ANALYSIS OF THE CORRELATIONAL-INTEGRATIVE RELATIONSHIP BETWEEN FINANCIAL ANALYSIS USING FINANCIAL RATIOS AND CREDIT RISKS IN THE IRAQI BANKING SECTOR

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Article history:		Abstract:
Received:	14th October 2024	Banks serve as an intermediary linking two essential parties: savers who have surplus funds and investors who require financing. Through their role in attracting both local and foreign savings and accepting them in the form of deposits with various maturities, banks utilize these savings to provide credit facilities and loans. This utilization has a positive impact on the national economy, as it funds projects that contribute to increasing the country's production capacity. However, this process involves several risks that credit decision-makers must consider. To mitigate these risks, banks have sought to use modern financial analysis as a crucial tool for evaluating the success or failure of credit policies. This is done by transforming the data available in financial statements into meaningful information that can be used as a basis for making decisions aimed at achieving financial management goals, maximizing enterprise value, and increasing profits.
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INTRODUCTION

Banks play an important and vital role in the national economy, acting as a bridge between two essential parties: the surplus side (savers) and the deficit side (investors). The dual role of banks involves attracting both local and foreign savings and accepting them as deposits with various maturities, on one hand, and using these savings to provide credit facilities and loans, which positively impacts the national economy by financing projects that enhance the country's production capacity. Therefore, credit operations are considered one of the most critical and precise functions performed by banks, as these operations are always accompanied by risks. Consequently, banks handle credit operations with great importance and pay close attention to them in proportion to the associated risks. The credit process involves numerous considerations, including policies, procedures, and standards aimed at minimizing the risks involved in this process. Banks primarily rely on credit studies of clients, which aim to assess the level of risks that may be faced when granting credit or other facilities. Despite the accuracy of these studies, risks remain present according to the banking principle "no credit without risk."

These risks vary and include risks arising from external factors, risks related to the client or their activities, and risks related to the prevailing conditions in the country, whether economic or political. These risks can result in losses for the bank in terms of both the value of the facilities and their associated interest.

Therefore, banks must rely on financial analysis when making credit decisions, whether for utilizing or obtaining funds. The credit department analyzes the client's financial statements to assess their financial position and ability to generate profits and cash flow. These statements accurately reflect the client's financial solvency and their ability to meet obligations towards the bank. These departments often use financial analysis techniques to convert financial statements into ratios and indicators that assist in making credit decisions.

Research Significance

The significance of the research lies in the prominent role played by financial analysis through its indicators, which provide decision-makers in the credit sector with analytical, evaluative, and predictive tools. Through these indicators and ratios, all aspects of the activities of an institution seeking credit can be assessed. In light of the increasing financial crises and banking setbacks, financial analysis becomes a fundamental tool that reflects the true picture of the institution, thus contributing to making well-thought-out and sound credit decisions.

Research Problem

The research is based on a central problem related to the neglect of the importance and role of modern financial analysis in reducing the risks associated with the credit process, which may expose the banking institution to significant losses. Most Iraqi banks do not pay sufficient attention to analyzing the financial reports and accounting information of the projects seeking financing. Instead, the bank's management heavily relies on the provided collateral when making credit decisions, which impacts the accuracy of such decisions.

Research Hypothesis
"The financial analysis indicators have a significant positive role in reducing credit risk levels."

Research Objectives
The research aims to achieve the following objectives:
1. To understand the nature of financial analysis, its developments, and its key indicators.
2. To understand the nature of credit, its associated policies, and the risks linked to it.
3. To explore the importance of having accounting information and its role in making investment decisions.
4. To clarify the extent to which the bank under investigation relies on modern financial analysis indicators in its credit decision-making.
5. To examine the impact of financial analysis indicators in reducing credit risk levels.

Research Methodology

The descriptive-analytical approach was adopted, which aims to study the problem in depth, helping to clarify the research topic in a better way. This methodology also includes gathering data related to the practical aspect and analyzing it over time to demonstrate the impact of financial analysis indicators in reducing credit risk levels.

Research Boundaries
- Temporal Boundaries: The period from 2014 to 2022.
- Spatial Boundaries: The research is focused on the Iraqi banking sector.

Chapter One: The Concept of Financial Analysis and Its Key Indicators
First: The Concept of Financial Analysis
Financial analysis is closely linked to the needs of various parties involved in a particular project, as it helps them understand the economic variables that have occurred during the course of the project over a specific period and its future development trends. To analyze historical variables and predict the future, financial analysis is used to study the past and compare it with the present in order to explore the future. In this sense, financial analysis is a science focused on providing information to assist stakeholders in making decisions related to the project.

