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IFRS Adoption and Credit Rating in Iraqi Banks: The Mediating Role of Governance and Implications for Agricultural Finance

Ali Mohammed Thijeel
Post Graduate Institute for Accounting & Financial Studies, University of Baghdad, Iraq.
ORCID iD: https://orcid.org/0009-0001-0999-8642
Email: asst.prof.ali@pgiafs.uobaghdad.edu.iq

Hakeem Hammood Flayyih Al-Fandawi*
Post Graduate Institute for Accounting & Financial Studies, University of Baghdad, Iraq.
ORCID iD: https://orcid.org/0000-0003-0615-0854
Email: hakeem.hmood@coadec.uobaghdad.edu.iq

Ghazi Maan Faisal
Post Graduate Institute for Accounting & Financial Studies, University of Baghdad, Iraq.
ORCID iD: https://orcid.org/0009-0002-9338-1713
Email: ghazi.maan@uobaghdad.edu.iq

This research originated from the recognition that expected credit losses place substantial emphasis on Credit Rating (CR) when assessing loan loss provisions. This emphasis arises due to the pronounced influence of increased provisions in contrast to the relatively diminished effect on non-performing loans under the International Financial Reporting Standards (IFRS). Accordingly, the study sought to explore the mediating function of Corporate Governance Mechanisms (CGMs) in the relationship between IFRS implementation and the CR of Iraqi banks listed on the Iraq Stock Exchange. To achieve this objective, the research employed structural equation modelling to analyse the intermediary role of CGMs within the IFRS–CR nexus. The corporate governance framework was assessed using three specific mechanisms: Board Size (BS), female representation on the board (SEX), and the percentage of major shareholding (MSP). For the measurement of CR, the study adopted the CAMELS model as a proxy. The sample consisted of ten banks listed on the Iraq Stock Exchange over the period from 2013 to 2022. The study produced several notable findings. One key result indicated considerable variation in the degree of compliance with IFRS across Iraqi banks. Furthermore, it was established that both BS and MSP exert a significant influence on CR. However, the analysis revealed that the three selected CGMs did not serve as mediators in the relationship between IFRS and CR. Nonetheless, a marginal indication was observed suggesting that major shareholder ownership might exert some influence on the dynamic between IFRS application and CR. These findings have important policy implications for the agricultural finance sector, suggesting that improvements in the CR of rural banks could be achieved through the adoption of IFRS and the enhancement of banking governance structures. Such reforms may, in turn, facilitate greater access to credit for agricultural stakeholders.

Keywords: IFRS, Credit Rating, Corporate Governance, Agricultural Finance, Rural Banking, Agricultural Credit, Financial Reform, Iraq.

Introduction

Since the global financial crisis of 2008, the international economy has endured a period of significant instability, primarily attributed to rising levels of bad debt and diminishing financial confidence. These issues have notably impacted economies in the United States and Europe (Georgieva, 2023; Wahidin, Akimov, & Roca, 2021). Financial markets have been plagued by elevated credit risk, which has influenced nearly all participants involved in financial transactions (O'Hara & Zhou, 2025). The escalating uncertainty surrounding debt has underscored threats to the stability of financial systems, extending even to governmental entities. Consequently, the reliability of accounting information used to assess the creditworthiness of market participants has become a major area of concern, overshadowing traditional focus areas such as market and trading risks.

In many developing countries, including Iraq, limited access to finance within the Agricultural Finance Sector (AFS) remains a persistent issue. Agri-enterprises and smallholder farmers often encounter challenges in securing formal credit due to a lack of collateral, high perceived risk, and inadequate rural banking infrastructure (Mehedi, Rahman, & Jalaludin, 2020). These financing limitations restrict investments in productivity-enhancing technologies, sustainable agricultural practices, and integration into broader markets, thereby stifling rural economic development. At the national level, empirical research has highlighted the influence of CGMs on investment flows and agricultural credit by signalling institutional strength and financial accountability (Agyemang et al., 2020). Poorly governed rural financial institutions frequently lack the credibility necessary to attract either domestic or international funding. Therefore, strengthening CGMs—particularly in areas of transparency and oversight—can play a critical role in improving the availability of agricultural lending (Attridge, Chen, & Mbate, 2021).

