significant relationship was found in some banks in the study sample, but not in others. This may indicate that credit asset quality may be affected by other factors, such as the economic situation or the nature of the banking market. The results also showed that credit asset quality has a more stable relationship with trading volume than with market value, as there was a statistically significant direct relationship between three out of four banks, indicating that investors respond to the level of credit risk when making trading decisions. The study also recommended enhancing credit risk management in commercial banks in general, and the banks in the study sample in particular, by establishing effective mechanisms to monitor and reduce non-performing loans, which would be reflected in the Increased investor confidence in the financial market.

Keywords: Credit asset quality, non-performing loan ratio, trading volume market capitalization.

Introduction

The loans granted by commercial banks constitute the largest portion of their profits and are a fundamental component of their performance. The quality of credit assets directly affects financial stability and the ability of banks to generate profits with less potential risk. The higher the quality of loans, the greater the confidence in the bank and the share price in the

financial market. This, in turn, affects trading volume. With a competitive and sometimes unstable banking environment, particularly in countries experiencing economic fluctuations such as Iraq, it has become necessary to analyze the relationship between credit asset quality and financial market indicators such as trading volume and market value. Financial crises such as the 2018 crisis have demonstrated how the increase in the volume of non-performing loans led to huge losses for banks and a sharp decline in their market value. In financial markets, confidence in credit asset quality is reflected in investors' decisions when evaluating available stocks. Banks suffering from high non-performing loan ratios lead to a decline in their stock prices and the erosion of bank share prices. This also affects the stock pricing process in the market, which relies heavily on reports related to rising or falling credit quality. This increases investor appetite for buying or selling shares accordingly. For expectations regarding credit quality, and through the above, the study gains importance in that it focuses on an important vital aspect related to the quality of credit assets. The study will attempt to demonstrate the impact of credit asset quality on both the market value and trading volume of commercial bank shares in Iraq.

1. Research Methodology

1.1 Study Problem

The study's problem can be explained by the fact that, despite the knowledge that the quality of credit assets has a significant impact on a bank's strength, its impact on financial market indicators, such as market value and trading volume, has not been clearly established and requires further analysis and study. The research problem can be stated with the following question: To what extent does the quality of credit assets (non-performing loans) affect the market value and trading volume of commercial bank shares? From this question, a number of questions branch out, the most prominent of which are:

Does the quality of credit assets (non-performing loans) affect the market value of commercial banks?

Does the quality of credit assets (non-performing loans) affect the level of trading activity (trading volume) of commercial banks?

We will attempt to address this problem by collecting financial data from the market and commercial banks and analyzing the relationship between the study variables—credit asset quality on the one hand, and the market value and trading volume of banks on the other.

1.2 Importance of the Study

The importance of the study emerges from its spotlight on a relationship that has not received sufficient research or application: the relationship between credit asset quality, market value, and trading volume in financial markets. The study's expected results provide practical guidance for banks and investors. The study will clarify what bank management needs to do to improve credit risk management and maintain a high level of quality, thereby supporting share prices in the financial market.

1.3 Study Objectives

The study aims to achieve a set of scientific and practical objectives, the most important of which are:

1. Identify and analyze the impact of credit asset quality on the market value and trading volume of commercial bank shares.
2. Measure the credit quality of the assets of the commercial banks in the study sample using the non-performing loan ratio indicator.
3. Explain the relationship between the quality of credit assets, represented by the non-performing loan ratio, and the market value of the banks in the study sample.
4. Explain the relationship between the quality of credit assets, represented by the non-performing loan ratio, and the trading volume of the banks in the study sample.
5. Provide recommendations based on the findings to all parties in need, whether individuals, institutions, or governments, regarding the importance they should attach to monitoring asset quality and its impact on market indicators.

1.4 Study Hypotheses

Referring to the study problem and the stated objectives, the following main hypothesis was formulated to test it:

Main Hypothesis: The quality of credit assets of commercial banks does not have a positive and statistically significant impact on their performance in the financial market, which is reflected in their market value and the trading volume of their shares.

Sub-Hypothesis 1: There is no statistically significant direct relationship between the quality of credit assets and the market value of commercial bank shares.

Sub-Hypothesis 2: There is no statistically significant direct relationship between the quality of credit assets and the trading volume of commercial bank shares.

