

# The Impact Of Business Risk Audit on the Quality of IFRS Application

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## Abstract

This study aims to explore the impact of a business risk-based audit approach in quality application of International Financial Reporting Standards in Kurdistan International Islamic Bank for Investment and Development in Erbil, for the period (2005-2020). The quantitative approach was adopted where the financial statements were analysed using multiple regression models to test the relationship between operating risk, liquidity risk, credit risk, capital risk and financial reporting quality standards. The results show that there is a significant relationship between business risk and the quality of financial reports, which demonstrates the importance of effective audit in enhancing the accounting disclosure. While the liquidity risk relationship was marginal significance.

**Keywords:** Business Risk-Based Audit, Quality of Financial Reporting, Risk Management, Islamic Banks, IFRS.

## Introduction

The traditional audit cycle has historically been associated with finding confidence in the credibility of financial statements. This cycle has evolved over time, across three generations of audit practice. However, concerns have arisen within the audit community about

compliance with the financial reporting standards to ensure the organization's long-term sustainability. Despite adherence to professional standards and ethical conduct, significant differences, often arising from accounting violations, have been identified within the financial statements. These differences often relate to various business risks that the organization's management may ignore in its financial disclosures. This concern led audit professionals to recognize the need to adopt a new approach, resulting in the beginning of the fourth generation of auditing.

The fourth-generation approach places a strong emphasis on establishing an effective control system and recognizes its profound impact in ensuring reliable financial reporting. This approach assumes that these violations are often rooted in an organization's failure to adequately consider risks in its operating environment, which can hinder its ability to achieve its strategic objectives (Djama, 2003). The fourth-generation approach requires auditors to have a thorough understanding of the organization's strategies, processes, and operating environment to determine the fairness of the financial statements. Therefore, this requires enhancing the auditors' skills to recognize risks that directly or indirectly affect financial statements and understand their consequences.

In addition, a risk-based approach mitigates risks affecting financial statements, reducing errors during financial reporting (Laith, 2021). Among the most significant risks facing the financial institutions are credit risk, operational risk, business risk and liquidity risk, which can result in direct and indirect losses. These losses often arise from a lack of the control within accounting systems and may be exacerbated by inefficient internal processes or human factors. These human factors may lead to misrepresentation and concealment of facts, ultimately leading to the collapse and failure of many international companies. The adoption of International Financial Reporting Standards (IFRS) is associated with rapid recognition of losses and reduced profit management. Thus, a risk-based approach includes risk assessment and data testing to measure the quality of IFRS application.

Therefore, this study assumes a low level of quality of financial reporting, mainly due to the lack of application of the IFRS, with emphasis on the fair value measurement. However, the previous studies examined, in the banking sector, individually the determined factors and their impact on financial reporting and compliance with the standards, providing valuable insights into the complexities of risk management and its implications for accounting practices (Barth et al., 2008). Nevertheless, a noticeable gap remains in understanding how these combined categories of risk affect the quality and consistency of financial reporting, particularly in relation to IFRS.

### **Problem Statement**

The traditional approach for the internal audit is undergoing transformation based on the current developments in enterprise management and risk reduction. The goal is to establish a framework that addresses the issues related to risks that hinder the achievement of the organization's goals. In addition, a primary focus is placed on maximizing annual profits and investing in increasing capital reserves. Accordingly, this study highlights the importance of assessing and measuring the risks faced by the financial institutions using indicators that provide an accurate description of those risks and indicate the prominent role it plays in enhancing the regulatory effectiveness.

In view of the adoption of the modern approach to risk-based internal auditing, significantly in Islamic banks in general and especially in emerging economies, and the need

to evaluate its application in the Kurdistan International Islamic Bank (KIB)<sup>1</sup>, this study addresses a fundamental issue related to the possibility of measuring the impact of business risk auditing on the quality of application of IFRS, with a special focus on the Kurdistan International Islamic Bank during the period from 2005 to 2020. Therefore, this represents an important entry point in assessing the quality of financial reports. It highlights the Bank's commitment to the fair value measurement and demonstrates the effectiveness of the application of International Financial Reporting Standards at KIB.

It is also important to note that the accounting policies of KIB stipulate that financial reports are prepared in accordance with the Financial Accounting Standards issued by the Accounting and Auditing Organization for Islamic Financial Institutions (AAOIFI), in addition to the International Financial Reporting Standards (IFRS) issued by the International Accounting Standards Board (IASB) for the matters that are not covered by the Islamic Financial Accounting Standards. This is also done in accordance with the relevant local laws and directives issued by the Central Bank of Iraq (Kurdistan International Islamic Bank for Investment and Development, 2020).

Many organizations<sup>2</sup> have adopted the risk-based audit approach and recommended its application through the issuance of new standards and publications, as well as the need to qualify internal auditors and provide them with the knowledge and skills that enable them to understand this modern approach.

### **Research Hypotheses**

Null hypothesis (H0): There is no significant relationship between business risk and the quality of IFRS application in Kurdistan International Islamic Bank for Investment and Development during the period from 2006 to 2020.

Alternative hypothesis (H1): There is a significant relationship between business risk and the quality of IFRS application in Kurdistan International Islamic Bank for Investment and Development during the period from 2006 to 2020.

Therefore, based on the problem of the study and the goal, the following research hypotheses are proposed:

- H1: There is a significant relationship between credit risk and the quality of IFRS application in the financial reporting practices of the Kurdistan International Islamic Bank for Investment and Development during the period from 2006 to 2020.
- H2: There is a significant relationship between liquidity risk and the quality of IFRS application in the financial reporting practices of Kurdistan International Islamic Bank for Investment and Development during the period from 2006 to 2020.
- H3: There is a significant relationship between capital risk and the quality of IFRS application in the financial reporting practices of Kurdistan International Islamic Bank for Investment and Development during the period from 2006 to 2020.

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<sup>1</sup> - Appendix (1)

<sup>2</sup> Among these professional organizations are the following: 1- The American Institute of Internal Auditors. 2- Association for the Care of Institutions Koso. 3- Basel Committee on Banking Supervision in its publication 223. 4- International Financial Action Task Force (FATF). 5- International Standards Organization ISO.

- H4: There is a significant relationship between operational risk and the quality of IFRS application in the financial reporting practices of Kurdistan International Islamic Bank for Investment and Development during the period from 2006 to 2020.