Against this backdrop, financial reforms, including the adoption of IFRS and the enforcement of sound CGMs, are increasingly viewed as essential enablers of financial access for underserved economic sectors, including agriculture. IFRS adoption has facilitated the harmonisation of accounting standards and enhanced the quality of financial reporting, rendering financial statements more reliable and reducing information asymmetry between borrowers and lenders (Singh & Newberry, 2008). In Iraq, where the rural banking sector remains underdeveloped, compliance with IFRS is expected to enhance credit risk assessment and strengthen trust in financial institutions (Shoman, 2023). Moreover, effective CGMs—such as independent board structures, robust disclosure standards, and ownership transparency—can mitigate agency conflicts and promote more efficient capital allocation (Monks & Minow, 2011). Experiences from other developing regions, including Jordan and parts of

Africa, have demonstrated that legal and governance reforms positively influence financial performance and investment attractiveness (Attridge et al., 2021; Haddad, Sbeiti, & Qasim, 2017). In this context, the implementation of IFRS and improved CGMs within Iraqi banks has the potential to strengthen CR, thereby narrowing the financial gap within the AFS.

Investors have increasingly turned to credit instruments due to their perceived riskiness compared to other asset classes (Griffith-Jones & Naqvi, 2021; Wisnu Putra & Eurelia Wayan, 2023). Accordingly, monitoring CR and counterparty risk has become a priority across many markets, with a focus on ensuring that actual credit risks are accurately reflected in both trading and banking books, as well as in financial statements. Prior to the introduction of IFRS 9 in 2014, CR frameworks were primarily guided by the Basel Capital Accord and internal economic capital models for regulatory capital estimation. Many institutions employed application scorecards to assess client creditworthiness in alignment with their respective risk appetites. Although both IFRS and Basel III—particularly the internal ratings-based approach (IRBA)—are grounded in GAAP principles, they provide distinct methodologies. Notably, while IRBA imposes minimum requirements on rating models, such obligations are absent under IFRS 9 (Turlea, 2021).

Over the last decade, IFRS has undergone substantial revisions in domains such as fair value accounting, financial instruments, leasing, and revenue recognition. These revisions have introduced a greater reliance on professional judgement and estimations, thereby increasing the complexity of financial reporting tasks for accountants and auditors. IFRS now necessitates the evaluation of counterparty CR in various contexts, such as derivative adjustments under IFRS 13 and expected credit loss provisions under IFRS 9 (Delgado-Vaquero & Morales-Díaz, 2019). CR reflects an entity's ability to meet its financial obligations in full and on time (Zhen & Zhou, 2025). When an entity applies for a loan, lenders typically assess its credit history to determine the likelihood of default. To address this, companies are expected to implement mechanisms that limit default risks. CGMs may offer a viable solution in this regard, as they facilitate a structured relationship between management and shareholders (Alkhawaldeh et al., 2021). Interest in CGMs intensified following the corporate collapses in the early 2000s and was further amplified by the 2008 financial crisis (Moussa, 2019). Nonetheless, prior research has yielded mixed findings regarding the effect of CGMs on credit risk within banking institutions. In contrast, limited studies have examined the implications of CR variations on shareholder wealth (Aroul & Rodriguez, 2024). CR serves as a vital indicator of financial health, evaluated by rating agencies using firm-specific characteristics alongside professional judgement and expertise (Kaur & Dey, 2025).

The above discussion highlights a notable gap in the understanding of the relationship between IFRS adoption and CR. Under certain conditions, such as earnings management, CR can be artificially influenced by manipulating financial figures, even when IFRS is applied. Since CGMs are recognised for their capacity to constrain earnings management practices (Biswas et al., 2022; Fan, Radhakrishnan, & Zhang, 2021; Nguyen, Kim, & Ali, 2024), this study investigates the following: Does IFRS adoption lead to improvements in CR? Furthermore, do CGMs mediate the relationship between IFRS and CR enhancement? The significance of this research lies in examining the mediating function of CGMs in reducing the risk of financial misstatement under IFRS, thereby contributing to the enhancement of CR among Iraqi banks listed on the ISE. The paper is structured as follows: the second section reviews relevant literature and hypothesis development, the third outlines the research methodology, the fourth presents the results and discussion, and the final section concludes the study.