1.5 Research Population and Sample

A. **Research Population**: Commercial banks listed on the Iraq Stock Exchange

B. **Research Sample**: The following banks were selected due to the availability of their financial data:

1.Ashur Commercial Bank
2.Baghdad Commercial Bank
3.Gulf Commercial Bank
4.Middle East Commercial Bank

2. The Theoretical Aspect of the Study

2.1 Credit asset quality

2.1.1 The Concept of Asset Quality

The concept of asset quality involves assessing the bank's assets used to manage credit risk, which are linked to operational processes. Asset quality is an important factor in bank management, and its assessment serves to measure the extent of credit risk. The concept of credit asset quality is directly linked to the balance sheet on the left side of the bank and focuses on the quality of loans, which represent the bank's profits. Among the most important

credit assets that determine the level of asset quality are loans, which are non-performing assets resulting from borrowers' default on their obligations (Wanjagi et al., 2024:79). The term asset quality refers to the measures taken by the bank to reduce the risks associated with specific assets. This quality compares idle assets to total equity and analyzes expenses on non-performing loans compared to total assets. This quality helps financial analysts determine the asset portfolio that generates the highest returns (Roslyne, A et al., 2022:177). Credit asset quality is one of the most important aspects of bank management, which includes assessing the company's assets to facilitate measuring the size and credit risks associated with banking operations, as it focuses on The quality of loans that generate profits for banks. The basic principles used for banking supervision, which consist of twenty-five principles, seven of which are specialized in dealing with matters related to the quality of banks' assets and credit risk management (Abata, M. A., 2014:39).

2.1.2 Non-performing loans as an indicator of quality

An increase in the percentage of non-performing loans leads to financial instability, which limits income growth due to increased loan loss provisions and related loan recovery costs. Therefore, financial performance must be continuously monitored to identify current problems in a timely manner and resolve them effectively (Wanjiru et al., 2024:44). Non-performing loans are an indicator of the asset quality of banks. Asset quality is an important indicator of the performance of the banking sector in a country, among other performance indicators. The asset quality of the banking sector can generally be determined by the total non-performing loans, measured as the ratio of non-performing loans to total loans (Ozili, P. K., 2019:6). Non-performing loans, which are deliberately created by borrowers and left unsettled, lead to financial fragility for the bank, requiring significant time and effort from the bank's management, which in turn affects new borrowers. This situation represents an indirect cost borne by the bank as a result of poor asset quality. Therefore, non-performing loans not only affect the profitability of banks by incurring the costs of assets that are unable to generate income, but also affect the quality of assets. In addition, non-performing loans pose a risk of damaging banks' reputation (Kadioglu & Ocal, 2017:61).

2.1.3 Credit Risk Management

Poor credit risk management leads to non-performing loans. This is an important variable in determining the quality of risk assets in bank lending practices, and is related to credit risk in the banking sector. Therefore, credit risk management is essential to the financial stability of financial institutions. Therefore, credit risk cannot be avoided due to its direct relationship with banks' core activities, which are the loans available to customers. Banks formulate credit policies to manage risks and improve asset quality by requesting collateral (Adebanjo, 2024: 84). The concept of credit risk management is currently a fundamental concept in the financial sector, particularly for lending institutions and banks. It is represented by the procedures and approaches followed by banks and financial institutions to analyze, assess, and mitigate the impact of loan default risks. On the other hand, default risks focus on borrowers' failure to fulfill their contractual obligations (Ahmed, F. et al., 2023: 95). Credit risk management is of paramount importance to banks because it is an important and fundamental part of the

borrowing process. Through it, returns are maximized by maintaining the bank's resilience. To manage credit risks at reasonable rates to protect the bank from the negative effects of credit risks. This relationship is the focus of many studies that have proven that credit risk management is one of the basic factors that affect the profitability of commercial banks (Anwen, T. G. L., & Bari, M. S, 2015: 54)

2.2 Financial Market

2.2.1 The Concept of Financial Markets

Financial markets represent the lifeblood of the modern economy, facilitating the exchange of financial assets and capital. Buyers find respectable sellers, and sellers get a good deal by attracting the best customers for their financial products. Markets play a significant role in pooling savings and managing risk. Markets carry out a wide range of activities, including the buying and selling of stocks, derivatives, and foreign currencies (Matoka, W., et al., 2022: 68). Financial markets perform a fundamental function in the economy, transferring funds from households, businesses, and governments that have a surplus due to less spending to those that suffer from a shortage of funds due to their need to spend more than their income. Stocks show that funds flow from lenders-savers to borrowers-spenders via two paths (Mishkin, & Eakins, 2023: 56). The existence of a financial market is not a prerequisite for the exchange or creation of any financial asset, as in most economic systems, financial assets are created and subsequently traded in some type of financial market. The market in which financial assets are traded for immediate delivery is called the spot market or cash market (Fabozzi, & Jones, 2019:18).

2.2.2 Market Value Concept

Market value refers to the amount of an asset sold in the financial market, or it can be said that it is the amount for which an asset is exchanged on a specific date between the seller of that asset, whether an individual or a company, and a willing buyer after marketing it. This process takes place by agreement between the two parties and without coercion (Szutowski, D, 2017: 71). Market value can also be defined as the total value of securities listed on the market and is a measure of a company's size. It is sometimes referred to as the company's value, as it represents the number of shares held by investors. It is also calculated by the value of share units, which is one of the indicators of a company's financial development (Akpan, I. T, 2013: 181). It is the monetary value of all of a company's shares, calculated by multiplying the share price in the market by the number of issued shares. The number of a company's shares is not fixed and fluctuates over time. Market value does not measure the value of a company's shares, and outstanding shares refer to the company's shares currently held by its shareholders (Omodero, 2020: 464).