Financial analysis relies on specific rules, standards, and foundations aimed at gathering and classifying the financial data and information of the bank accurately, and then analyzing it in detail to uncover relationships and links between them. For example, financial analysis studies the relationship between current assets (representing the bank's liquidity) and current liabilities (representing short-term obligations), as well as analyzing the relationship between equity and long-term liabilities, and the relationship between revenues and expenses. After analyzing these relationships, the results are interpreted and their causes are identified to uncover strengths and weaknesses in financial plans and policies.

Additionally, financial analysis plays an important role in evaluating control systems and providing appropriate recommendations and solutions in a timely manner (Yahiaoui et al., 2019: 155).

Financial analysis is defined as the process of examining the financial statements and data of a specific institution over a past period to provide information that clarifies the institution's progress during that time and predicts its future performance. In other words, financial analysis focuses on utilizing and analyzing financial reports to assess the institution's financial position and performance, as well as evaluating its anticipated financial performance in the future. It is also defined as a comprehensive diagnosis and evaluation of the financial condition of a specific institution over a past period, with the aim of identifying the positive and negative aspects resulting from the adopted policies. This is done using tools and methods suitable for the nature of the set goals to assist management in making appropriate decisions (Gitman, 2015: 62).
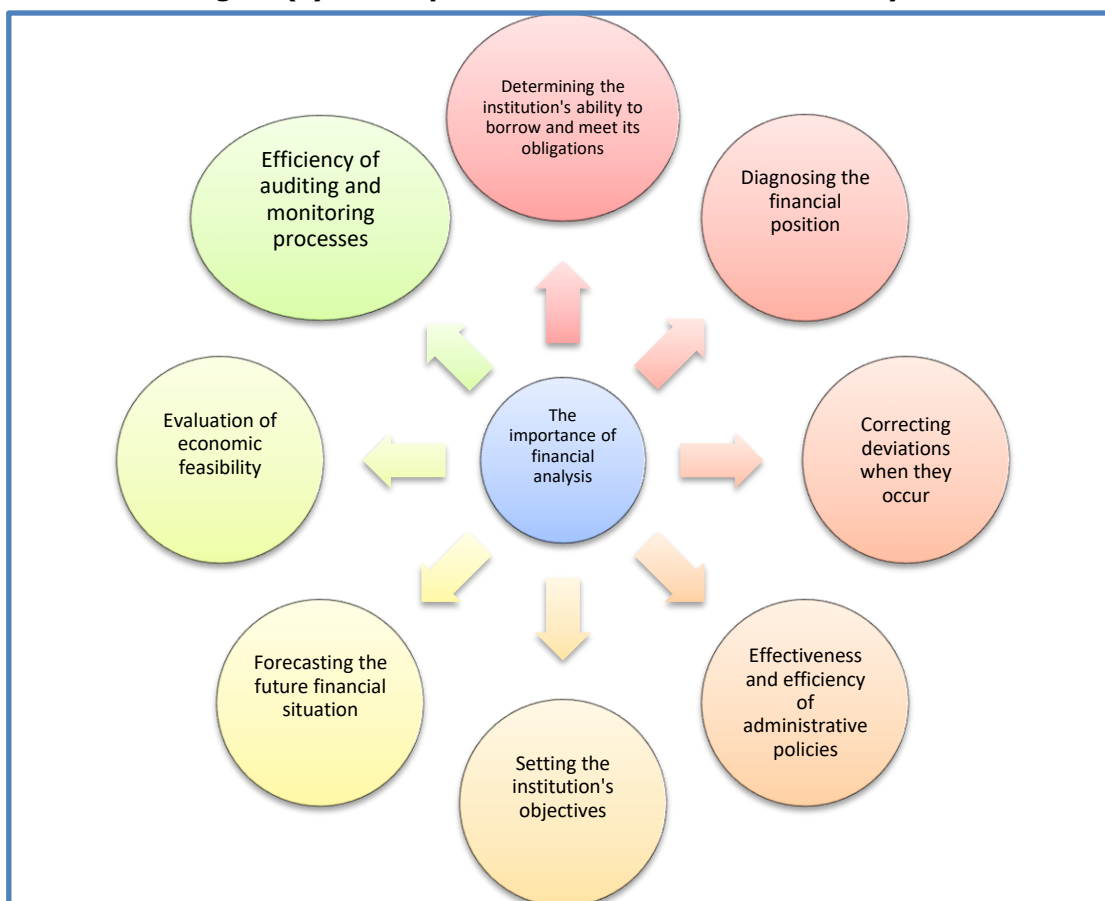
Moreover, financial analysis encompasses a set of processes aimed at studying, understanding, analyzing, and interpreting the financial data available in the institution's financial statements. Financial analysis is used to assess the institution's financial position and performance, provide information that helps in decision-making, correct deviations, and predict the future. Financial analysis is also defined as the process of extracting ratios and percentage indicators from financial and accounting data, enhancing the institution's economic effectiveness (Abd al-Rahim, 2008: 133).

