



The Effect of Credit Risk Management on the Profitability of Commercial Banks

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Abstract – This study examines the effect of credit risk management on the financial performance of a selected commercial bank operating in Iraq over the period 2019–2024. The research is grounded in secondary data obtained from audited annual reports and publicly available financial disclosures. Key financial indicators—including Return on Assets (ROA), Return on Equity (ROE), Capital Adequacy Ratio (CAR), Debt-to-Equity ratio, operating income, and net profit—are analyzed using descriptive and trend analysis techniques. The findings reveal a substantial improvement in profitability, with ROA increasing from 0.60% to 8.00% and ROE rising from 2.70% to 42.00%, indicating markedly enhanced operational efficiency and shareholder returns. The subject institution maintained robust capital adequacy throughout the review period, ensuring financial stability and resilience against credit-related risks. However, the Debt-to-Equity ratio remained relatively elevated, reflecting continued reliance on financial leverage. The study concludes that effective credit risk management played a pivotal role in improving financial performance, supported by improvements in asset quality, prudent provisioning practices, and strong operational growth. These findings underscore the importance of balancing profitability with risk to ensure long-term institutional sustainability in the banking sector.

Keywords – Credit Risk Management, Financial Performance, Return on Assets, Return on Equity, Capital Adequacy, Commercial Banks, Emerging Markets, Iraq.

I. INTRODUCTION

Background of the Study

The banking sector plays a pivotal role in the economic development of any nation by mobilizing savings and allocating financial resources to productive investments. Commercial banks, as financial intermediaries, facilitate economic growth by providing credit to individuals, businesses, and governments (World Bank, 2020). However, lending activities inherently expose banks to various types of risks, among which credit risk is the most significant and pervasive. Credit risk refers to the possibility that a borrower or counterparty will fail to meet their contractual obligations in accordance with agreed terms (Basel Committee on Banking Supervision, 2017). This risk arises primarily from lending operations, which constitute a major portion of banks' assets and revenue streams.

The importance of credit risk management has been increasingly emphasized in modern financial systems, particularly following the Global Financial Crisis of 2007–2008. The crisis demonstrated how weak credit risk assessment, excessive lending, and inadequate regulatory oversight could lead to widespread financial instability and institutional failures (International Monetary Fund, 2009). Consequently, international regulatory frameworks such as Basel II and Basel III have established comprehensive guidelines to ensure that banks maintain sufficient capital buffers and adopt sound risk management practices (Basel Committee on Banking Supervision, 2017).

Empirical studies further confirm that effective credit risk management significantly influences bank performance.

Greuning and Bratanovic (2009) emphasized that proper risk assessment enhances financial stability and profitability. Similarly, Kargi (2011) found that poor credit risk management negatively affects bank profitability, while Hosna et al. (2009) identified a strong relationship between credit risk indicators and financial performance. In developing economies such as Iraq, the significance of credit risk management is even more pronounced due to economic volatility, political uncertainty, and limited financial infrastructure (Ahmed & Malik, 2015; Alshatti, 2015).

Concept of Credit Risk Management

Credit risk management (CRM) is a systematic process through which financial institutions identify, measure, monitor, and control the risk of default associated with lending activities. It involves evaluating borrowers' creditworthiness, setting appropriate credit limits, diversifying loan portfolios, and continuously monitoring loan performance. Effective CRM seeks to achieve a balance between risk and return by ensuring that institutions maximize profitability while maintaining acceptable levels of risk exposure.

Banks and financial institutions employ various techniques to manage credit risk, including:

- Credit appraisal and scoring models
- Collateral requirements and security arrangements
- Diversification of loan portfolios across sectors and geographies
- Hedging strategies and financial instruments
- Continuous monitoring mechanisms and proactive recovery processes



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Problem Statement

The stability and efficiency of the banking sector are critical determinants of economic growth and financial development. However, banks are inherently exposed to significant risks due to their reliance on lending activities. Credit risk, in particular, poses a major threat to financial stability, as borrower defaults can lead to substantial losses, reduced profitability, and, in extreme cases, institutional failures (Basel Committee on Banking Supervision, 2017). Despite the growing importance of credit risk management, many financial institutions—especially in developing economies—face challenges in implementing effective risk management frameworks, including inadequate credit assessment systems and weak regulatory enforcement (World Bank, 2020).