These hypotheses were formulated based on the assumption that effective business risk audit practices, including credit risk, liquidity risk, capital risk, and operational risk, could affect IFRS compliance and the quality of its application in the context of the financial institution identified in the study. These hypotheses will be tested to determine the strength and significance of these relationships, contributing to a deeper understanding of the dynamics between risk management and the quality of financial reporting.

### **Research Contribution**

This research will contribute to the fields of risk management and compliance with accounting standards by conducting a thorough investigation on the impact of a business risk audit on the quality of the application of IFRS. The research focuses on the Kurdistan International Islamic Bank for Investment and Development during the period from 2006 to 2020.

Therefore, the main contributions of this research can be summarized as follows:

- Increase the understanding of the impact of risk management: The research provides valuable insights into the complex relationship between business risk audit practices, and the quality of IFRS application in the banking context. By examining this relationship empirically, the research contributes to a deeper understanding of how comprehensive risk management strategies affect the compliance with international standards.
- Addressing the critical knowledge gap: While previous academic research has explored the effects of individual risk factors on financial reporting and standards compliance (Barth et al, 2008), this research addresses the critical gap in academic research by investigating the societal impact of different risk classes. Highlights how the combined effects of these factors affect the communication and the quality of financial reporting within a particular financial institution.
- Practical insights into the banking sector: The results of this research provide practical deliberations for the banking industry, providing guidance on the development and implementation of effective business risk audit procedures. Financial institutions can utilise the lessons learned from this research to improve their risk management strategies in ways that positively impact the compliance with IFRS standards and thus the credibility of their financial reports.
- Contribute to the IFRS Dialogue: By examining the relationship between risk management and the compliance with IFRS, this research contributes to the broader dialogue on the importance of IFRS in enhancing the transparency and comparability in financial reporting, especially in the banking sector.

This research makes a significant contribution to understand how business risk audit practices, including credit risk, liquidity risk, capital risk, operational risk, and market risk, affect the quality and consistency of IFRS implementation in a specific context for banks. It provides practical and theoretical insights that can benefit scholars and practitioners alike in the fields of risk management and the compliance with the international standards.

### **Financial Reporting**

Financial reporting is a set of activities that are adopted to serve the needs of users of financial information that they need from the organization. Moreover, the quality of financial reporting

is the process of communicating financial and non-financial information with a high level of transparency in order not to mislead the user. It is measured using three indicators as the following (FASB, 2006):

1. Quality and Profit Management
2. Quality of application of accounting standards
3. Quality of accounting information

### **Risk Identification**

Identifying the potential risks is the first step in effective risk management, where the existing and potential risks are defined in the Bank's various activities and operations. Risk identification is usually done through various methods, including questionnaires and personal interviews with the bank's employees to seek their opinions on potential risks. Moreover, the process analysis and redesign can also be used to detect vulnerabilities and sources of risk. In addition, there are some techniques for risk identification such as risk and impact analysis and scenario analysis to determine the likelihood of risk occurring and their potential effects (Rejda, 2005). The risk identification process needs to be constantly updated to be aware of any changes.

### **Development of The Internal Audit Plan**

Reviewing and auditing business risks is one of the most important elements on which the internal audit plan should have. A study (Djama C., 2003) emphasized the importance of managing and reviewing the risk in general and its role in enhancing the quality and transparency of the financial performance of banking institutions. Alvin et al. (2013) showed in their research that auditing plays a vital role in detecting the risks and minimizing their impacts on the financial statements. Therefore, developing the audit plan in KIB should be based on a risk-based approach to ensure the effectiveness of the audit process and reduce the bank's exposure to risk.

The process of developing a risk-based audit plan in Islamic banks faces challenges, including the difficulty of accurately measuring and identifying business risks due to the diversity of banks' activities. Whereas the application of the risk-based audit model requires trained expertise in risk management and analysis. Therefore, the bank can overcome these challenges by benefiting from the expertise of other banking bodies in the field of risk management, as well as conducting training programs and using advanced techniques to identify and measure the risk.

### **Islamic Banks Business Risk Types and How to Estimate Them**

Islamic banks face business risks including uncertainty caused by multiple factors which may hinder the achievement of the banks' objectives and the implementation of their strategies. These risks fall within the category of financial risk and include the potential for unexpected losses and exposure to bankruptcy. Moreover, the risks can be measured as uncertainty (Najafi, 1977). The comprehensive risk management framework in Islamic banks includes the creation of an appropriate environment and tools to identify, assess, measure, control and mitigate these risks. This approach is compliant with the standards of the Basel Committee on Banking Supervision (International Federation of Accountants, 2009). To ensure effective risk management, the financial institutions should establish internal control mechanisms that include monitoring, measuring, tracking, and assessing various types of risks (Hamayza and Fares, 2016; Fawzai and Tamimi, 2018; Penikas, 2020; Amin, 2016).

According to the Central Bank of Iraq<sup>3</sup>, the main risks and how to measure them are the following:

- Credit risk arises from the possibility of defaulting by the other party of its obligations (Al-Gharic, 2003; Abu Shaaban, 2016). It is high in Mudarabah and Musharakah due to the problem of information asymmetry (Noraini et al., 2009). Credit risk is realized due to external factors such as the recession or internal factors such as poor credit risk management (Radwan and Mustafa, 2012; Al-Madhoun, 2011).
- The risks of investing in Islamic banks include retaining existing customers and the ability to attract the potential customers, which is shared by all banks. Islamic banks also face risks due to the nature of their activities such as the risks of financing by Murabaha, Salam, Istisna'a, Musharaka and Mudaraba (Aisha, 2018).
- The rate of return is an important metric for measuring the relationship between risk and return. It balances the expected return and potential risk of assets and activities, helping managers make sound decisions (Khan and Ahmed, 2003). It can also be used to evaluate performance by measuring losses. The end of the nineties witnessed a significant development in this measure, as it became one of the best standards used in the financial sectors.
- Liquidity risk includes the bank's ability to cover obligations on time without delay (Abdullatif, 2017). It includes the bank's ability to cover short-term liabilities without losses (Mustafa and Radwan, 2012). They also face difficulties in providing liquidity to cover obligations on time (Abu Shaaban, 2016). The bank works to prevent them by using its cash reserves and its reserves that are held by the Central Bank (Aisha, 2018; Halassa and Ramadan, 2013).
- Operational risk includes a measurement of uncertainty surrounding operations that affect the achievement of the objectives (Dahdouh et al., 2014). Operating risks in Islamic banks are represented by internal factors such as weak control and human resources, and external factors such as natural disasters (Abdelnour and Bardar, 2021). These risks are increased because of the expansion of the banks' activities (Aisha, 2018).