Thus, financial analysis is considered one of the essential tools that a bank can use to assess the success or failure of the policies implemented by the institution. Through reviewing the previous definitions, it can be stated that financial analysis is the process of converting available data in financial statements into meaningful information, which can be used as a basis for making decisions aimed at achieving financial management objectives, such as maximizing the value of the entity and generating profits.

The importance of financial analysis is highlighted as a field of knowledge that focuses on studying financial data to ensure effective control over the use of financial resources. Financial analysis is considered a modern tool for evaluating the performance of institutions, as final accounts alone do not provide a clear picture of the actual financial situation of institutions, since they are historical data. Therefore, it is crucial to link the elements of these accounts together to understand their content through the financial analysis process. Financial analysis of final accounts, conducted according to recognized standards and equations, helps clarify the economic and financial condition of the bank by analyzing account balances and making comparisons to accurately illustrate the financial situation.

Financial analysis focuses on collecting, classifying, measuring, and studying financial data and information, with the goal of achieving proper control over the available financial resources in the project and understanding the relationships between their elements and the meanings of the numbers contained therein. This contributes to estimating the value of the entity and accurately assessing its financial position (Hegazy, 2011: 2).

The importance of modern financial analysis is presented in the following figure:

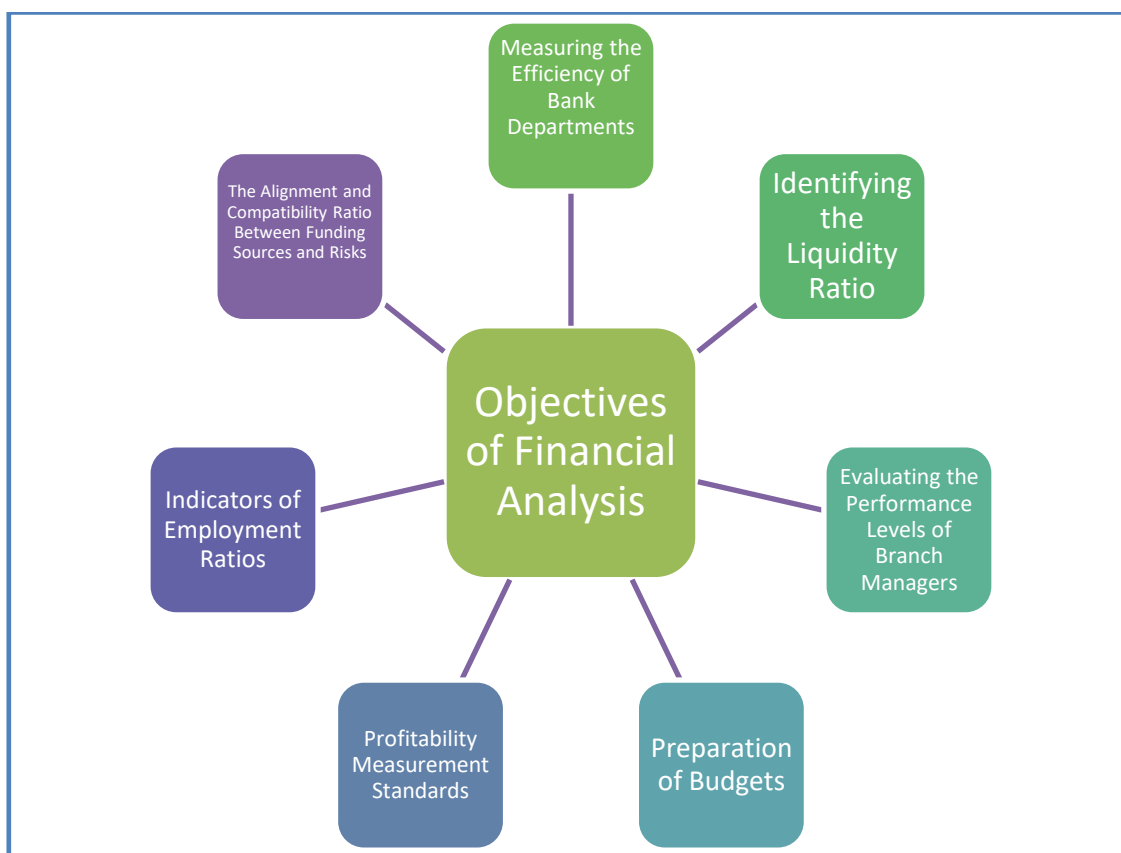**Figure (1) The Importance of Modern Financial Analysis**