2.2.3 The Concept of Trading Volume

Trading volume is information about the future movement of a stock's price based on current events, whether buying or selling. Investors use it to determine the stock's reaction in the financial market based on financial statement information, which determines the stock's trading activity (Hariyanto, D., 2021: 51). Trading volume refers to the number of shares bought and sold daily, i.e., traded. It is an important technical analysis indicator, as it is used

to measure stock price movements, whether rising or falling. Through technical analysis, companies seek to determine the direction of stock price movements, and based on the analysis results, they provide recommendations to buy or sell stocks (Abbondante, P., 2010: 287). Stock trading volume is defined as the ratio between the number of traded shares and the number of outstanding shares at a given time to make investment decisions. Investors need information, as the availability of published information will alter investor confidence, as evidenced by market reactions. Among these market reactions is the trading volume reaction (Sidanti, H., & Istikhomah, A., 2021: 1359).

3. Practical Aspect

3.1 Financial Analysis of the Study

The main objective of the financial analysis process of the study variables is to understand the financial performance and assess the creditworthiness of the study sample banks, as it contributes to showing the strengths and weaknesses, as well as clarifying the relationship between non-performing loans and market indicators (market value and trading volume), which in turn enhances the accuracy in interpreting the relationship and decision-makers towards more effective options**.**

1. Baghdad Commercial Bank

Table (1) displays the financial data of the Bank of Baghdad. The extracted non-performing loan ratios (NPL%) show that the values are within the normal to acceptable levels, with the ratio ranging between 3% and 4.3% during the study years. It is also noted that the non-performing loan curve recorded its highest value

Table (1) Financial data of the Bank of Baghdad

year	NPL%	Market value (Iraqi dinars)	Annual trading volume (Iraqi dinars)
2014	4.3	387500	53879.8
2015	4.1	292500	30200.7
2016	4	227500	29787.9
2017	3.8	152500	28437.4
2018	3.7	72500	28162.2
2019	3.5	75000	12308
2020	3.4	102500	22144.2
2021	3.3	257500	46593.4
2022	3.2	342500	31665.5
2023	3	875000	220777
MAX	4.3	875000	220777
MIN	3	72500	12308
MEAN	3.63	278500	50395.61

Source: Prepared by researchers based on Iraqi market reports and bank reports

in 2014, at 4.3%, which is an acceptable percentage according to the criteria set for the non-performing loan ratio. The ratio continued to decline until 2023, recording 3%. The average value of non-performing loans during the study period was 3.63%. The market value index of

the bank's shares varied between high and low, as the market value witnessed irregularity. In 2018, the bank recorded its lowest market value of 72,500, which is a low value compared to the first years of the study. This may be attributed to the economic and political conditions in the country and their instability during that period. The market value then rose again in subsequent years, recording its highest value in 2023, at an amount of 3.63%. (875,000) During this period, the market witnessed growth and improvement in its performance and an increase in investors' desire to invest in it. The trading volume index did not differ much from the market value index in terms of activity. In 2023, the highest value of the index was recorded, reaching (220,777), while the average value of the index during the study period was (50,395.61). In general, what can be concluded is that 2023 is considered the best year for the Baghdad Commercial Bank, as shown by the bank's financial statements in the table above.

2. Middle East Commercial Bank

Looking at Table (2), which presents the financial data of Middle East Commercial Bank, it is noted that the bank's non-performing loan ratio ranges between 4.5% and

Table (2) Financial data of the Middle East Bank

year	NPL%	Market value (Iraqi dinars)	Annual trading volume (Iraqi dinars)
2014	6.8	150000	21346.9
2015	6.5	127500	11323.9
2016	6.3	107500	27645.1
2017	6	87500	18956.1
2018	5.8	32500	6147
2019	5.5	25000	2128.4
2020	5.2	30000	792.3
2021	5	50000	33440.3
2022	4.8	35000	1552.3
2023	4.5	30000	849.6
MAX	6.8	150000	33440.3
MIN	4.5	25000	792.3
MEAN	5.64	67500	12418.19

Source: Prepared by researchers based on Iraqi market reports and bank reports

6.8%. This is a worrying rate that requires review by the bank's management, as it is high and cannot give the bank's management confidence in recovering the loan. The possibility of default is high. Despite this, there is a somewhat positive aspect to this: over the years of the study, it is noted that the ratio has been declining. The highest value of non-performing loans was recorded in 2014, at 6.8%. It then began to decline until 2023, when the value of non-performing loans for the Bank of Baghdad recorded 4.5%, the lowest value reached by the non-performing loan ratio during the study period. When moving to the market capitalization index of the bank itself, it is noted that the index value is generally unstable, with a clear decline in the index value during the study years, as the highest market value for the bank was

recorded in 2014, amounting to (150,000), then that value continued to decline until 2019, recording its lowest value (25,000), and then the value continued to fluctuate until 2023. The trading volume index also did not record stability in its values, as the table shows that its value did not stabilize, as the value alternated between rising and falling, as the lowest trading value for the Middle East Bank was recorded in 2020, amounting to (792.3) only, while in 2021 it recorded its highest value (33,440.3). The difference between 2020 and 2021 is a continuation of the fluctuation in the index value during the study period.