Literature Review

Governance, IFRS, and Agricultural Finance

The implementation of IFRS has been recognised as a transformative step towards improving the transparency and comparability of financial statements, particularly for institutions seeking access to international finance. Singh & Newberry (2008) highlight the relevance of IFRS in developing economies, noting its potential to facilitate cross-border investment and reinforce financial discipline. In Iraq's post-conflict financial setting, Shoman (2023) demonstrates that IFRS compliance enhances the credibility of reporting and harmonises banking operations with international practices. These developments have important implications for rural and agricultural banking, suggesting that standardised and reliable financial reporting may alleviate perceived lending risks among institutional investors and donors. Furthermore, evidence from Jordan shows that reforms in accounting legislation and the application of governance codes enhance disclosure quality and promote market efficiency (Haddad et al., 2017). With the adoption of IFRS by rural banks, improved reporting may contribute to stronger CR through reduced information asymmetry, thereby facilitating increased credit availability within the AFS. Based on this reasoning, the following hypothesis is put forward;

H1: The effect of the adoption of IFRS on CR of Iraqi banks is positive and significant.

Robust corporate governance is fundamental to institutional resilience and effective financial intermediation in developing economies, particularly within strategic sectors such as agriculture. Governance structures characterised by board independence, transparent disclosures, and shareholder accountability are widely recognised for their capacity to enhance institutional reputation and reduce perceived risk (Monks & Minow, 2011). Agyemang et al. (2020) underscore the significance of national governance capacity as a determinant of development capital inflows, particularly in sectors vulnerable to elevated credit risk, such as agriculture. Their study, focusing on African countries, demonstrates that well-functioning governance frameworks at the national level can mitigate investor risk perceptions, thereby increasing the likelihood of attracting foreign direct investment (FDI). This is especially relevant in the AFS, which is often deemed high-risk due to factors such as climatic variability, price fluctuations, and inadequate infrastructure. Similarly, Attridge et al. (2021) find that the governance quality of national development banks directly influences their ability to channel long-term finance to underserved sectors, including agriculture. Against this backdrop, strengthening CGMs in Iraqi banks—many of which serve rural and AFS clients—may significantly reduce perceived CR and facilitate increased capital flows toward agricultural lending. Based on this understanding, the following hypothesis is proposed;

H2: CR of Iraqi banks is positively and significantly affected by CGMs.

Mehedi et al. (2020) provide empirical support for the argument that strong governance structures and corporate transparency significantly enhance the provision of agricultural credit in developing economies such as Bangladesh. Their analysis highlights several governance attributes—including board independence, board size, and ownership concentration—as critical determinants of financial institutions' capacity to extend credit to the AFS. These findings suggest a synergistic relationship wherein effective CGMs, when reinforced by financial reporting under IFRS, contribute to improved risk perception and institutional credibility. Such an integrated framework is particularly relevant to Iraq, where agricultural financing remains markedly inadequate. While both CGMs and IFRS independently influence CR, their combined effect may be more substantial, especially in contexts where governance functions as a mediating mechanism. Therefore, the implementation of these frameworks within the Iraqi rural banking sector may facilitate more effective capital allocation to the AFS and support broader financial system efficiency. Based on this rationale, the following mediating hypothesis is proposed;

H3: The effect of the adoption of IFRS on CR of Iraqi banks is mediated by CGMs.

Empirical Evidence on IFRS and Credit Rating

A considerable body of empirical research has examined the influence of IFRS adoption on CR and risk performance. Bhat, Callen, & Segal (2014), in a comparative study of 211 firms across 17 countries, found that while IFRS adoption improved financial transparency, it did not result in substantive changes in credit risk indicators, leverage, or profitability. Their findings also underscored the importance of contextual variables, such as institutional enforcement quality, in shaping the effectiveness of IFRS implementation. This context-dependent interpretation is echoed by Daskalopoulos et al. (2016), who noted that CR agencies in more developed economies tend to interpret IFRS compliance as a positive signal of a firm's commitment to transparency and sound governance, particularly in environments with weaker institutional frameworks. Lejard, Paget-Blanc, & Casta (2021) observed that IFRS 9 introduced greater variability in provisioning practices across banks, reflecting a paradigm shift in the measurement and management of credit risk. This evolution is particularly pertinent to the AFS, where asset valuation and provisioning may be less transparent due to seasonal and market-driven uncertainties. Similarly, Brito & Júdice (2023) concluded that the expected credit loss model under IFRS 9 supports the development of more resilient and lower-risk credit portfolios compared to prior standards such as IAS 39. Their findings suggest that banks adhering to IFRS are better positioned to detect and quantify credit risk at earlier stages.