The Importance of Financial Analysis in Commercial Banks

Financial analysis holds greater significance at the level of commercial banks, as it serves multiple purposes. Therefore, commercial banks, through their financial management departments, focus on analyzing their final accounts and balance sheets prepared at the end of each fiscal year (Abdullah, 2008: 11). This analysis aims to provide answers to three specific questions:

- How sound is the financial position of the bank?
- How stable are these banks financially?
- What is the profitability position of the bank?

The results of financial analysis are among the most critical foundations relied upon in decision-making and in evaluating the efficiency of management and its ability to achieve optimal resource utilization. Consequently, the objectives and purposes of financial analysis are diverse, making it an essential tool for guiding financial strategies and ensuring effective performance, as illustrated in the following diagram (Al-Kayed, 2010: 161):

Figure (2): Objectives and Purposes of Modern Financial Analysis

Second: Indicators of Modern Financial Analysis

The concept of financial analysis using financial ratios is based on establishing quantitative relationships between data from the income statement, financial position statement, or a combination of income and financial position data over a specific time period. These relationships, developed over time, simplify the financial analysis process by reducing a large volume of information into a defined set of indicative metrics, making them easier to understand and use.

Financial ratios rely on the relationship between the "numerator and denominator," where their values are derived from accounting figures and data listed in the balance sheet or income statement. This relationship must reflect and explain a part of performance while being inherently connected to it. The relationships between accounting data should be based on the numerator and denominator components without alteration.

The significance of financial ratios or performance evaluation cannot be understood without comparing them to specific established benchmarks. Performance is evaluated by comparing the results of financial ratios to approved standards. Financial ratios also transform financial data into a format that facilitates comparison and interpretation of their importance, enabling more effective comparisons among different economic entities. (Damodaran, 2006:153).

From the above, it is evident that this type of financial analysis significantly contributes to understanding the data included in financial statements, thereby supporting management in making various decisions. Financial analysis indicators help identify the strengths and weaknesses in the financial position of the economic entity.

Using these indicators enables the economic entity to evaluate its past achievements and its adherence to approved financial policies. Moreover, financial analysis simplifies a vast amount of data into a small set of clearly indicative financial metrics, allowing the financial analyst to diagnose the financial situation of the economic entity with greater precision.

Thus, financial analysis using financial ratios is considered the optimal approach due to its ability to forecast and examine a range of variables with common characteristics, such as ratios measuring activity or profitability. In horizontal analysis, the financial statement elements are measured based on one or two specific items from their data.

Among the most important financial indicators or ratios relevant to banking are the following:
1 – Liquidity Indicator
Liquidity ratios assist in evaluating and analyzing the financial position of an institution or its working capital, aiming to measure its ability to meet its short-term obligations. Since current liabilities are inherently short-term, it is natural

for them to be settled using short-term resources as well, following the standard of alignment between uses and resources.

Current liabilities include debts and other obligations that must be repaid within a short period. Analyzing liquidity ratios helps the institution assess its ability to settle these obligations from its current resources, thereby enhancing its financial stability and avoiding potential financial difficulties.

Therefore, studying and determining liquidity ratios involves examining both current assets and current liabilities. The most commonly used and widespread liquidity ratios can be summarized as follows (Basadat, 2022: 53):

A - Current Ratio

The current ratio demonstrates the institution's financial ability to meet its obligations to creditors without relying on inventory. There is no standard or model current ratio that can be universally applied to all institutions, as some institutions may have a high current ratio and still face financial insolvency. This is due to the impact of the quality of current assets on the significance of the current ratio (Holm, 2019: 86).

An institution may have a high current ratio but still be unable to meet its current obligations due to the poor quality of its current assets, such as weak collection of trade receivables, low turnover rates overall, or holding stagnant or excessive inventory. Therefore, the current ratio serves as a preliminary indicator to judge an institution's ability to meet its obligations. However, this does not diminish the importance of the current ratio as an initial measure of financial capacity.

The current ratio can be calculated using the following formula (Bin Saniyah, 2018: 104):

Current Ratio = Total Current Assets / Total Current Liabilities

The higher the current ratio, the greater the institution's ability to meet its short-term or current financial obligations.