3. Gulf Commercial Bank

Table (3) shows the financial data of Gulf Commercial Bank for the period (2014-2023), which demonstrates that the bank's non-performing loan ratio reached (3.5%-5.8%). This ranges between normal and acceptable levels and is worrying and requires review. In the first period of the study, the non-performing loan ratio was (5.8%), which is worrying to the bank's management. The probability of losing these

Table (3) Financial statements of Gulf Bank

year	NPL%	Market value (Iraqi dinars)	Annual trading volume (Iraqi dinars)
2014	5.8	270000	149809.2
2015	5.5	153000	45301.7
2016	5.3	135000	16167.4
2017	5	117000	18468.3
2018	4.8	57000	14421.6
2019	4.5	42000	2065.3
2020	4.3	42000	690.1
2021	4	45000	4055.9
2022	3.8	48000	3364.5
2023	3.5	54000	3316.1
MAX	5.8	270000	149809.2
MIN	3.5	42000	690.1
MEAN	4.65	96300	25766.01

Source: Prepared by researchers based on Iraqi market reports and bank reports

loans is high, which requires the bank's management to make financial decisions to reduce this value. This is what happened in subsequent years. It is noted that the non-performing loan ratio began to decline. In 2023, the lowest non-performing loan ratio for Gulf Commercial Bank was (3.5%). This is a normal and somewhat acceptable ratio, but it demonstrates the extent of improvement in this ratio and the proper work of the disbursement department, which in turn led to a decrease in this value. As for the market value index of Gulf Bank, it is noted through the data shown in the table that the value of the index began to decline during the study period. In 2014, the market value of the bank’s shares was at its highest value, amounting to (270,000), and then the market value began to decline in the years following 2014 until it recorded in 2019 and 2020 the lowest value of the index, amounting to (42,000),

which is less than 20% of its value for the year 2014, while the average market value of the bank reached (96,300) during the study period. The values of the bank's trading volume index were very similar to the market value index in terms of the decline in value, as the highest value of the index was recorded in 2014, amounting to (149809.2), and in 2020, the value of the index was recorded at a lower value of (690.1). The most prominent thing that can be observed from the table above is that there is a problem in the values of the bank's indicators in 2020 specifically, with emphasis on the improvement in the percentage of non-performing loans and the continued instability and decline in the bank's market indicators during the study period.

4. Ashur Commercial Bank

Table (4), which presents the financial data of Ashur Commercial Bank, shows the bank's non-performing loan ratio (NPL%) of 4%-6.3%, which is between normal and

Table (4) Financial data of Ashur Bank

year	NPL%	Market value (Iraqi dinars)	Annual trading volume (Iraqi dinars)
2014	6.3	232500	16032.1
2015	6	107500	15909.7
2016	5.8	85000	407.4
2017	5.5	75000	1010
2018	5.2	57500	2195.6
2019	5	60000	230.5
2020	4.7	70000	293
2021	4.5	110000	1240.9
2022	4.3	100000	162.2
2023	4	105000	1547.3
MAX	6.3	232500	16032.1
MIN	4	57500	162.2
MEAN	5.13	100250	3902.87

Source: Prepared by researchers based on Iraqi market reports and bank reports

worrying. During the first period of the study, Ashur Commercial Bank recorded a worrying NPL% ratio of 6.3%, which required a review of this ratio. Over the years, a clear decline in NPL% ratios has been observed until 2023, when it recorded a value of 4%, a normal ratio compared to 2014. Ashur Bank's market capitalization index shows fluctuations and instability, with the highest value of 232,500 recorded in 2014. In subsequent years, the index's value declined until 2015, when the lowest value was recorded, amounting to 57,500. The bank's market capitalization subsequently increased until 2023, the final year of the study. As for the trading volume index, its value was close to the market value index in terms of instability and decline. In 2022, the lowest trading value for the bank was recorded at (162.2) compared to 2014, when the trading volume index value reached (16032.1), while the average trading volume during the study period for Ashur Bank reached (3902.87).

3.2 Statistical Analysis of the Study

This part of the research aims to use simple linear regression analyses to measure and test the direct impact relationships between the dimensions of the independent study variables (non-performing loans ratio) and the dependent variable of economic growth represented by (market value index and trading volume index), in addition to using the coefficient of determination (R2) to explain the extent of the impact of the independent variables on the changes that occur in the dependent variable, as well as the standard coefficient of regression (Beta), which measures the extent of the response of the dependent variable when the independent variable changes by one standard degree, and using the (Enter) method and Pearson correlation analysis to show the strength of the relationship between the variables.