In the context of Iraqi commercial banks, limited empirical studies have examined how credit risk management influences financial performance using recent, longitudinal financial data. This creates a significant research gap that the present study aims to address. The central problem is to examine the extent to which credit risk management affects the financial performance and stability of a representative commercial bank in Iraq during the period 2019–2024.

Significance of the Study

This study holds significant importance for multiple stakeholders, including banking institutions, regulators, investors, and academic researchers. For bank management, the findings provide valuable insights into how credit risk management practices impact profitability and financial stability, thereby supporting improvements in risk assessment processes and lending strategies. For regulators and policymakers, the results contribute to the development of more effective regulatory frameworks and supervisory mechanisms. From an academic perspective, this research addresses gaps in the literature by providing longitudinal empirical evidence from an emerging market context, particularly Iraq.

Research Objectives

The primary objective of this study is to evaluate the impact of credit risk management on the financial performance of a selected commercial bank in Iraq. The specific objectives are as follows:

1. To analyze the relationship between credit risk management and profitability, focusing on Return on Assets (ROA) and Return on Equity (ROE).
2. To assess the role of capital adequacy in maintaining financial stability and absorbing credit-related risks.
3. To evaluate the impact of financial leverage on the institution's risk profile using debt ratios.
4. To examine the contribution of operational performance indicators—such as EBIT margin and interest coverage ratio—in reducing credit risk.
5. To investigate the effect of operational efficiency on institutional creditworthiness.

Scope and Delimitations

This study is limited to the financial analysis of a selected commercial bank operating in Iraq over a six-year period spanning 2019 to 2024. It focuses on evaluating the relationship between credit risk management and financial performance using key financial ratios derived from audited financial statements. The study primarily relies on secondary data obtained from annual financial reports, publicly available financial disclosures, and relevant stock exchange publications. The findings are therefore specific to the institutional context under review and may not be directly generalized to the broader Iraqi banking sector.

II. REVIEW OF LITERATURE

Introduction

Credit risk management has emerged as a central theme in contemporary banking research because it sits at the intersection of bank profitability, solvency, and systemic stability (World Bank, 2020; Basel Committee on Banking Supervision, 2017). In liberalized and increasingly integrated financial systems, banks are expected to expand credit to support economic growth, yet they must do so without compromising portfolio quality or endangering depositors and investors, making effective credit risk management a core governance and regulatory concern (Greuning & Bratanovic, 2009).

Over the years, numerous empirical and theoretical studies have examined the relationship between credit risk management and bank performance across different institutional, regulatory, and macroeconomic contexts (Abiola & Olausi, 2014; Ali et al., 2019). In both developed and emerging markets, research generally finds that high levels of non-performing loans (NPLs), weak underwriting standards, and inadequate monitoring are associated with lower ROA and ROE, while sound credit policies, adequate provisioning, and strong capital buffers are linked to superior profitability (Kolapo et al., 2012; Li & Zou, 2014).

Conceptual Overview of Credit Risk

Credit risk is commonly defined as the probability of loss resulting from a borrower's failure to repay a loan or otherwise meet contractual financial obligations (Greuning & Bratanovic, 2009). In the banking context, this risk arises primarily from traditional loan portfolios but also originates from off-balance-sheet exposures, guarantees, trade finance, and counterparty risk in derivatives transactions (Boffey & Robson, 1995). Because loans and advances typically constitute the largest component of bank assets, credit risk is widely regarded as the most significant risk faced by banks (Abiola & Olausi, 2014).

Eveline (2010) highlighted a fundamental paradox in banking: while lending is essential for profitability and developmental finance, it simultaneously exposes institutions to default risk, concentration risk, and sectoral shocks, making effective credit risk management indispensable for sustainable growth. Njanike (2009) further argued that failures in credit evaluation, monitoring,



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and recovery are often at the core of banking crises, particularly in developing countries where rapid credit expansion is not matched by improvements in risk management capacity.

Credit Risk Management and Bank Performance

A large body of empirical research has established a strong relationship between credit risk management and financial performance, typically measured by ROA and ROE (Abiola & Olausi, 2014; Kolapo et al., 2012). Abiola and Olausi (2014), in their study of Nigerian commercial banks, found that credit risk indicators significantly affect profitability, with higher NPLs and weaker risk controls associated with lower ROA and ROE. Similar conclusions are reported across emerging markets, where institutions that maintain stringent credit standards and adequate provisioning tend to outperform peers with aggressive but poorly controlled lending strategies (Ali et al., 2019).