B -Liquidity Ratio

The liquidity ratio represents the total value of highly liquid current assets relative to current liabilities, as shown in the following formula (Gitman, 2015: 120):

Liquidity Ratio = (Current Assets - Inventory) / Current Liabilities

2 - Profitability Ratios

The primary objective of any institution is to maximize the wealth of its owners, and achieving this goal depends on several factors, including the ability to generate profits. Profitability is a critical measure of how effectively an institution utilizes its funds. Profitability analysis holds great importance for all stakeholders, particularly investors (owners), lenders (depositors), and tax authorities (Ahlam & Naima, 2019: 15).

Moreover, profits play vital economic roles that cannot be ignored. They are essential for addressing risks that the institution may face, ensuring its continuity in business. Profits are also necessary to secure future capital and serve as an indicator of the efforts exerted.

In general, the higher the profits, the more effective and efficient the institution's efforts are deemed to be (Brigham, 2013: 118).

Key Indicators for Measuring Profitability Ratios:

A - Return on Assets (ROA):

This ratio measures the return on the total capital resources available to the institution and is calculated as follows (Hassan, 2019: 160):

ROA = Net Profit / Total Assets

This ratio indicates the amount of profit generated for every unit of currency invested in the institution's assets. In other words, it represents the ratio of net profit to assets, whether these assets are revenue-generating or not.

B - Return on Equity (ROE):

This indicator, known as the return on equity, is used to measure the efficiency of management in generating returns on the funds invested by shareholders. The higher the ROE, the more it demonstrates the optimal use of shareholders' funds and increased profits achieved. This ratio is calculated using the following formula (Richard et al., 2020: 740; Hamid, 2024: 64):

ROE = Net Profit / Equity

C - Net Profit Margin Ratio:

This ratio is used to measure the contribution of each unit of revenue to net profit. It reflects the efficiency of the bank or institution in converting revenues into profits after deducting all expenses, including interest and taxes. The net profit margin is calculated using the following formula (Melicher & Norton, 2017: 436):

Net Profit Margin = Net Income / Net Sales

This ratio provides insight into how efficiently management is at generating profits from total revenue. The higher this ratio, the greater the efficiency in converting revenue into net profit.

3 - Capital Utilization Ratios

These ratios aim to assess the financial institution's efficiency in deploying available funds within the framework of its credit policies. They also measure the bank's performance in utilizing available funds and labor productivity, as well as the returns achieved through investments in various areas.

4 - Total Revenue to Total Investment Ratio:
This ratio is used to measure the bank's efficiency in investing funds and increasing revenue from various investments. The higher this ratio, the greater the bank's efficiency in generating returns from its investments. The return on investment ratio is calculated using the following formula:
Total Revenue to Total Investment Ratio = Total Revenue / Total Investments

5 - Total Revenue to Total Assets Ratio:
This ratio measures the efficiency with which the bank uses its financial resources and human capabilities to provide banking services effectively. It reflects the bank's ability to generate returns from earned interest and commissions. An increase in this ratio indicates proper utilization of assets. The operating efficiency ratio is calculated using the following formula:
Total Revenue to Total Assets Ratio = Total Revenue / Total Assets

Chapter Two: The Development of Banking Credit in Iraq

The evolution of banking activities from traditional operations to modern banking and credit activities has driven banks to invest the funds deposited with them in a variety of financial, commercial, and economic ventures. Banks invest the majority of deposits in accordance with the directives of monetary authorities. One of the most prominent banking activities is credit activity, which plays an active role in financing projects of various sizes, whether small or large, commercial or service-based, contributing to economic development.

Bank credit is defined as the total amount that any individual or company can borrow from a bank or another financial institution. It includes all the funds provided by financial institutions to individuals or companies (Matouq & Al-Shaibani, 2024: 159). This is done through an agreement between the banks and borrowers, where banks offer loans and trust the borrowers' ability to repay the principal and interest later. Whether an individual will receive credit and the amount granted is determined based on an evaluation of their creditworthiness.

There are two types of credit:

1. Cash Credit: This type of credit is granted to borrowers in the form of cash that they can use directly, instead of assets or goods. It includes loans or credit facilities provided in cash, and these funds can be used for various purposes such as financing business operations, purchasing assets, or covering personal expenses.

2. Conditional Credit: This type of credit is provided based on a commitment from the borrower to pay the amounts due according to certain terms. It often requires collateral or guarantees to ensure repayment. It may take the form of letters of guarantee or documentary credits.