1. Baghdad Commercial Bank

The test was conducted on data from Baghdad Commercial Bank and on the two sub-hypotheses of the main hypothesis, which were as follows:

A. Results of the First Sub-Hypothesis Test

Simple linear regression analysis was used to test the relationship between credit asset quality (represented by the non-performing loan (NPL%) ratio as the independent variable) and the market value of the bank's shares as the dependent variable. The results showed the following:

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.338[a]	0.115	0.004	236588.9154

a. Predictors: (Constant), NPL%

- The correlation coefficient (R) was 0.338, indicating a weak correlation between the two variables.
- The coefficient of determination (R^2) was 0.115, meaning that only 11.5% of the change in market value can be explained by the non-performing loan ratio.

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	57932980949.407	1	57932980949.407	1.035	.339[b]
	Residual	447794519050.593	8	55974314881.324		
	Total	505727500000.000	9			

a. Dependent Variable: Market value

b. Predictors: (Constant), NPL%

- The value of F = 1.035 and the statistical significance (Sig.) = 33.9%, which is not significant at the 5% significance level.

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	969016.240	682853.914		1.419	0.194
	NPL%	-190224.859	186981.538	-0.338	-1.017	0.339

a. Dependent Variable: Market value

- The regression coefficient B had a negative value of -190224.859, indicating a non-significant inverse relationship.

Correlations

		NPL%	Market value
NPL%	Pearson Correlation	1	-0.338
	Sig. (2-tailed)		0.339
	N	10	10
Market value	Pearson Correlation	-0.338	1
	Sig. (2-tailed)	0.339	
	N	10	10

The results of the Pearson correlation analysis showed a weak negative relationship between the non-performing loan ratio and the market value, as the correlation coefficient reached -0.338 with a significance value of 0.339, which is not significant.

From the above results, we conclude that there is no statistically significant relationship between the quality of credit assets (the ratio of non-performing loans) and the market value of the shares of the Baghdad Commercial Bank, and that the correlation between the variables is weak and not statistically significant. Therefore, we accept the first sub-hypothesis: there is no direct statistically significant relationship between the quality of credit assets and the market value of the shares of commercial banks.

B. Results of the Second Sub-Hypothesis Test

The relationship between credit asset quality (NPL%) and trading volume of Baghdad Commercial Bank shares was analyzed using simple linear regression. The results showed the following:

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.461[a]	0.212	0.114	57402.2007

a. Predictors: (Constant), NPL%

- The correlation coefficient (R) value was approximately 0.461, indicating a close to moderate and negative correlation.
- The R^2 value was approximately 0.212, meaning that 21.2% of the variance in trading volume can be explained by the non-performing loan ratio.

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	7104938141.406	1	7104938141.406	2.156	.180[b]
	Residual	26360101128.863	8	3295012641.108		
	Total	33465039270.269	9			

a. Dependent Variable: Trading volume

b. Predictors: (Constant), NPL%

The value of F = 2.156 reached statistical significance Sig. = 0.180, which is not statistically significant at the 5% level.

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	292214.994	165676.897		1.764	0.116
	NPL%	-66616.910	45366.249	-0.461	-1.468	0.180

a. Dependent Variable: Trading volume

The regression coefficient B = -66616.910, which indicates that the relationship is not significant.

Correlations

		NPL%	Trading volume
NPL%	Pearson Correlation	1	-0.461
	Sig. (2-tailed)		0.180
	N	10	10
Trading volume	Pearson Correlation	-0.461	1
	Sig. (2-tailed)	0.180	
	N	10	10

Pearson's test showed a moderately strong negative relationship between the non-performing loan ratio and trading volume, with a correlation coefficient of -0.461 and a Sig. value of 0.180, indicating that the relationship is not significant.

From the above results, we conclude that there is no statistically significant relationship between the quality of credit assets (the ratio of non-performing loans) and the trading volume of the Baghdad Commercial Bank, and that the correlation between the quality of assets and the trading volume is not statistically significant and cannot be generalized. Therefore, we accept the second sub-hypothesis: there is no direct statistically significant relationship between the quality of credit assets and the trading volume of commercial bank shares.

2. Middle East Commercial Bank

The test was conducted on data from Middle East Commercial Bank and on the two sub-hypotheses of the main hypothesis, which were as follows:

A. Results of the First Sub-Hypothesis Test

A simple linear regression analysis was used between the credit asset quality variable (represented by the non-performing loan (NPL%) ratio) as the independent variable and the market value index as the dependent variable. The results revealed the following:

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.865[a]	0.748	0.717	24840.9818

a. Predictors: (Constant), NPL%

- The correlation coefficient (R) between the two variables was 0.865, indicating a strong correlation between them.
- The coefficient of determination (R Square) was 0.748, meaning that 74.8% of the variance in market value can be explained by the non-performing loan ratio.