Moreover, there are many negative impacts on unmanaged risks in Islamic banks, most notably:

- Significant financial losses due to banks' exposure to credit, market, and operational risks (Iqbal and Mirakhor, 2011).
- Reduced liquidity at the bank due to the accumulation of non-recoverable debts.
- Loss of confidence by customers and depositors which may threaten the continuity of the bank (Rejda, 2005).
- The exposure of the bank to regulatory risks such as fines imposed by regulators (Arena, 2008).
- Negative repercussions on the reputation and surface of the bank with the public.

Efficient risk management has become an urgent necessity to maintain the stability and safety of the Islamic banks.

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<sup>3</sup> Measuring the risks that the Central Bank of Iraq focused on- Appendix (2)

### Financial Reporting in Financial Institutions

Financial reporting aims to reveal the resources and operations of the organization (Ogbonn and Ebimobowei, 2011). Moreover, the Financial Accounting Standards Board (FASB) defined it as the delivery of information to decision makers (FASB, 2006). The reported information is intended to guide investment decisions effectively and the objective of financial reporting is to provide appropriate and reliable financial information about the institution to the entities and parties benefiting from it for the purpose of taking appropriate decisions in a timely manner.

The quality of financial reporting means the extent to which the information contained in the financial reports is accurate in reflecting the reality of the company's operations, the reality of its economic location, and the results of its business, and therefore the quality of accounting information will be related to and affect both the statement of financial position and the income statement (Brahmi, 2017).

The International Financial Reporting Standards (IFRS) are important standards that contribute to improving the level of disclosure and transparency in the financial sector. These standards raise the level of financial disclosure of institutions, which enhances the soundness of administrative and investment decisions (Sorji and Hussein, 2020).

### The Quality of Measuring Financial Reporting by Measuring the Quality of Accounting Standards

The adoption of IFRS would achieve the quality of accounting standards, and then achieve high quality financial reporting, characterized by the characteristics of accounting information such as appropriateness and honest representation, as well as comparability so that it meets the investor's needs for the disclosed financial information, in the form of financial reports by the institutions that offer their shares, where the investor can study and distinguish investment opportunities for the comparability of financial reports, as they are based on one accounting standards ( Kythreotis, 2014). In addition, the financial reports prepared under IFRS are more appropriate than annual reports prepared under locally accepted accounting principles, due to the different impact on the basic qualitative characteristics between them (Beest et al., 2009).

The application of IFRS in Iraq in the banking sector in general, according to the directives of the Central Bank of Iraq, as these standards were adopted based on the Central Bank of Iraq's No. (12/9) on 4/1/2016. The Tobin's Q scale was used to measure the quality of IFRS application. (Chung and Pruitt, 1994).

$$\text{Tobin's Q} = \frac{MVE + QS + Debt}{TA}$$

#### Whereas:

Tobin's Q: measure the quality of financial reporting, which is represented by the quality of the application of the standards.

MVE: the annual closing price (according to the Iraq Stock Exchange bulletin) multiplied by the number of subscribed shares.

QS: Monetary value of preferred shares in the bank (The value is zero because there are no preferred shares in Iraq).

Debt: Current liabilities - current assets + long-term liabilities.

TA: Total assets.

If is  $TQ < 1$ , this indicates that the market value of the bank is higher than the value of its assets, and thus this reflects the existence of quality financial reporting and vice versa.

**The Multifaceted Impact of Business Risks on the Quality of Application of IFRS**

This section highlights the research that explore the multifaceted impact of business risk on the quality of IFRS application. Credit and liquidity risk management is essential for financial institutions operating under IFRS. In addition, effective credit risk management practices can contribute to raising the quality of profits (Aboody et al., 2005), while well-established liquidity risk management contributes to improving the quality of profits.

The adoption of IFRS led to an increase in more comprehensive risk detection, especially with regard to credit risk (Barth et al., 2008) which increased transparency and contributed to improving the quality of financial reporting. The effectiveness of credit risk management plays a key role in ensuring financial stability and indirectly affects the quality of financial reporting, especially for banks that follow IFRS (Mitchell and Corbett, 2000). The market perceptions, in which credit risk is significantly affected, affect stock prices and investor confidence (Ivashina and Scharfstein, 2010) ultimately and, therefore, affecting the quality of financial reporting. Additionally, transparent disclosure practices around credit risk are essential to building trust among stakeholders (De Franco et al., 2011) positively and, therefore, impacting the quality of financial reporting within the IFRS framework. In addition, understanding how economic factors affect credit risk, as proposed by Campbell and Taksler (2003), is critical to assessing their impact on the quality of financial reporting.

Effective liquidity risk management enhances the quality of profits, underscoring its role in enhancing the quality of financial reporting under IFRS. The adoption of IFRS has encouraged more comprehensive liquidity risk disclosure (Lang and Maffett, 2011) and, therefore, enhancing transparency and positively impacting the quality of financial reporting for effective liquidity risk management.

Capital risk plays an important role in improving the quality of financial reporting under IFRS where research show how it affects the quality of profits (DeFond et al, 2005), and financial risk disclosure (Ali et al, 2017), and touches on the impact on regulatory capital requirements and risk-taking behavior (Beatty and Weber, 2003). Studies also address the impact of capital risk on market perceptions and investor confidence (Jin and Myers, 2006), and the impact of capital risk detection on building trust among stakeholders (Hribar and Yang, 2016). Booth (1997) in his research illustrated how economic factors can affect capital risk and thus the quality of financial reporting.

The application of IFRS in different countries has significant implications for the quality of financial reporting. However, extensive literature on IFRS has revealed that the quality of IFRS application varies widely between companies and regions (Daske et al., 2013). One of the main factors affecting the quality of the report appears to be the operational risks faced by companies during the implementation of IFRS. Therefore, operations risk can be defined as the vulnerability to which companies are exposed because of losses caused by inadequate or failed internal processes, people, and systems (Basel Committee, 2011). Previous research has identified several factors of process risk that can undermine the quality of IFRS application such as lack of internal control controls, lack of experience in IFRS, limitations of IT systems, and organizational culture (Wijekoon et al., 2022). The academic research converges significantly on the idea that mitigating these process risks improve the quality of IFRS reporting. Companies that invest in comprehensive training, controls, technology modernization, and culture change achieve superior IFRS compliance. Regulatory oversight is needed to ensure the quality of the application (Houqe et al., 2012). Overall, research highlights the key role of business risk in the quality of IFRS reporting.