As shown in Table (1), the banking sector in Iraq began to practice its credit operations through these two types, with noticeable but divergent trends in their development. Cash credit saw a clear increase between 2014 and 2022, rising from approximately (34,123,067) in 2014 to about (60,576,014) in 2022, with a compound annual growth rate of (7.4%). This increase resulted from the expansion of banks in providing cash loans to individuals, especially after recovering from the effects of the 2014 financial crisis and the COVID-19 pandemic.

On the other hand, conditional credit saw a decline during the same period, largely due to the impact of the ISIS crisis and the fluctuation of the dollar exchange rate, which significantly reduced trade (imports). As a result, conditional credit decreased from around (50,908,393) million dinars in 2014 to approximately (30,380,910) million dinars in 2022, with a compound annual decrease of (-6.3%) over the same period.

In light of the above, it is clear that the largest share of total credit throughout the study period was attributed to cash credit, with an average contribution of approximately (57.7%). This directly affects living standards and price levels, as it contributes to an increase in the money supply in the economy.

Generally, the banking sector's role in financing individuals and businesses is evident, as the total credit extended increased from approximately (85,031,460) million dinars in 2014 to about (90,956,924) million dinars in 2022. Naturally, this has a positive impact on the overall economic variables in the country.

Table (1): Development of Total Banking Credit in Iraq from 2014 to 2022

Year	Conditional Credit (1)	Cash Credit (2)	Total Credit (3)	Ratio 3/1	Ratio 3/2
2014	50908393	34123067	85031460	59.9	40.1
2015	40533153	36752686	77285839	52.4	47.6
2016	33281607	37180123	70461730	47.2	52.8
2017	27651378	37952829	65604207	42.1	57.9

2018	25336633	38486947	63823580	39.7	60.3
2019	25269822	42052511	67322333	37.5	62.5
2020	25450156	49817373	75267529	33.8	66.2
2021	27644173	52971508	80615681	34.5	65.5
2022	30380910	60576014	90956924	33.4	66.6

Source: Central Bank of Iraq, Annual Statistical Bulletins, 2014-2022.

Chapter Three : Credit Risks in the Iraqi Banking Sector

Scholars in the field of financial and banking studies have varying views on the concept of risk due to the diversity of perspectives. Some believe that risks are the changes that occur in both the internal and external environments, which negatively affect the bank. These changes are linked to uncertainty. On the other hand, others argue that financing or investment decisions in financial institutions are made based on a set of assumptions about future events (Schroeck, 2002: 24). Often, knowledge about future events is incomplete, leading to a set of expectations based on previous experiences and studies. This means that these expectations are not certain and carry a degree of uncertainty, which is known as risk. Therefore, risks are considered as the degree of variation or change in the expected returns from investment projects. The higher the degree of variation, the greater the risk. Risk is seen as a deviation from the relative standard of expected investment returns. Based on this, the basic concept of risk involves measuring, forecasting, and estimating the potential outcomes of a specific alternative in the future, which is surrounded by an element of risk (Jabir & Al-Fraiji, 2021: 2).

Credit risk can be explained as the risks that may arise from the inability of the other party to meet its financial obligations to the bank, potentially leading to losses. Credit risks manifest as settlement or payment risks, where one party may have to pay money or deliver assets before receiving the equivalent assets or money in return, exposing them to potential loss. Credit risk may also arise when the partner fails to repay the bank's share when the repayment is due (Lamia, 2016: 46).

It is clear from Table (2) that credit risks in the banking sector, based on the indicator of (Provision for Doubtful Debts / Loan Volume), have shown a gradual and continuous increase throughout the study period, rising from approximately (7%) in 2014 to about (17.8%) in 2022, with an increase more than double. This increase is attributed to the expansion of loan granting, which directly impacts the level of credit risks in the banking sector.

Table (2): Evolution of Credit Risk Indicator in the Iraqi Banking Sector for the period 2014-2022

Year	Loans	Provision for Doubtful Debts	Credit Risk %
2014	34123067	2388614.69	7
2015	36752686	2940214.88	8
2016	37180123	3346211.07	9
2017	37952829	4174811.19	11
2018	38486947	3848694.7	10
2019	42052511	4625776.21	11
2020	49817373	5978084.76	12
2021	52971508	8475441.28	16
2022	60576014	10782530.49	17.8

Source: Central Bank of Iraq, Annual Statistical Bulletins, 2014-2022.