Mwangi (2012) analyzed financial institutions in Kenya and concluded that credit risk indicators such as the NPL ratio and CAR significantly influence performance, with higher credit risk negatively affecting both profitability and capital strength. Li and Zou (2014) similarly reported that banks with lower credit risk and stronger capital positions tend to achieve better profitability, confirming the robustness of this relationship across regions. However, Afriyie and Akotey (2013) found a positive relationship between NPLs and short-term profitability in certain rural banks, suggesting that some institutions offset higher default risk through interest rate pricing strategies.

Capital Adequacy and Financial Stability

Capital adequacy is a critical component of credit risk management because it determines an institution's ability to absorb unexpected losses and remain solvent in the face of adverse shocks (Poudel, 2012; Basel Committee on Banking Supervision, 2017). Regulatory capital requirements, as codified in the Basel accords, ensure that banks maintain sufficient capital buffers relative to their risk-weighted assets, protecting depositors and contributing to overall financial stability. Poudel (2012) identified CAR as a key determinant of bank performance, noting that higher capital levels are associated with greater financial stability, lower probability of failure, and, in many cases, improved profitability.

Ali and Dhiman (2019) found that capital adequacy positively influences profitability in public sector banks, indicating that well-capitalized institutions are better positioned to manage risks, expand lending, and generate sustainable returns. In contrast, Mwangi (2012) observed that while capital adequacy is important, its direct impact on profitability may vary depending on asset quality and economic conditions, suggesting a potentially non-linear relationship between capital and performance. For banks in developing economies, capital adequacy assumes an even more central role in ensuring resilience to credit and market disturbances (World Bank, 2020).

Leverage and Credit Risk Exposure

Financial leverage is another critical factor influencing credit risk, reflecting the extent to which a bank finances its assets with debt rather than equity (Adeusi & Dada, 2017). High leverage, typically measured through Debt-to-Equity and Debt-to-Assets ratios, can amplify both returns and losses, making institutions more sensitive to credit shocks during economic downturns. Adeusi and Dada (2017) reported that excessive leverage negatively impacts performance and increases vulnerability, as highly leveraged banks have thinner capital cushions and less flexibility to absorb loan losses.

Ugoani (2012) found that poor credit risk management combined with high leverage contributed significantly to bank failures, where rapid asset growth was not matched by adequate capital and risk controls. On the other hand, moderate leverage can enhance profitability by allowing institutions to expand lending activities and benefit from the spread between lending and funding rates, provided that credit risk is well managed and capital remains adequate (Kolapo et al., 2012). These findings highlight the need for a balanced approach to leverage management to support growth while avoiding structural fragility.

Credit Risk Management in Developing Economies

Banks in developing economies face unique challenges in managing credit risk, stemming from structural factors such as weak legal frameworks, limited availability of reliable credit information, political interference, and macroeconomic instability (World Bank, 2020; Afriyie et al., 2018). Afriyie et al. (2018) examined credit risk management practices in Ghana and found that strategic approaches, including strong corporate governance, robust internal controls, and effective monitoring systems, are essential for minimizing credit risk and enhancing bank performance.

In the context of Iraq, limited research exists on credit risk management and its impact on bank performance, despite the country's exposure to political instability, security risks, and oil-price-driven macroeconomic fluctuations (World Bank, 2020). Available studies tend to focus on broader financial sector issues or use aggregated data, leaving a gap in terms of detailed, institution-level analyses of credit risk practices. The present study contributes to filling this gap by providing longitudinal empirical evidence using a comprehensive set of credit risk management indicators.

Operational Efficiency and Credit Risk

Operational efficiency plays a significant role in managing credit risk and enhancing financial performance because it affects both the cost structure and the quality of risk processes (Eveline, 2010). Efficient institutions are better able to allocate resources to credit appraisal, monitoring, and recovery functions, ensuring that potential problems are identified early and addressed proactively, which in turn helps maintain asset quality and control NPLs. Recent studies have also highlighted the importance of advanced technologies, including predictive analytics and machine



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learning, in enhancing credit risk assessment and decision-making processes (Addy et al., 2024; Rehman et al., 2019).

Research Gap and Conceptual Framework

Despite the extensive body of literature on credit risk management and financial performance, most empirical studies are concentrated in developed economies and large banking systems. Limited attention has been given to emerging markets—particularly the Iraqi banking sector—where institutional structures, regulatory environments, and risk dynamics differ significantly. Moreover, existing studies often rely on cross-sectional or regression-based approaches, with relatively less emphasis on longitudinal trend analysis using recent post-2019 financial data.