## Theoretical Literature Review.

### The Impact of Business Risk Audit on The Quality Of IFRS Application in Islamic Banks

The trend of transition towards the use of IFRS is an important phenomenon on the global stage. This transition aims to enhance the quality and comparability of financial reporting and enhance transparency in transnational financial reporting (Barth et al., 2008). This theoretical literature review aims to provide a comprehensive overview of the main theoretical foundations and concepts related to research on the impact of business risk auditing on the quality of IFRS application within the banking sector.

- **IFRS Accreditation and Quality of Financial Reporting**

IFRS has been widely adopted by countries and organizations around the world with the expectation that it will improve the quality of financial reporting (Barth et al., 2008). Previous research has shown that IFRS accreditation is associated with higher quality in financial reporting, as it enhances communication and comparability in financial statements. This superiority is based on the belief that IFRS, as it is principle-based, encourages more transparent and relevant financial reporting (Daske et al., 2008). This forms the basis for estimating the impact of a business risk audit on IFRS compliance and the quality of financial reporting.

- **Risk Management and Financial Reporting**

Risk management plays a vital role in the banking sector where financial institutions are exposed to multiple risks, including credit risk, liquidity risk, capital risk and operational risk (Aboody et al., 2005). In this context, academic research emphasizes the importance of strong risk management practices in maintaining financial stability and ensuring accurate financial reporting. The effective risk management is not just a mean of protecting the organization, it can significantly impact the quality and consistency of financial reports.

- **Business Risk Audit and Accounting Compliance Standards**

Business risk auditing is a multifaceted approach that includes assessing and managing different categories of risk. For each of these categories of risk, previous research has shown that effective risk management practices can enhance the reliability of financial reporting by ensuring the accuracy of financial statements (Aboody et al., 2005).

- **Comprehensive Risk Management and Accounting Standards**

While the current literature has explored the impact of specific categories of risk on the financial reporting, the combined impact of these diverse risks remains a relatively unexplored area. The theoretical basis of this study assumes that the combined impact of a comprehensive business risk audit may significantly affect the quality and consistency of IFRS application within the banking context.

- **Corporate Governance and Quality of Financial Reporting**

Corporate governance practices are closely related to the quality of financial reporting, providing the framework within which financial reporting decisions are made (DeFond and Zhang, 2014). The corporate governance mechanisms, including oversight of risk management by boards, can contribute to improving the quality of financial reporting. This highlights the importance of considering risk management practices when assessing the quality of financial reporting within banks.

- **Market Perceptions and Financial Reporting**

Financial reporting quality perceptions can influence investor confidence and market behavior (Francis et al., 2005). When financial institutions demonstrate effective risk management practices and adherence to accounting standards, it can positively impact market perceptions and therefore financial performance. Therefore, understanding the

theoretical correlation between risk management and financial reporting is essential to understanding the broader implications for stakeholders.

### **Empirical Literature Review**

#### **The Impact of Business Risk Audit on the Quality of IFRS Application in Islamic Banks**

This section provides a comprehensive analysis of empirical evidence, methodologies and emerging trends related to the impact of business risk auditing on the quality of application of IFRS within the field of Islamic banking. Drawing on a variety of research, this section aims to provide a deeper understanding of how auditing practices in Islamic banks affect compliance with IFRS and the overall quality of financial reporting.

- **Audit Quality and IFRS Compliance**

Al-Twajiry et al. (2004) conducted a study in Saudi Arabia where they investigated the interaction between audit quality and IFRS compliance in Islamic banks. The results showed a strong positive correlation between rigorous audit practices and IFRS application quality. Auditors who carefully assessed and handled business risks contributed significantly to improving IFRS compliance and overall financial reporting quality. This study laid the stage for the most advanced research by highlighting the vital role of audit quality.

- **Risk-based Audit Methodology**

Sarens and Abdolmohammadi (2010) explored the impact of risk-based auditing methodology on the quality of IFRS application in Islamic banks in Malaysia. The research revealed compelling insights as the adoption of a risk-based audit methodology led to significant improvements in the conformity of financial statements with IFRS standards. By focusing on identifying and addressing business risks, auditors have played a vital role in ensuring more accurate and transparent financial reporting. This study demonstrated the practical implications of audit methodology on IFRS quality.

- **Internal Control and Sharia Compliance**

Sufian and Mohamad Noor (2009) focused their study on Islamic banks in Malaysia where they explored how powerful internal control mechanisms affect Sharia compliance and thus the quality of IFRS application. The research has shown the critical role that strong internal control plays in effectively managing business risk, promoting Sharia compliance, and facilitating compliance with IFRS standards. This research highlighted the interdependence of internal control, ethics, and quality of financial reporting.

- **Stakeholder Perception and Financial Reporting**

Elamer and Alsayed (2019) in their research surveyed the perception of stakeholders, including investors and regulators, on the quality of IFRS implementation in Islamic banks in the UAE. The study revealed an exciting dimension that stakeholder perception was significantly influenced by how auditors approach business risk. Stakeholders recognized the auditors' efforts in identifying and addressing these risks as positive contributions, enhancing their confidence in the quality of financial reporting. This study confirmed the link between audit practices and stakeholder trust.

- **Time Dynamics and Regulatory Changes**

Safiullah et al. (2017) contributed to the field by exploring the dynamics of the evolution of business risk audit and its impact on IFRS quality considering regulatory changes over time. The research was centred on Islamic banks in Qatar and revealed that as regulatory frameworks evolved over time, reviewers adapted their practices to effectively address emerging business risks. This adaptation positively impacted the quality of IFRS application.

- **Comparison With Conventional Banks**

Darus and Ahmad (2014) conducted a comparative study in Indonesia where they looked at the differences in business risk auditing and its impact on IFRS quality between Islamic and conventional banks. The study revealed that while both types of banks face similar risks, auditors at Islamic banks paid more attention to Sharia compliance and ethical considerations. This unique approach has contributed to adding a unique dimension to the quality of IFRS implementation within Islamic banks.

### **Empirical Literature Review on Risk Management and Quality of Financial Reporting**

Several studies examined the relationship between risk management practices and the quality of financial reporting. For instance, Aboody et al. (2005) studied the banking industry and found that the quality of effective risk reporting positively influences the selection of auditors. This suggests that banks with strong risk management practices typically deal with higher quality auditors, which in turn can positively impact the quality of financial reporting.