Chapter Three: Measuring the Effects and Correlations between the Research Variables

First: Descriptive Analysis and Presentation of Results Based on Survey Responses

We aim to examine the impact of modern financial analysis theories on the level of credit risks based on the responses of the sample from the banking sector. We will rely on the arithmetic mean as a common and important measure of the average behavior at various levels, where the value of the arithmetic mean represents the central value surrounding all the different values of the variable. Additionally, the standard deviation will be used as one of the most important measures of dispersion, along with the coefficient of variation to compare the spread between two groups. This is the initial condition for controlling the spread of two groups by comparing the distribution properties of the calculated measures for each.

Based on the results, the importance will be ranked, and finally, the level of responses from the studied sample will be determined based on their answers on the five-point Likert scale (from 1 to 5).

The results presented in Table (3) related to financial analysis indicators showed that the highest value was for item (3), which stated that "credit decision-making processes based on a mix of financial indicators play an effective role in reducing credit risk levels." Its arithmetic mean was approximately (4.02), with a standard deviation of around (0.71), resulting in a coefficient of variation of (17.66%). This item ranked first in terms of relative importance, indicating that the banking sector heavily relies on the diversity of indicators used to assess risk levels when making credit decisions.

On the other hand, the lowest value was for item six, which stated that "a reduction in the financial obligations of the borrowing institution can contribute to improving credit risk assessment." Its arithmetic mean was about (3.45), with a standard deviation of (0.90), resulting in a coefficient of variation of (26.08%). This item ranked last in terms of relative importance, suggesting that the indicator of the borrowing institution's financial obligations plays a less significant role in assessing credit risk levels, especially with the potential for a sudden increase in these obligations due to poor management. Therefore, it is not heavily relied upon by credit-granting entities.

Table (3): Descriptive Statistics of Survey Responses on the Financial Analysis Indicators and Their Effect on Reducing Credit Risk Levels.

S	Items	Mean	Standard Deviation	Coefficient of Variation	Response Direction
1	The total revenue indicator is used to successfully control credit risk by understanding the cash inflows of the borrowing institution.	3.90	.92	23.58	Agree
2	The total investments indicator of the borrowing institution is used appropriately to reduce credit risk.	3.92	.94	23.97	Agree
3	Credit decision-making processes based on a mix of financial indicators play an effective role in reducing credit risk levels.	4.02	.71	17.66	Agree
4	There is a need to develop and enhance the effective use of modern financial indicators in reducing credit risk.	3.72	.95	25.53	Agree
5	Profitability indicators play an important role in reducing credit risk.	3.47	1.04	29.97	Agree
6	A reduction in the financial obligations of the borrowing institution can contribute to improving credit risk assessment.	3.45	.90	26.08	Agree
7	There is a need to develop new regulatory policies to address the financial distress of borrowing institutions from the banking sector in order to reduce the scale of credit risk.	3.53	.91	25.77	Agree
8	A high turnover ratio provides a clearer picture of the borrowing institution's assets, which can increase its ability to repay in case of default.	3.54	.90	25.42	Agree
	Overall average				**Agree**

Source: Prepared by the Researcher
Second: Analysis of the Correlation and Impact Relationship Between Research Variables

This section of the chapter aims to analyze the relationship between the independent variable, which is represented by the indicators of modern financial analysis, and the dependent variable, which reflects the level of credit risk. The Pearson correlation coefficient will be used as a statistical tool to discover the nature of the relationship between these variables, in terms of both its strength and direction. If there is a positive correlation between two variables, it means that an increase in one variable is associated with an increase in the other. On the other hand, if there is a negative correlation, it indicates that an increase in one variable is linked to a decrease in the other.

The correlation is considered strongly positive when its value ranges between (+0.3) and (+0.9), meaning that an increase in one variable is associated with a clear increase in the other variable. The correlation is considered acceptably positive when it ranges between (+0.5) and (+1), where the positive direction remains, but with less strength than in the case of a strong positive correlation.

On the other hand, the correlation is strongly negative when its value ranges between (-0.3) and (-0.9), indicating that an increase in one variable is associated with a significant decrease in the other variable. If the correlation is weakly negative, it falls between (-0.5) and (0), suggesting that an increase in one variable might be associated with a slight or negligible decrease in the other variable.

Additionally, if the value of the correlation coefficient is (+1), this indicates a perfect positive correlation, meaning that an increase in one variable always leads to a proportional increase in the other variable by the same percentage. Conversely, if the value of the correlation coefficient is (-1), this indicates a perfect negative correlation, where an increase in one variable leads to a proportional decrease in the other variable by the same percentage. If the value of the correlation coefficient is (0), this indicates no correlation between the variables, meaning that a change in one variable is not associated with any change in the other variable.

First: Testing the First Main Hypothesis of the Research, which states that "Modern financial analysis indicators have a significant positive role in reducing credit risk levels."