In addition, few studies integrate multiple financial indicators—such as profitability, capital adequacy, leverage, and operational performance—within a single analytical framework. This creates a gap in understanding how these variables interact over time in a real-world banking context. The present study aims to fill this gap by conducting a structured financial analysis of a representative commercial bank in Iraq over the period 2019–2024.

Hypothesis Development

Drawing on the reviewed literature and the conceptual framework, the study formulates the following research hypotheses:

- H1 – Credit Risk Management and Financial Performance: Credit risk management variables have a significant positive impact on ROA and ROE.
- H2 – Capital Adequacy and Financial Performance: The Capital Adequacy Ratio (CAR) has a significant positive effect on financial performance.
- H3 – Leverage and Credit Risk Exposure: Leverage ratios (Debt-to-Equity and Debt-to-Assets) have a significant negative effect on financial performance.
- H4 – Operational Performance and Risk Reduction: Higher EBIT margin and interest coverage ratio significantly reduce credit risk and improve financial performance.
- H5 – Efficiency and Creditworthiness: The efficiency ratio has a significant negative impact on financial performance.

III. THEORETICAL FRAMEWORK AND METHODOLOGY

Introduction

This chapter presents the theoretical foundation underpinning the study and outlines the methodology adopted to examine the effect of credit risk management on the profitability of a selected commercial bank in Iraq. The theoretical framework explains how established financial and economic theories interpret the relationship between risk, return, capital, leverage, efficiency, and governance in banking. Building on this foundation, the methodology describes the research design, data sources, operational

definitions of variables, and analytical techniques used to empirically evaluate the relationship between credit risk management and financial performance over the period 2019–2024.

Research Design

The study adopts a descriptive and interpretative research design to evaluate the relationship between credit risk management and financial performance. The descriptive approach is used to systematically present financial data, while the interpretative approach is applied to analyze trends, patterns, and relationships among key financial variables. The research is based on a longitudinal approach, covering six consecutive years to capture changes in financial performance over time. A single-institution case study method is employed, which allows for an in-depth analysis of financial behavior within a real-world institutional context, providing practical insights into how credit risk management influences performance.

Data Source and Collection

The study is based entirely on secondary data collected from reliable and publicly available sources. The primary data source consists of audited annual reports of the subject institution for the period 2019–2024, providing comprehensive financial information including income statements, balance sheets, and key financial indicators. Additional supporting data has been obtained from financial summaries, regulatory disclosures, and relevant financial publications. The use of audited financial statements ensures accuracy, credibility, and consistency in the data used for analysis.

Variables of the Study

- Dependent Variables (Financial Performance Indicators)
- **Return on Assets (ROA):** Measures the institution's ability to generate profit from its total assets, reflecting operational efficiency and effective resource utilization.
- **Return on Equity (ROE):** Measures the return generated on shareholders' funds, indicating the institution's capacity to generate profit from equity capital.
- **Net Income:** Represents total profit after deducting all expenses, provisions, and taxes; a direct indicator of financial performance.
- **Operating Income:** Reflects income generated from core banking activities, indicating operational strength and revenue-generating capacity.

Independent Variables (Credit Risk and Financial Structure Indicators)

- **Capital Adequacy Ratio (CAR):** Measures capital strength and the ability to absorb potential losses arising from credit risk, reflecting compliance with Basel III regulatory standards.



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- **Debt-to-Equity Ratio (D/E):** Represents the level of financial leverage, measuring the proportion of liabilities relative to shareholders' equity.
- **Debt-to-Assets Ratio:** Indicates the proportion of total assets financed through liabilities, reflecting overall leverage and financial risk exposure.
- **EBIT Margin:** Measures earnings before interest and taxes as a proportion of total revenue, capturing operational profitability.
- **Interest Coverage Ratio:** Indicates how comfortably the institution can meet interest obligations from operating earnings, reflecting financial health.
- **Efficiency Ratio:** Compares operating expenses to operating income, indicating cost management performance and operational efficiency.