In addition, the empirical literature includes studies that specifically examine the role of credit risk management in the quality of financial reporting. For example, Aboody et al. (2005) conducted research on the quality of profits, insider information circulation and cost of capital. The findings revealed that banks with higher earnings were less likely to circulate inside information, suggesting that effective credit risk management practices may improve the quality of profits and thus affect financial reporting.

Although empirical studies directly link liquidity risk management practices to the quality of financial reporting, liquidity risk is a critical aspect of risk management in the banking sector. Moreover, the impact of liquidity risk management on capital adequacy and financial stability can indirectly affect the quality of financial reporting. This area could benefit from more empirical research.

Additionally, operational risk management has received attention in the literature because of its importance in maintaining operational efficiency and mitigating risks. While empirical studies directly link operational risk management to relative financial reporting quality are few, the broader impact of operational risk on financial performance and stability can indirectly affect reporting quality.

This section brings together the results of previous studies, revealing a consistent pattern of empirical evidence supporting the impact of business risk auditing on the quality of IFRS application in Islamic banks. These studies emphasize the vital role of auditors in identifying, assessing and addressing business risks, ultimately increasing the transparency and the compliance of financial reporting.

### **Research Methodology**

This section illustrates the methodology used to investigate the impact of a business risk audit on the quality of financial reporting at KIB. The research uses the quantitative approach and involves data collection with using statistical analysis to draw conclusions and inferences. This method allows the relationship between business risk audit and the quality of IFRS application at KIB to be explored in a systematic manner.

The practical approach was based on the published annual reports of KIB for the period 2005-2020. In addition, E-Views software is used to conduct the statistical analysis on the financial statements of the bank. The statistical approach helps to determine the impact of independent variables namely operational risk, liquidity risk, capital risk, credit risk on the

dependent variable which is the quality of financial reporting by measuring the quality of application of accounting standards (Tobin's Q). The results are interpreted to draw conclusions about the impact of a business risk audit on enhancing the transparency and credibility of financial statements.

## Data Analysis

### 1. Correlation Analysis

We examine the correlations between business risk variables and accounting quality indicators (Tobin's Q). This, correlation coefficients will be used to identify the relationships between the variables.

**Table 1 –  
Correlation matrix**

No.	Variables	1	2	3	4	5
1	Tobin's Q	1.000				
2	Operational Risk	-0.300	1.000			
3	Credit Risk	-0.179	-0.038	1.000		
4	Liquidity Risk	0.323	-0.889*	0.172	1.000	
5	Capital Risk	-0.811*	0.750	0.286	-0.853*	1.000
*** $p < 0.01$ , ** $P < 0.05$ , * $P < 0.1$						

The correlation matrix presented in Table (1) shows correlations between five variables which are: Tobin's Q, Operational Risk, Credit Risk, Liquidity Risk, and Capital Risk. Correlations are measured using Pearson's correlation coefficient, which ranges from -1 to 1. Positive correlation indicates that the variables tend to move in the same direction, while negative correlation indicates that the variables tend to move in opposite directions.

Based on the correlation matrix, the relationship between the variables can be described as the following:

- Operating risk is negatively correlated with liquidity risk (-0.889,  $p < 0.1$ ), suggesting that these risks tend to move in opposite directions. This could be because companies consider assets to be liquid as a means of protection against operational interruptions.
- Credit risk has mixed non-significant correlations, suggesting that it is less associated with other risks compared to operational risk and liquidity. This corresponds to their potential impact on companies in a nonlinear form.
- The positive correlation between credit risk and liquidity risk suggests that as credit risk increases, liquidity risk tends to increase, while the negative correlation between credit risk and capital adequacy ratio suggests that as credit risk increases, the capital adequacy ratio tends to decrease.

In the summary, the correlation emphasizes the theoretical links between key risk factors and the quality of application of accounting standards, highlighting their combined impact. The matrix provides useful insights for preparing regression models.

### 2. Regression Analysis

We test research hypotheses related to the impact of business risk on the quality of IFRS. The hypotheses are formulated based on previous research and theoretical foundations and regression analysis will help gauge the strength and direction of these relationships (Hair et al., 2018).

To express Tobin's Q as a dependent variable with the independent variables in the regression equation, the following equation will be used:

$$\text{Tobin's Q} = \beta_0 + \beta_1(\text{Operational Risk}) + \beta_2(\text{Credit Risk}) + \beta_3(\text{Liquidity Risk}) + \beta_4(\text{Capital Risk}) + \varepsilon$$

In this equation:

- Tobin's Q is the dependent variable that measures the quality of IFRS application.
- Operations risk, credit risk, liquidity risk, and capital risk are the independent variables that represent different types of risks facing the bank.
- $\beta_0$  is the intercept of the regression line.
- $\beta_1, \beta_2, \beta_3, \beta_4$  are the slope coefficients that represent the change in Tobin's Q with one change in each independent variable.
- $\varepsilon$  is the term error.

This model of multiple regression examines the impact of various risk factors on the quality of IFRS application. The coefficients will indicate the importance and direction of the relationship between each risk factor and the dependent variable, while keeping the other variables constant.

### The Results of the Regression Analysis

In the given regression analyses, the dependent variable is the quality of application of IFRS while the independent variables are liquidity risk, credit risk, operating risk, and capital risk. Analytics focuses on observing the relationships between these independent variables and the dependent variable.

**Table 2:**

**The Impact of Business Risk on the Quality of Application of IFRS**

	1	2	3	4
Liquidity Risk	0.8675 (0.7099)	0.9792 (0.7662)	-1.2302** (0.4304)	-0.8160 (0.5067)
Credit Risk		-0.6659 (0.7329)	-0.3502** (0.1422)	-0.3097*** (0.0850)
Capital Risk			-0.1472*** (0.0234)	-0.1597*** (0.0281)
Operational Risk				0.0000 (0.0000)
Constant	-0.2953 (0.3951)	-0.2523 (0.4615)	1.1063*** (0.2658)	0.7797* (0.3523)
Observations	16	16	10	10
Adjusted $R^2$	0.040	0.032	0.696	0.743
Standard errors in parentheses * $P < 0.10$ , ** $P < 0.05$ , *** $P < 0.01$				

Based on the previous results, we can see in the regression No. 1 that liquidity risk is the only independent variable included in the model. A positive liquidity coefficient (0.8675) indicates that higher liquidity levels are associated with improvements in the quality of application of IFRS. This positive relationship is supported by academic studies that find that increased liquidity enhances firms' ability to deal with risks and cash needs (Bushman and Williams, 2012).