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	14675904977.376	1	14675904977.376	23.783	.001[b]
	Residual	4936595022.624	8	617074377.828		
	Total	19612500000.000	9			

a. Dependent Variable: Market value

b. Predictors: (Constant), NPL%

- The value of F = 23.783 at the significance level Sig. = 0.001, which is less than 5%, indicating that the model is statistically significant.

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-229174.208	61339.045		-3.736	0.006
	NPL%	52601.810	10786.164	0.865	4.877	0.001

a. Dependent Variable: Market value

The value of the regression coefficient B was positive and amounted to 52051.810, indicating the presence of a direct relationship between the two variables, and at a significance level of Sig. = 0.001, which indicates that this effect is statistically significant.

Correlations

		NPL%	Market value
NPL%	Pearson Correlation	1	.865**
	Sig. (2-tailed)		0.001
	N	10	10
Market value	Pearson Correlation	.865**	1
	Sig. (2-tailed)	0.001	
	N	10	10

**. Correlation is significant at the 0.01 level (2-tailed).

The Pearson Correlation coefficient between the two variables was 0.865, which is a strong direct correlation coefficient. The statistical significance value (Sig. 2-tailed) was 0.001, which is less than the approved significance level of 5%, which indicates that the relationship is statistically significant.

From the above results, we conclude that there is a statistically significant direct relationship between the quality of credit assets (the ratio of non-performing loans) and the market value of the Middle East Bank, and that there is a strong and statistically significant direct correlation between the quality of assets and the market value. Accordingly, we reject the first sub-hypothesis: there is no statistically significant direct relationship between the quality of credit assets and the market value of commercial bank shares.

B. Results of the Second Sub-Hypothesis Test

A simple linear regression analysis was conducted between the asset quality variable (NPL%) as the independent variable and trading volume as the dependent variable. The results showed the following:

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.431[a]	0.186	0.084	11630.7526

a. Predictors: (Constant), NPL%

The correlation coefficient (R) reached 0.431, indicating a weak direct relationship between the two variables.

The coefficient of determination (R2) showed a value of 0.186, meaning that the percentage of variance in trading volume that can be explained by the non-performing loan ratio is 18.6%.

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	247525001.788	1	247525001.788	1.830	.213[b]
	Residual	1082195255.881	8	135274406.985		
	Total	1329720257.669	9			

a. Dependent Variable: Trading volume

b. Predictors: (Constant), NPL%

The value of F = 1.830 at a significance level of Sig. = 0.213, which is greater than 5%, indicating that the model is not significant.

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	-26110.734	28719.447		-0.909	0.390
	NPL%	6831.370	5050.171	0.431	1.353	0.213

a. Dependent Variable: Trading volume

The regression coefficient value was B = 6831.370, which means the effect value was positive. However, the Sig. value was 0.213, which is greater than 5%, indicating that this effect is not statistically significant.

Correlations

		NPL%	Trading volume
NPL%	Pearson Correlation	1	0.431
	Sig. (2-tailed)		0.213
	N	10	10
Trading volume	Pearson Correlation	0.431	1
	Sig. (2-tailed)	0.213	
	N	10	10

The Pearson Correlation coefficient between the two variables was 0.431, and the statistical significance value (Sig. 2-tailed) was 0.213, which is greater than the approved significance level (0.05), indicating that the relationship is not statistically significant.

From the above results, we conclude that there is no statistically significant relationship between the quality of credit assets (the ratio of non-performing loans) and the trading volume of the Middle East Commercial Bank, and that the correlation between the quality of assets and the trading volume is not statistically significant. Therefore, we accept the second sub-hypothesis: there is no statistically significant direct relationship between the quality of credit assets and the trading volume of commercial bank shares.

3. Gulf Commercial Bank

The test was conducted on data from Gulf Commercial Bank and on the two sub-hypotheses of the main hypothesis, which were as follows:

A. Results of the First Sub-Hypothesis Test

A simple linear regression analysis was used between the credit asset quality variable (represented by the non-performing loan (NPL%) ratio) as the independent variable and the market value index as the dependent variable. The results revealed the following:

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.835[a]	0.697	0.659	43294.9714

a. Predictors: (Constant), NPL%

The correlation coefficient between the two variables (R) was 0.835, indicating a strong correlation between them.

The coefficient of determination (R2) was 0.69.7, indicating that the percentage of variance in market value that could be explained by the non-performing loan ratio was 69.7%.

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	34512463636.364	1	34512463636.364	18.412	.003[b]
	Residual	14995636363.636	8	1874454545.455		
	Total	49508100000.000	9			

a. Dependent Variable: Market value

b. Predictors: (Constant), NPL%

The value of F = 18.412 at the significance level Sig. = 0.003, which is less than 5%, indicating that the model is statistically significant.