Measurement of Variables

Based on the theoretical framework and the institution's financial statements, key indicators are computed using standard financial formulas. Profitability indicators include ROA (Net Income / Total Assets) and ROE (Net Income / Shareholders' Equity). Credit risk-related indicators include CAR (Regulatory Capital / Risk-Weighted Assets), Debt-to-Equity (Total Liabilities / Shareholders' Equity), Debt-to-Assets (Total Liabilities / Total Assets), EBIT Margin (EBIT / Total Revenue), Interest Coverage Ratio (EBIT / Interest Expense), and Efficiency Ratio (Operating Expenses / Operating Income). These ratios are calculated annually for the study period and form the basis of the subsequent analysis.

Data Analysis Techniques

This study employs a combination of descriptive and interpretative analytical techniques. Descriptive analysis is used to organize and present financial data in tabular and graphical forms, enabling clear visualization of trends over time. Interpretative analysis is applied to examine patterns, relationships, and underlying financial dynamics. A trend analysis approach assesses changes in financial indicators across the 2019–2024 period, identifying growth patterns, fluctuations, and structural developments. Ratio analysis, widely used in financial research, evaluates profitability, capital strength, and leverage, providing meaningful insights into the effectiveness of credit risk management practices.

Limitations of the Methodology

The study is limited by its reliance on secondary data obtained from published financial reports, which restricts the ability to explore internal credit risk management practices in detail. The absence of advanced statistical techniques such as regression analysis limits the establishment of causal relationships; however, the use of trend and ratio analysis provides valuable insights into financial performance dynamics. Additionally, the focus on a single institution limits the generalizability of findings to the broader banking sector. Despite these limitations, the methodology provides a clear and structured framework for

analyzing the relationship between credit risk management and financial performance over the study period.

Ethical Considerations

The study uses publicly available, audited financial statements and does not involve direct interaction with human participants. As such, there are no personal data or privacy concerns. Care is taken to present financial information accurately, to avoid misrepresentation, and to interpret results objectively. Any limitations related to data availability or measurement are explicitly acknowledged to maintain transparency and academic integrity.

IV. DATA ANALYSIS AND INTERPRETATION

Introduction

This chapter presents a detailed and systematic analysis of the financial performance of the subject institution for the period 2019–2024, with particular emphasis on the role of credit risk management in shaping profitability, capital strength, leverage, and operational stability. The analysis is based on published annual reports and related financial disclosures. Indicators analyzed include Return on Assets (ROA), Return on Equity (ROE), Capital Adequacy Ratio (CAR), leverage position, operating profitability, and overall efficiency.

The presentation follows a structured academic format in which each key variable is introduced through a numbered table, followed by analytical interpretation. Since the research examines the effect of credit risk management on financial performance, the selected indicators are interpreted not merely as accounting outcomes, but as reflections of the institution's broader risk posture, asset-quality orientation, capital discipline, and earnings strategy over the review period.

Profitability Analysis

Profitability is one of the most direct indicators of financial performance, revealing the extent to which management converts resources into earnings. In banking institutions, profitability reflects the joint outcome of lending policy, asset quality, funding decisions, operating efficiency, and risk management discipline.

Return on Assets (ROA)

Table 4.1: Return on Assets (ROA) – Selected Commercial Bank, Iraq (2019–2024)

Year	ROA (%)
2019	0.60%
2020	1.42%
2021	2.00%
2022	4.00%
2023	6.00%
2024	8.00%

Source: Audited Annual Reports of the Subject Institution (2019–2024)



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The Return on Assets ratio demonstrates a strong and continuous upward movement over the study period, rising from 0.60% in 2019 to approximately 8.00% in 2024. This trajectory indicates that the institution significantly improved its ability to generate profit from its total asset base. The relatively modest ROA in 2019 reflects limited asset productivity at the beginning of the study period; however, the ratio accelerated steadily through 2020, 2021, 2022, and 2023, reaching its highest level in 2024. This pattern may be associated with stronger asset deployment, improved income generation from financial intermediation activities, and enhanced control over credit-related losses through more prudent credit risk management practices.

From the perspective of the study objectives, the ROA results suggest that the institution's financial performance improved materially during the review period. This strengthens the argument that effective credit risk management—including improved asset quality, prudent provisioning, and selective deployment of funds—positively influences profitability. The movement in ROA accordingly supports Objective 1 and provides evidence consistent with Hypothesis H1.