However, this relationship is not statistically significant, as the p-value is greater than (0.10). As a result, we cannot conclude that there is a significant relationship between liquidity and the quality of application of financial standards in regression No. 1. Furthermore, a low value adjusted R-squared (0.040) indicates that liquidity alone explains only 4% of the variance in the dependent variable. As such, while liquidity appears to be a driving factor for the dependent variable depending on the coefficient, other key factors are likely to be lacking in this simple model. Other regressions can be considered to include additional independent variables that represent other dimensions of risk in order to develop a more robust model that better explains changes in the dependent variable (Iatridis, 2012; DeFond, 2010). Using a larger and more comprehensive set of control variables will allow the development of a robust model to better understand accounting quality factors.

In regression No. 2, the independent variables are liquidity risk and credit risk. The liquidity coefficient in this regression is (0.9792), indicating a positive relationship between liquidity and the quality of application of financial standards. This suggests that increased liquidity is associated with improved quality of application of financial standards. However, this relationship is not statistically significant, as the p-value is greater than (0.10). Therefore, we cannot conclude that there is a statistically significant relationship between liquidity risk and the quality of application of financial standards.

In terms of credit risk, the value of the credit risk coefficient in the regression No. 2 (-0.6659), which indicates a negative relationship between credit risk and the quality of application of financial standards. This means that increased credit risk is associated with a decrease in the quality of application of financial standards. This negative relationship between credit risk and the dependent variable is in line with theoretical expectations (Lepetit et al., 2008). However, this relationship is not statistically significant, as the p-value is greater than (0.10). However, the predictive power of the model remains limited, as shown by the adjusted R-squared value of (0.032). This means that credit and liquidity risk explain an estimated 3.2% of the variance in the dependent variable. Future research may benefit from the inclusion of additional independent variables such as capital efficiency ratios for which are associated with risk appetite and financial health outcomes (Louzis et al., 2012).

In summary, although the negative relationship between credit risk and the dependent variable is consistent with the theory, regression No. 2 is affected by a narrow range of considered independent variables. Expanded analysis can provide a deeper and more coherent understanding.

Based on regression No. 3, two additional independent variables are included which are: capital risk and credit risk as well as liquidity risk. The regression coefficient is negative for capital risk (-0.1472). This relationship is consistent with the expectations of academic research which finds that having more capital allows companies to better withstand losses and shocks (Bourkhis and Nabi, 2013).

In regression No. 3, the liquidity coefficient is (-1.2302), which is significant at the level of 5% ( $p < 0.05$ ). This suggests that there is a negative relationship between liquidity and the quality of application of IFRS. This means that increased liquidity is accompanied by a decrease in the quality of application of accounting standards.

Regarding credit risk, regression No. 3 indicates that credit risk has a negative relationship with the dependent variable, with a coefficient of -0.3502 ( $p < 0.05$ ). This suggests that increased credit risk is associated with a lower quality of application of accounting standards. It is consistent with theoretical foundations (Lepetit et al. 2008).

Note that the adjusted R-squared value of (0.696) indicates that these variables explain more than 69% of the variance in the dependent variable. This represents a significant improvement compared to previous models. By integrating multivariates based on the concepts of risk measurement theory and financial stability, Regression No. 3 offers a more comprehensive examination compared to simple specifications. In conclusion, Regression No. 3 presents the most coherent results to date by leveraging a multivariate framework based on academic research.

Based on regression No. 4, three independent variables are included in addition to liquidity risk: capital risk, credit risk, and operational risk. The negative regression coefficient repeats capital risk (-0.1597) and credit risk (-0.3097) relationships observed in regression No. 3, consistent with expectations from academic research that were done by Bourkhis and Nabi (2013) and Lepetit et al. (2008).

The capital adequacy ratio shows a negative relationship with the dependent variable in regression No. 4, with a coefficient of -0.1597 ( $p$ -value  $< 0.05$ ). This means that an increase in capital adequacy is accompanied by a decrease in the quality of application of accounting standards. However, the operational risk coefficient cannot be distinguished from zero (0.0000). This means that operational risk does not affect variances in the application of IFRS. Academic research supports this unimportant relationship as it finds that operational risk is less important than other factors for corporate stability.

The liquidity risk coefficient in this regression is (-0.8160) indicating a negative correlation between liquidity and the quality of application of accounting standards. However, this relationship is statistically insignificant, as the  $p$ -value is greater than (0.10). As a result, we cannot conclude that there is a significant relationship between liquidity and the quality of application of accounting standards in regression No. 4.

In terms of credit risk, credit risk shows a coefficient of (-0.3097) in regression No.4, which is significant at the level of 5% ( $p < 0.05$ ) indicating a negative relationship between credit risk and the quality of application of IFRS. This means that increased credit risk is associated with a decrease in the quality of application of IFRS.

Note that regression No. 4 shows the highest value of the adjusted R-squared of (0.743) indicating that more than 74% of the variance of the dependent variable can be explained. By retaining the significant variables of regression 3 while adding non-significant operational risk, regression No. 4 offers the most robust specification to date based on theory and statistical relevance. This identifies important factors while checking for less influencing factors.

In conclusion, Regression No. 4 offers the strongest model by incorporating predictive independent variables as much as possible based on the previous regression analysis supported by academic research.

Based on the results of the statistical analysis presented in the four regressions above, this is an analysis of each independent variable and how it changes across different model specifications:

- **Liquidity Risk**

In the regression No. 1, liquidity has a positive but insignificant coefficient of (0.8675). This suggests that higher liquidity risk is weakly correlated with Tobin's Q. When adding credit risk in regression No. 2, the liquidity coefficient becomes more positive by (0.9792) but still not significant. This suggests that the positive relationship between liquidity and Tobin's Q is reinforced without considering credit risk. However, in regressions No. 3 and 4 when capital

risk has negative coefficients and becomes significant in one of them. The coefficients are (-1.2302) and (-0.8160) respectively. A possible explanation could be that taking into account capital risk, high liquidity benefits fade, and liquidity is associated with low Tobin's Q. This is consistent with research suggesting that excess liquidity can indicate inefficient use of resources (Pinkowitz et al., 2006).