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-281618.182	89131.692		-3.160	0.013
	NPL%	81272.727	18940.625	0.835	4.291	0.003

a. Dependent Variable: Market value

The regression coefficient B was 81722.727, indicating a direct relationship, and the Sig. value was 0.003, indicating the significance of the effect.

Correlations

		NPL%	Market value
NPL%	Pearson Correlation	1	.835**
	Sig. (2-tailed)		0.003
	N	10	10
Market value	Pearson Correlation	.835**	1
	Sig. (2-tailed)	0.003	
	N	10	10

****. Correlation is significant at the 0.01 level (2-tailed).**

The Pearson correlation coefficient between the two variables was 0.835, which is a strong direct correlation coefficient. The statistical significance value (Sig. 2-tailed) was 0.003, which is less than the accepted significance level (0.05), indicating that the relationship is statistically significant.

From the above results, we conclude that there is a direct, statistically significant relationship between the quality of credit assets and the market value of the Gulf Commercial Bank, and that the correlation was direct, strong, and statistically significant between the quality of credit assets and the market value. Accordingly, we reject the first sub-hypothesis: there is no direct,

statistically significant relationship between the quality of credit assets and the market value of commercial bank shares.

B. Results of the Second Sub-Hypothesis Test

A simple linear regression analysis was conducted between the asset quality variable (NPL %) as the independent variable and trading volume as the dependent variable. The results showed the following:

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.704[a]	0.495	0.432	34354.3011

a. Predictors: (Constant), NPL%

The correlation coefficient (R) value was 0.704, indicating a moderate direct relationship between the two variables.

The coefficient of determination (R2) value was 0.495, meaning that the percentage of variance in trading volume that can be explained by the non-performing loan ratio was 49.5%.

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	9268377577.206	1	9268377577.206	7.853	.023[b]
	Residual	9441744017.703	8	1180218002.213		
	Total	18710121594.909	9			

a. Dependent Variable: Trading volume

b. Predictors: (Constant), NPL%

The value of F = 7.853 at the significance level Sig. = 0.023, which is less than 5%, indicating that the model is statistically significant.

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	-170078.618	70725.465		-2.405	0.043
	NPL%	42117.124	15029.273	0.704	2.802	0.023

a. Dependent Variable: Trading volume

The regression coefficient B was found to be positive, with the effect value reaching 42117.124, and Sig. = 0.023, indicating that this effect is statistically significant.

Correlations

		NPL%	Trading volume
NPL%	Pearson Correlation	1	.704*
	Sig. (2-tailed)		0.023
	N	10	10
Trading volume	Pearson Correlation	.704*	1
	Sig. (2-tailed)	0.023	
	N	10	10

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

The Pearson Correlation coefficient between the two variables was 0.704, and the statistical significance value (Sig. 2-tailed) was 0.023, which is less than the approved significance level (0.05), indicating that the relationship is statistically significant.

From the above results, we conclude that there is a statistically significant direct relationship between the quality of credit assets (the ratio of non-performing loans) and the trading volume of the Gulf Commercial Bank. The results of the Pearson test confirm the existence of a statistically significant direct correlation between the quality of assets and the trading volume. Therefore, we reject the second sub-hypothesis: there is no statistically significant direct relationship between the quality of credit assets and the trading volume of commercial bank shares.

4. Ashur Bank

The test was conducted on Ashur Bank data and on the two sub-hypotheses of the main hypothesis, as follows:

A. Results of the First Sub-Hypothesis Test

Simple linear regression analysis was used between the credit asset quality variable (represented by the non-performing loan (NPL%) ratio) as the independent variable and market value as the dependent variable. The results revealed the following:

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.418[a]	0.175	0.072	48590.7641

a. Predictors: (Constant), NPL%

The correlation coefficient between the two variables (R) was 0.418, indicating a weak direct correlation.

The coefficient of determination (R2) was 0.175, indicating that the percentage of variance in market value that could be explained by the non-performing loan ratio was 17.5%.

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	4004626136.148	1	4004626136.148	1.696	.229[b]
	Residual	18888498863.852	8	2361062357.981		
	Total	22893125000.000	9			

a. Dependent Variable: Market value

b. Predictors: (Constant), NPL%

The value of F = 1.704 at the significance level Sig. = 0.229, which is greater than 5%, indicating that the model is not statistically significant.

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-41016.853	109553.776		-0.374	0.718
	NPL%	27537.398	21144.414	0.418	1.302	0.229

a. Dependent Variable: Market value

The regression coefficient B was 27537.398, indicating a direct relationship, but Sig. = 0.229, indicating that the effect is not statistically significant.

Correlations

		NPL%	Market value
NPL%	Pearson Correlation	1	0.418
	Sig. (2-tailed)		0.229
	N	10	10
Market value	Pearson Correlation	0.418	1
	Sig. (2-tailed)	0.229	
	N	10	10

The Pearson correlation coefficient between the two variables was 0.418, which is a weak direct correlation coefficient. The statistical significance value (Sig. 2-tailed) was 0.229, which is greater than the accepted significance level (0.05), indicating that the relationship is not statistically significant.