Return on Equity (ROE)

Table 4.2: Return on Equity (ROE) – Selected Commercial Bank, Iraq (2019–2024)

Year	ROE (%)
2019	2.70%
2020	7.30%
2021	10.00%
2022	18.00%
2023	32.50%
2024	42.00%

Source: Audited Annual Reports of the Subject Institution (2019–2024)

Return on Equity increased substantially over the period, rising from 2.70% in 2019 to approximately 42.00% in 2024. This demonstrates that the institution's capacity to generate returns for shareholders improved significantly during the study period. The annual reports indicate that the institution achieved high growth in profit while simultaneously expanding its equity base, meaning that the rise in ROE was not merely the result of a shrinking denominator, but also of stronger earnings performance. Net profit expanded from approximately IQD 7.3 billion in 2019 to over IQD 306 billion in 2024, a development that reflects growing financial strength and more efficient use of capital.

It should be noted that ROE must be interpreted with caution in banking studies, as it may be influenced by leverage. A bank can report higher ROE not only because it is more profitable, but also because it relies more heavily on liabilities relative to equity. In the case of the subject institution, leverage ratios remained elevated during much of the period, suggesting that part of the ROE increase may reflect the effect of funding structure. Nevertheless, the dominant implication remains positive: earnings

performance improved markedly, and returns generated on shareholders' funds grew increasingly strong across the six-year period, further supporting Hypothesis H1.

Capital Adequacy Analysis

Capital adequacy is a central concept in banking analysis because it indicates the extent to which an institution can absorb unexpected losses without threatening solvency. It is particularly important in a study of credit risk management because credit losses, if not properly covered by capital and provisions, can rapidly erode financial stability. The Capital Adequacy Ratio therefore serves as a direct indicator of institutional resilience and compliance with prudential standards established by regulatory authorities.

Table 4.3: Capital Adequacy Ratio (CAR) – Selected Commercial Bank, Iraq (2019–2024)

Year	CAR (%)
2019	64.00%
2020	28.58%
2021	33.75%
2022	52.00%
2023	52.00%
2024	43.42%

Source: Audited Annual Reports of the Subject Institution (2019–2024)

The Capital Adequacy Ratio remained exceptionally strong throughout all years of the study period. The ratio stood at approximately 64.00% in 2019, declined to 28.58% in 2020—primarily due to changes in regulatory methodology and the implementation of IFRS 9 under Basel III, which increased the risk-weighted asset base—then rose again to 33.75% in 2021 and stabilized at approximately 52.00% in 2022 and 2023, before moderating to 43.42% in 2024. Even at its lowest point, the CAR remained substantially above minimum regulatory benchmarks, indicating that the institution consistently maintained a considerable buffer against risk-weighted exposures.

From an interpretive standpoint, a robust CAR is highly relevant to this study as it reflects the institution's capacity to absorb losses arising from credit defaults or other adverse shocks. In practical terms, strong capital adequacy protects depositors, reassures regulators, strengthens market confidence, and reduces the probability that credit losses will destabilize the institution. These findings support Objective 2 and are consistent with Hypothesis H2, which posits that capital adequacy positively contributes to financial stability and enhances the institution's capacity to manage credit risk effectively.

Leverage Analysis

Leverage is an important dimension of the institution's financial structure because it shows the extent to which assets are financed through liabilities relative to equity. In banks, leverage is naturally higher than in many non-financial firms, yet excessive reliance on borrowed funds



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can increase vulnerability during adverse conditions. In this study, leverage is examined because it interacts closely with credit risk management: a highly leveraged institution may experience amplified pressure if asset quality deteriorates or profitability weakens.

Table 4.4: Debt-to-Equity Ratio – Selected Commercial Bank, Iraq (2019–2024)

Year	Total Assets (IQD '000)	Equity (IQD '000)	Liabilities (IQD '000)	D/E Ratio
2019	1,132,744,205	273,641,424	859,102,781	3.14×
2020	1,419,528,237	278,435,852	1,141,092,385	4.09×
2021	1,539,808,657	309,129,877	1,230,678,780	3.98×
2022	1,724,199,578	349,626,266	1,374,573,312	3.93×
2023	2,748,497,945	471,428,908	2,277,069,037	4.81×
2024	3,545,961,264	727,516,049	2,818,445,215	3.87×

Source: Audited Annual Reports of the Subject Institution (2019–2024)

The Debt-to-Equity ratio remained elevated throughout the period, ranging from approximately 3.14× in 2019 to 4.09× in 2020, declining slightly to 3.98× in 2021 and 3.93× in 2022, peaking at 4.81× in 2023, and moderating to 3.87× in 2024. This confirms that the institution relied heavily on liabilities to finance its asset base—a structural characteristic typical of commercial banks, yet significant from a risk perspective. A high D/E ratio implies that a relatively small equity base supports a much larger volume of assets, amplifying the potential impact of adverse credit shocks on equity positions.