- **Credit Risk**

Credit risk has a negative and non-significant coefficient of (-0.6659) in regression No. 2. This shows a weak negative relationship between credit risk and Tobin's Q. In regressions No. 3 and 4 the credit risk coefficient remains negative but becomes greater and significant in one of them by (-0.3502) and (-0.3097) respectively. This suggests that after taking into account capital risk and operating risk, the negative relationship between credit risk and Tobin's Q is reinforced. High credit risk is associated with low Tobin's Q which is confirmed by Lepetit et al., (2008).

- **Capital Risk**

Capital risk was introduced in regression No. 3 and 4 and has a negative and significant coefficient in both models. This suggests that higher capital risk is associated with the lower Tobin's Q after considering other risks. The negative relationship between capital risk and the quality of banks' financial statements is due to high capital reserves allowing banks to effectively mitigate risk, meet regulatory requirements, and maintain market confidence. Adequate capitalization reduces the likelihood of financial distress, leading to more transparent and reliable reporting. Banks with lower capital levels face regulatory scrutiny and are more vulnerable to capital financial reporting irregularities (Bourkhis and Nabi, 2013).

- **Operational Risk**

Operating risk has been added in regression No. 4 and has a small but non-significant positive coefficient. This suggests that the operational risk has an almost unnoticeable relationship with Tobin's Q in this sample.

In summary, the adjusted R-squared value increases as more independent variables are added to regression models. The interpretation of the statistical model improves significantly with the shift from regression No. 1 to regression No. 4 as shown by the steady increase in the value of the adjusted R-squared from (0.040) to (0.743). This suggests that the capital adequacy ratio and credit risk, in particular, are important predictors that help explain much of the variance in Tobin's Q. The model became more robust with the inclusion of these additional independent variables. This emphasizes the importance of specific variables based on theories and experimental selection criteria (Roodman, 2009). By gradually increasing specifications, statistical analyses reveal key factors in a data-driven manner. The recurring importance of variables related to capital and credit risk reflects their importance for the supervision and financial position of the bank (Barth et al., 2004).

## **Conclusion**

The main objective of this study is to investigate the impact of business risk audit approach practices on the quality of financial reporting in Islamic banks. Provided a comprehensive review of the relevant literature to develop the theoretical framework and tested hypotheses. The empirical analysis is carried out using the financial statements of KIB in Erbil over the period from 2005 to 2020.

The study yielded several key findings. The results of the regressions showed a remarkable relationship between effective business risk management and the quality of financial banks' reporting. This suggests that the implementation of robust mechanisms and effective control



over day-to-day activities can contribute to enhancing compliance with disclosure and submission standards. At the same time, effective liquidity risk management practices have been shown to increase transparency by providing more targeted information in financial reports.

In conclusion, this study confirms the vital role of good business risk audit approach in ensuring the quality of Islamic banks' reporting. By effectively minimizing various risks at the operational level, banks can enhance their reliability and credibility in their financial information, which is in line with the objectives of the regulations in promoting stability and confidence in the banking sector.

Although the findings provide valuable insights, it must be acknowledged that there are some limitations. Future research can investigate additional risk factors or extend the study sample. Furthermore, qualitative studies may provide deep case studies for a deeper understanding of risk management processes. Overall, this study contributes to new empirical evidence on the importance of prudent risk control in Islamic financial Institutions to enhance transparency.

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## Appendix (1)

### First: Introducing the Kurdistan International Islamic Bank for Investment and Development

It is an Iraqi private shareholding company, practicing banking, investment and specialized activities under the supervision and control of the Central Bank of Iraq. All its activities are subject to the provisions of the Banking Law No. (94) of 2004, the Islamic Banks Law No. (43) of 2015, the Companies Law No. (21) of 1997 as amended, the Anti-Money Laundering and Combating the Financing of Terrorism Law No. (39) of 2015, and the regulations, guidelines, instructions, and orders issued by the Central Bank of Iraq. In all its business and operations, the bank is committed to the provisions and principles of the Sharia. In addition, KIB was established on 13/3/2005, and on 1/11/2006 the bank was listed on the Iraq Stock Exchange. The bank was included in the Investment Law in the Kurdistan Region No. (4) for the year 2006, according to the decision of the Investment Commission in the Region No. (177) on 7/6/2009, and the subscribed and paid-up capital on 31/12/2020 amounted to (400 four hundred billion Iraqi dinars), with a development rate of 800% over the year of establishment. The bank currently has five branches and eight offices. The head office of the bank is in Erbil Governorate, Golan Street- Erbil (Kurdistan International Islamic Bank for Investment and Development, 2020).

KIB's vision is to lead and excel in Islamic banking by providing comprehensive financial solutions that are original and innovative. The bank's mission is to provide the best service to customers through products compatible with the foundations of Islamic banking at the highest levels of quality, with the latest technologies, at acceptable competitive prices, contributing to the development renaissance, and improving the quality of life in the Kurdistan Region community, and in Iraq in general (Kurdistan International Islamic Bank for Investment and Development, 2020).

## Appendix (2)

### Measuring the risks that the Central Bank of Iraq focused on

#### First: Credit Risk

$$\text{Degree of concentration of loans} = \frac{\text{the value of the bank's loans}}{\text{total banks loan (all banks)}}$$

The higher the degree of concentration of loans above 25% of the bank's capital base, the higher the degree of credit risk, and this ratio measures the degree of concentration of the bank's activity in borrowing.

$$\text{Loan growth rate} = \frac{\text{loans of the current year} - \text{loans of the previous year}}{\text{loans of the previous year}}$$

The higher the growth rate of loans, the higher the credit risk.

$$\text{Loan loss provision rate to total loans} = \frac{\text{provision for loan losses}}{\text{total loans}}$$

The higher this rate, the higher the credit risk, and this rate measures the value of potential credit risk in the loan portfolio. In this case, analysts look at the bank's reserves to assess the bank's ability to meet loan losses, and if the quality of assets is poor, the bank needs a large reserve to face non-performing loans (Hanafi Abdel Ghaffar, Abu Qahf Abdel Salam, 2002). There are other accurate measurement indicators that depend on the ratios of financial analysis which the researcher will rely on which can be used for the purpose of identifying the size of credit risks, controlling them and then reducing their impact to the lowest level, which are as follows (Al-Fateh, 2013; Mamlouk, 2014; Tariq Abdel-Aal Hammad, 2003; Tariqullah Khan, Habib Ahmed, 2003; Karim, 2019):

$$\text{Credit Risk} = \frac{\text{net loans burden}}{\text{total loans}}$$

$$\text{Credit Risk} = \frac{\text{doubtful debt}}{\text{cash credit}}$$

$$\text{Credit Risk} = \frac{\text{provisions for doubtful debt}}{\text{outstanding loans}}$$

### Second: Liquidity Risk

Banks face a type of risk called liquidity risk, because the sources of money in banks are short-term, as well as cash outflows from the bank are often considered unstable flows, which are risks specific to the nature of the activity practiced by the bank. Banks manage liquidity to avoid risks related to the following cases:

- Liquidity related to the bank's regular needs.
- Liquidity related to facing short-term loans to which the bank is exposed, which is represented in unforeseen events.

$$\text{Liquidity risk} = \frac{\text{basic deposits}}{\text{total assets}}$$

(Radwan Lamar, 2013).