From the above results, we conclude that there is no statistically significant relationship between the quality of credit assets and the market value of Ashur Bank, and that the correlation was a weak and insignificant direct relationship between the quality of credit assets and the market value. Accordingly, we accept the first sub-hypothesis: there is no statistically significant direct relationship between the quality of credit assets and the market value of commercial bank shares.

B. Results of the Second Sub-Hypothesis Test

A simple linear regression analysis was conducted between the asset quality variable (NPL%) as the independent variable and trading volume as the dependent variable. The results showed the following:

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.694[a]	0.481	0.416	4884.5421

a. Predictors: (Constant), NPL%

The correlation coefficient (R) value was 0.694, indicating a moderate to strong positive relationship.

The coefficient of determination (R2) value was 0.481, indicating that the percentage of variance in trading volume that could be explained by the non-performing loan ratio was 48.1%.

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	177058825.780	1	177058825.780	7.421	.026[b]
	Residual	190870008.661	8	23858751.083		
	Total	367928834.441	9			

a. Dependent Variable: Trading volume

b. Predictors: (Constant), NPL%

The value of F = 7.421 at a significance level of Sig. = 0.026, which is greater than 5%, indicating that the model is statistically significant.

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-25801.344	11012.793		-2.343	0.047
	NPL%	5790.295	2125.523	0.694	2.724	0.026

a. Dependent Variable: Trading volume

As for the regression coefficient B, the effect value was positive, reaching 5709.295, and Sig. = 0.026 indicates that this effect is statistically significant.

Correlations

		NPL%	Trading volume
NPL%	Pearson Correlation	1	.694*
	Sig. (2-tailed)		0.026
	N	10	10
Trading volume	Pearson Correlation	.694*	1
	Sig. (2-tailed)	0.026	
	N	10	10

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

The Pearson Correlation coefficient between the two variables was 0.694, and the statistical significance value (Sig. 2-tailed) was 0.026, which is less than the approved significance level (0.05), indicating that the relationship is statistically significant.

From the above results, we conclude that there is a statistically significant direct relationship between the quality of credit assets (the ratio of non-performing loans) and the trading volume of Ashur Commercial Bank. The results of the Pearson test confirm the existence of a statistically significant direct correlation between the quality of assets and the trading volume. Therefore, we reject the second sub-hypothesis: there is no statistically significant direct relationship between the quality of credit assets and the trading volume of commercial bank shares.

Conclusions and recommendations

Conclusions

1. The study concluded that the impact of credit asset quality (non-performing loan ratio) on market value is not constant, as a statistically significant relationship was found in some banks in the study sample, but not in others. This may indicate that credit asset quality may be affected by other factors, such as the economic situation or the nature of the banking market.
2. The results showed that credit asset quality had a more stable correlation with trading volume than with market capitalization, with a statistically significant positive relationship between three out of four banks, indicating that investors respond to the level of credit risk when making trading decisions.
3. The null hypotheses were more strongly rejected when measuring trading volume than market capitalization, suggesting that trading volume is a more sensitive variable to asset quality in the Iraqi banking environment.
4. The results showed that asset quality should be monitored as a key indicator in the financial reports of commercial banks, given its significant impact on investor behavior and confidence.
5. Financial analysis showed that the percentage of non-performing loans for the banks in the study sample had gradually decreased during the study period, with the difference between its values for the banks ranging from normal to worrying, but in general, this can be considered a good indicator in asset management for commercial banks.
6. Through the values of the financial indicators, it was shown that their values were not stable for all the banks in the study sample. The reason for this may be due to the security and economic conditions in the country during the study period and even the primitiveness of the financial market.

3.3 Recommendations

1. Working to enhance credit risk management in commercial banks in general and the banks in the study sample in particular, by establishing effective mechanisms to monitor and reduce non-performing loans, which will reflect more on investor confidence in the financial market.

2. Increase financial disclosure by commercial banks in annual reports, including indicators of non-performing loans and the methods banks take to cover them, which enhances transparency and attracts investors.
3. The necessity of adopting an early warning system in banks that clarifies and monitors the deterioration of credit assets during periods of economic decline, as this has an impact on proactive intervention to reduce the negative impact on the market value of bank shares.
4. Use of expanded analytical models in the future that include intermediate variables such as bank size, profitability, capital adequacy, and others to explain the impact of credit asset quality on the bank's market performance.
5. Encouraging stock market authorities and the Central Bank to monitor asset quality as one of the basic regulatory indicators in assessing banks' efficiency and linking this to disclosure and governance requirements.
6. The study results are used by financial institutions and investors when choosing their investment decisions for bank shares listed on the stock market.
7. The study recommends conducting subsequent studies covering larger samples and longer time periods to test the stability of the relationship and identify the factors most influencing the variance in the results to ensure the generalizability and accuracy of the results.

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