The leverage increases between 2019 and 2020, and again between 2022 and 2023, coincide with strong growth in total assets and net profit, suggesting that leverage was used to support institutional expansion and profitability. The existence of a very strong capital buffer, as reflected in the CAR results, mitigated some risks associated with this leverage structure. From the perspective of the study, the leverage results support Objective 3 and are broadly consistent with Hypothesis H3: high leverage creates structural exposure that makes continued vigilance in risk management essential for maintaining stability.

Operational Performance Analysis

Operational performance is essential in banking analysis because it reflects the institution's ability to generate income from core business activities while managing risk, expenses, and funding obligations effectively. An institution that improves operating income, reduces unnecessary cost burdens, and strengthens recurring revenue is generally better positioned to absorb credit losses and maintain resilience during periods of uncertainty.

Table 4.5: Net Operating Income and Net Profit – Selected Commercial Bank, Iraq (2019–2024)

Year	Net Operating Income (IQD '000)	Net Profit After Tax (IQD '000)
2019	28,967,355	7,298,604
2020	39,786,150	20,200,071
2021	61,249,785	29,980,364
2022	91,350,664	53,154,485

2023	177,170,663	155,781,991
2024	465,018,705	306,832,365

Source: Audited Annual Reports of the Subject Institution (2019–2024)

The institution's net operating income from interest and commissions increased steadily from approximately IQD 28.97 billion in 2019 to IQD 465.02 billion in 2024. Net profit after tax rose in parallel from IQD 7.30 billion in 2019 to IQD 306.83 billion in 2024. These trends confirm that the institution's core banking activities became substantially more productive over time and that operational strength contributed significantly to overall financial performance. The annual reports attribute these improvements to higher net commission income, stronger foreign exchange earnings, enhanced asset quality, and tighter control over operating expenses.

The upward trajectory of operating income and net profit supports Objective 4 and Hypothesis H4. Improved operational performance strengthened the institution's ability to absorb credit-related costs, sustain high levels of capital adequacy, and deliver strong profitability, thereby reinforcing the positive role of credit risk management in overall financial performance.

Efficiency Analysis

Efficiency in banking refers to the ability to control operating costs relative to income generated from activities and services. Even a profitable institution can face long-term pressure if expenses increase faster than revenues. In studies of credit risk management, efficiency is also relevant because institutions with stronger systems, better processes, and disciplined cost structures are generally better able to screen borrowers, monitor exposures, and respond to emerging risks.

Although a fully consistent numerical efficiency ratio for all years requires detailed extraction of identical line items from each annual report, the available evidence indicates that the subject institution improved cost management during the review period. Financial disclosures note meaningful reductions in operating expenses relative to income alongside strong growth in overall profitability. Similarly, the institution pursued process improvements, digital transformation, and centralization of operations, all of which support more efficient resource use.

From the standpoint of Objective 5 and Hypothesis H5, the qualitative and partial quantitative evidence suggests that efficiency gains contributed to improved profitability and resilience. Operational efficiency and credit risk management reinforced each other during 2019–2024, and these dynamics align with findings from the broader academic literature that efficient cost management reduces vulnerability and supports long-term sustainability (Eveline, 2010; Addy et al., 2024).



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Integrated Discussion of Findings

The analysis reveals a broad pattern of strengthening profitability, high capital resilience, improved operational results, and persistently elevated leverage over the review period. ROA and ROE increased steadily; net operating income and net profit grew substantially; and CAR remained well above regulatory minima in every year. These outcomes are consistent with strategies of enhancing asset quality, implementing IFRS 9, investing in lower-risk assets, and maintaining a robust capital base.

At the same time, the institution operated with a high Debt-to-Equity ratio, indicating that the balance-sheet structure remained heavily liability-funded. This means that the improved profitability and strong capital adequacy were achieved within an environment of structural financial risk. The combination of high leverage and high capital underscores the importance of continued vigilance: while capital buffers and strong earnings mitigate risk, they do not eliminate the potential impact of credit shocks or funding pressures. It should be noted that a portion of the profitability improvement may be leverage-driven rather than purely efficiency-driven, which represents an important consideration for long-term sustainability.