It is evident from Table (4) that the correlation coefficient between modern financial analysis indicators and credit risk levels reached (0.803) at a significance level of (0.000), which is less than the significance level of (0.05), indicating a significant correlation between these indicators and the ability to reduce the risk levels associated with credit decisions.

Therefore, it is essential for banks to rely on these indicators in a diversified manner according to the subject of the research, in a way that suits the nature of each bank in terms of its development, governance practices, and the extent of its use of modern technology. This can contribute to reducing risk levels and achieving the institution's goals. Additionally, relying on these indicators enhances the banks' commitment to modern international standards.

Table (4) Results of the Correlation Relationships Between the Research Variables

Variables	Theories of Financial Analysis	Credit Risk
Financial Analysis Indicators	1	0.803
Credit Risk	0.803	1

Source: Prepared by the Researcher

To test the hypothesis that "Financial analysis indicators play a significant positive role in reducing credit risk levels," the analysis will be conducted using the simple linear regression model as follows:

$$Y = α + β(X)$$
$$Y = 0.486 + 0.532(X)$$

It is evident from Table (5) that the calculated value of (F) between the financial analysis indicators and credit risk is (25.183), which is greater than the tabulated (F) value of (3.94) at a significance level of (0.05). Based on this, we accept the hypothesis that "Financial analysis indicators contribute to reducing credit risk levels" at a significance level of (5%), corresponding to a confidence level of (95%).

Furthermore, the coefficient of determination (R^2) value of (0.817) indicates that financial analysis indicators explain (81.7%) of the variations in credit risk, while the remaining (18.3%) is attributed to other variables not included in the research model. Additionally, the marginal slope coefficient (β) of (0.532) shows that the use of financial analysis indicators by one unit will lead to a (53%) improvement in risk levels. Moreover, the constant value (α) in the equation is (0.486).

Table (5): Impact Relationship Analysis

Independent Variables	Dependent Variable	Constant (α)	Slope Coefficient (β)	(R^2)	Calculated (F)	Tabulated (F)	Sig	Significance
Financial Analysis Indicators	Credit Risk	0.486	0.532	0.817	25.183	3.94	**0.000**	**Significant**

Source: Prepared by the Researcher
Chapter Five: Conclusions and Recommendations
1. CONCLUSIONS
1. The research hypothesis was confirmed based on the correlation coefficient, which showed a significant relationship between financial analysis indicators and the ability to reduce levels of risk associated with credit decisions.

2. Financial analysis indicators explain 81.7% of the changes that occur in credit risk, while the remaining 18.3% can be attributed to other variables not included in the research model. According to the R^2 value, there is a significant impact of financial analysis indicators on credit risk levels, supported by the statistical significance and validity of this result based on the computed F value.

3. The banking sector heavily relies on the diversity of indicators used to assess the level of risk when making credit decisions, as evidenced by the respondents' answers to the statement that "credit decision-making based on a mix of financial indicators plays an effective role in reducing credit risk."

4. The financial obligations ratio of the borrowing institution plays a minimal role in assessing credit risk, especially considering the potential for sudden increases in these obligations due to mismanagement within the institution. Consequently, this indicator is not heavily relied upon by credit providers, as reflected in the respondents' answers to the statement that "a decrease in the financial obligations of the borrowing institution can help improve the assessment of credit risk."

2. RECOMMENDATIONS
1. It is essential to adhere to modern financial analysis indicators, including liquidity and profitability ratios, in accordance with international standards (Basel III) and the local standards set by the Central Bank of Iraq, particularly complying with the credit concentration standard. This is aimed at reducing the level of risks associated with the credit process.

2. The Central Bank should intensify efforts to raise banking awareness regarding the importance of modern financial analysis, educate stakeholders on its relevance, and mandate banks to adopt it. This step will contribute to achieving efficient and effective management of banking risks in general, and credit risks in particular.

3. Banks should reduce potential credit risks by adopting effective banking inquiry methods aimed at assessing the size of the risks associated with credit issuance. This requires focusing on preventive methods implemented by credit management to avoid those risks, while considering the outcomes of indicators derived from financial analysis. Through this integrated approach, banks can achieve accurate credit risk assessments and enhance their ability to make safer and more sustainable credit decisions.

4. Financial institutions should hedge against risks by managing them effectively, as the safety and strength of banks are fundamental to economic growth and the stability of the financial system. Consequently, authorities have focused on changing the regulatory approach to include potential future risks that could threaten the financial position of banks. This means adopting a proactive regulatory response instead of reacting after the problem occurs.

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