This metric refers to the bank's ability to pay its outstanding or urgent obligations on time without delay from the reality of the liquid assets it acquires. (Bouabdali, Ahlam, Abderrazak Khalil, 2004).

$$\text{Liquidity risk} = \frac{\text{time deposits}}{\text{total deposits}}$$

This rate indicates the extent to which you rely on less volatile funds, and the higher this rate, the lower the liquidity risk.

### Third: Capital Risk

The United Kingdom has worked on the implementation of the risk assessment system by the supervisory authorities, as this system assesses the risks to which banks are exposed, which are evaluated in real time. Supervisory authorities consider bank capital (regulatory capital) as the primary indicator of banking soundness, as an objective, easily identifiable and internationally applicable measure. Regulatory capital is defined as the minimum capital relative to risk-weighted assets as defined by the Basel Committee (Mervat Abu Kamal, 2007).

In line with the 1988 Basel Convention, the total capital required to protect against credit risk is equal to the sum of the capital requirements for on-balance sheet and off-balance sheet assets (Khan Tariq and Ahmed Habib, 2003).

$$\text{Capital Adequacy Ratio} = \frac{\text{core capital}}{\text{assets and the items off the balance sheet risk weighted} + \text{market risk}}$$

The percentage must be greater than or equal to 8%. This new framework enhances capital strength, provides a comprehensive approach to capital management and strengthening market discipline, by improving transparency in financial reporting, and this framework will strengthen the safety and security of banks and strengthen the stability of the global financial system (Mervat Abu Kamal, 2007).

That is, in the sense of:

- **Capital adequacy ratio = risk-weighted assets × 8%**
- **Risk-weighted assets = asset × risk weight**
- **The risk weights for residential mortgages are 40%, while the rest of the weights are equal to 75% for other retail credits.** (Allen & Delong, 2003).

In calculating the capital adequacy ratio, the Central Bank of Iraq relied on the following formula adopted by the Islamic Financial Services Board 2017:

$$\text{Capital Adequacy Ratio} = \frac{\text{organisational capital}}{\text{assets and the items off the balance sheet risk weighted}} \leq 8$$

#### Fourth: Operational Risks

Basel II noted the importance of considering the operational risks facing banks, and therefore they must retain capital to meet losses resulting from operating risks. Banks must maintain in their possession the capital necessary to cover operating risks, and the size of the expected operational risks for the year is measured using the basic indicator method, which is a fixed percentage symbolized by (alpha), by taking the equivalent of 15% of the average net income after tax for the previous three years, and then the result is multiplied by 12.5%, and the year in which the amount of total income is (zero), or loss, is excluded, and the average of only two years is calculated. If the bank makes a loss for two or more of the last three years, the supervisory authority of the bank has the right to determine the capital requirements to be retained to cover operational risks, in application of the second pillar of Basel 2 (Mervat Abu Kamal, 2007).

- Capital required to cover operational risk (size of expected operational risk) = (average net income for the previous three years) × 15%, and then multiply the output by 12.5%.
- Net Income = Comprehensive Income – Profits from Securities.
- Operational risks can be calculated as follows (Radwan Lamar, 2013):

$$\text{Operational Risk} = \frac{\text{total assets}}{\text{total workers}}$$

Tobin's Q for measuring the quality of applying the IFRS				
Year	Tobin's Q	Total Assets	Debt	Annual closing price * Number of subscribed shares
2005	-0.765105567	606699990	-46418954	0
2006	1.25079384	123701866	-45274468	200000000
2007	0.325209073	128446487	-45728037	87500000
2008	0.103942033	252165648	-53789390	80000000
2009	0.094751871	354987851	-58864237	92500000
2010	0.065671731	490465142	-109790305	14200000

2011	0.115368337	600602245	-180709518	25000000
2012	0.262923997	1031799376	-35871584	63000000
2013	0.26569322	1077019849	-388843128	67500000
2014	0.323648661	1061321504	-416504167	76000000
2015	0.127140277	1022533002	-449994871	58000000
2016	-0.006139794	959325675	-509890062	50400000
2017	-0.037158475	1062107860	-551466308	51200000
2018	-0.106170365	1262959834	-574088906	44000000
2019	-0.101612157	1245661690	-562574371	43600000
2020	-0.120092393	1445018764	-577535762	40400000

Net profit and operational risk at KIB between 2005 and 2020			
Year	Net profit after tax	Average net profit for 3 years (tax 15%)	Operational risk = B*12.5%
2005	-125713		0
2006	563872		0
2007	5178442		0
2008	11312635	430674	53834.25
2009	13232918	852747	106593.375
2010	9088103	1486200	185775
2011	24032538	1681683	210210.375
2012	34047355	2317678	289729.75
2013	36365641	3358400	419800
2014	37729651	4722277	590284.625
2015	42376000	5407132	675891.5
2016	47129775	5823565	727945.625
2017	41495180	6361771	795221.375
2018	7117382	6550048	818756
2019	2008065	4787117	598389.625
2020	10991789	2531031	316378.875

Credit risk at KIB between 2005 and 2020			
Year	Provision for loan losses	Total credit	Credit risk
2005	0	0	#DIV/0!
2006	0	0	#DIV/0!
2007	1045000	0	#DIV/0!
2008	2178212	6079963	0.358260733
2009	3108738	11504318	0.27022358
2010	4938845	93217789	0.052981787
2011	8109437	61897525	0.131013914
2012	11105461	86106981	0.12897283
2013	14002930	162232455	0.086313987
2014	16691162	142798557	0.116886069
2015	3048735	101333671	0.0300861
2016	3985471	49262201	0.080903226



2017	8177600	15341077	0.533052536
2018	292538	1812392	0.1616409894
2019	291669	2572366	0.113385498
2020	737529	3198296	0.230600607