Hypotheses Assessment

- **H1** – Credit Risk Management and Financial Performance: Supported. The strong upward trends in ROA and ROE, together with improved asset quality and conservative investment policies, provide evidence in favour of this hypothesis.
- **H2** – Capital Adequacy and Financial Stability: Supported. The consistently high CAR, even following the adoption of Basel III and IFRS 9, provides strong evidence in favour of this hypothesis.
- **H3** – Leverage and Financial Risk: Partially supported. The high D/E ratios confirm significant structural leverage and associated financial risk, although strong capital adequacy and profitability mitigated adverse effects during the study period.
- **H4** – Operational Performance and Profitability: Supported. The substantial increase in net operating income and net profit, alongside evidence of strong liquidity and cost control, supports this hypothesis.
- **H5** – Efficiency and Creditworthiness: Conceptually supported. Qualitative and partial quantitative evidence of improved cost management and process efficiency indicates that this hypothesis is valid; a full numerical efficiency ratio series would further strengthen the conclusion.

V. FINDINGS, RECOMMENDATIONS, CONCLUSION, AND LIMITATIONS

Introduction

This chapter presents the major findings of the study, followed by recommendations, conclusions, and limitations. The purpose is to interpret the results obtained

from Chapter 4 in relation to the research objectives and hypotheses. The findings are derived from the financial analysis of a selected commercial bank in Iraq over the period 2019–2024, focusing on the impact of credit risk management on financial performance.

Major Findings

1. Return on Assets (ROA) increased significantly from 0.60% in 2019 to 8.00% in 2024, indicating substantially improved efficiency in utilizing assets for profit generation.
2. Return on Equity (ROE) rose from 2.70% to 42.00%, reflecting strong growth in shareholder returns and enhanced earnings performance.
3. The Capital Adequacy Ratio (CAR) remained consistently above regulatory requirements throughout the study period, demonstrating robust capital strength and financial stability.
4. The Debt-to-Equity ratio remained elevated throughout the period, indicating continued reliance on liability-based funding and the presence of structural financial risk.
5. Operating income and net profit showed substantial growth, particularly after 2022, indicating improved operational performance and revenue generation.
6. The institution demonstrated improved cost control and operational efficiency, as reflected in the widening gap between income and profit.
7. Overall, the findings indicate that effective credit risk management contributed positively to profitability, stability, and operational performance, consistent with the study's hypotheses.

Recommendations

1. The institution should continue to strengthen its credit risk management practices to maintain asset quality and contain credit risk exposure.
2. It is recommended to maintain an optimal balance between profitability and leverage to avoid excessive financial risk accumulation.
3. The institution should further reinforce its capital base to sustain high capital adequacy levels and ensure financial stability under adverse conditions.
4. Management should focus on improving operational efficiency through cost control, process optimization, and digital transformation.
5. Diversification of non-interest income sources—such as commissions and investment activities—is advisable to reduce dependence on traditional lending income.
6. Adoption of advanced technologies and data analytics tools is recommended to enhance credit risk assessment capabilities and decision-making quality.
7. Continuous monitoring of key financial risk and performance indicators is essential to ensure long-term institutional sustainability.



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Conclusion

This study concludes that credit risk management has a significant positive impact on the financial performance of commercial banks operating in developing economies such as Iraq. The analysis of financial indicators demonstrates substantial improvement in profitability, capital adequacy, and operational performance over the study period 2019–2024. Effective credit risk management practices—including improved asset quality, prudent provisioning, and strong capital planning—contributed to enhanced financial outcomes. At the same time, the presence of high financial leverage indicates that structural financial risk warrants continued attention from management, regulators, and investors.

Overall, the study confirms that credit risk management is a critical determinant of financial stability and long-term sustainability in the banking sector. The findings support the research objectives and validate the proposed hypotheses, contributing to the growing body of empirical literature on credit risk management in emerging market banking institutions.

Limitations of the Study

The study is limited to the analysis of a single institution, which may restrict the generalizability of findings to other banks or financial institutions. The use of secondary data from annual reports may also limit the scope of analysis, as the study depends on the accuracy and availability of published information. The study focuses primarily on financial ratios and does not incorporate advanced statistical methods or primary data, which may limit the depth of causal inference. Additionally, the efficiency analysis is based partly on qualitative assessment due to the unavailability of a fully consistent data series across all years. Future research should consider multi-institution panel studies incorporating regression-based techniques to strengthen causal claims and enable broader generalization.

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