Further, Ferreira, Barros, & Pimentel (2024) demonstrated that the adoption of IFRS significantly enhances the explanatory capacity of financial disclosures concerning CR, particularly when accompanied by strong CGMs. This interaction effect highlights the necessity of integrating IFRS adoption with governance reforms to reinforce institutional creditworthiness. Supporting this view, Bertoni, Candio, & Pediroda (2024) assessed the effects of earnings management and voluntary IFRS adoption on CR in the Italian context. Their study revealed that, although earnings manipulation temporarily inflated CR, voluntary IFRS adoption negatively affected ratings due to reduced opportunities for financial misrepresentation. These findings reinforce the need for robust CGMs to ensure that IFRS-based transparency is substantive rather than superficial. Lastly, Jakubik & Teleu (2025) assessed the application of IFRS 9 under crisis conditions, such as the COVID-19 pandemic, and concluded that banks adhering to IFRS demonstrated more strategic and resilient approaches to risk management. Collectively, this evidence affirms the potential of IFRS, particularly when supported by strong CGMs, to enhance the credibility and resilience of credit systems.

Corporate Governance Mechanisms and Credit Rating

The empirical findings concerning the relationship between CGMs and CR remain largely inconclusive, often shaped by contextual variables such as the strength of regulatory frameworks, levels of institutional maturity, and the degree of market transparency. Bhattacharya & Sharma (2019), examining 122 Indian firms, concluded that while environmental and social dimensions of ESG performance exhibited a significant positive association with CR, the governance component, although positively related, was statistically insignificant. Their analysis also revealed potential reverse causality, where firms with superior CR tended to disclose more extensively on ESG, thereby complicating causal inference. In the United States, Fernando, Li, & Hou (2020) studied defaulting firms and found that weak governance structures—specifically concentrated ownership and ineffective board configurations substantially elevated default risk. This insight is particularly pertinent to agricultural banks in Iraq, where ownership structures are frequently characterised by familial control. Similarly, Ko, Lee, & Anandarajan (2019) reported that robust CGMs mitigate operational risks and enhance institutional performance, attributing CR stability to governance attributes such as board composition, foreign shareholding, and separation of roles between CEO and board chair. Moussa (2019), focusing on Tunisian banks, identified board size and gender diversity as influential determinants of credit quality. Larger boards were linked to higher credit risk, whereas diverse boards with distinct role assignments showed stronger risk oversight.

Table 1: Summary of Studies on Relationship Between IFRS and on Credit Rating.

Study	Area of Focus	Region / Context	Key Findings	Relevance to Hypotheses
(Singh & Newberry, 2008)	IFRS Implementation in Developing Nations	Developing Countries	The implementation of IFRS promotes financial transparency and mitigates information asymmetry within reporting systems.	Supports H1
(Bhat et al., 2014)	IFRS & Credit Risk	Global (17 Countries)	While IFRS adoption enhances the quality of financial information, its influence on credit risk assessments is not consistently evident.	Supports H1
(Daskalopoulos et al., 2016)	IFRS & Sovereign Credit Ratings	Advanced Economies	IFRS adoption is favourably perceived by credit rating agencies.	Supports H1
(Lejard et al., 2021)	IFRS 9 & Provisioning Practices	European Banks	IFRS 9 introduces greater variability in bank provisioning, thereby affecting comparability across institutions.	Supports H1
(Brito & Júdice, 2023)	IFRS 9 & Credit Portfolio Quality	European Context	The expected credit loss model under IFRS 9 enhances the quality of credit portfolios.	Supports H1
(Bertoni et al., 2024)	Earnings Management vs. IFRS Adoption	Italy	Earnings management may temporarily enhance CR, while IFRS reduces artificially inflated earnings.	Supports H1
(Jakubik & Teleu, 2025)	IFRS 9 During Financial Crises	Malta	IFRS 9 serves a critical function in assessing credit risk during financial crises.	Supports H1
(Haddad et al., 2017)	Accounting Law & Governance Codes	Jordan	Governance codes and accounting legislation improve disclosure standards and market confidence.	Supports H1, H2
(Shoman, 2023)	IFRS & Governance Practices	Iraq	IFRS adoption strengthens governance practices and enhances reporting quality in Iraqi firms.	Supports H1, H2
(Ferreira et al., 2024)	IFRS & Credit Rating Informativeness	566 Firms, 36 Countries	IFRS adoption improves the explanatory power of financial reports used in credit rating assessments.	Supports H1, H2
(Bhattacharya & Sharma, 2019)	ESG Disclosures & Credit Rating	India	Environmental and social disclosures exert a greater influence on CR than governance indicators.	Supports H2
(Agyemang et al., 2020)	Country-level Governance & FDI	Africa	Strong national governance frameworks attract investment in sensitive sectors such as agriculture.	Supports H2
(Attridge et al., 2021)	Governance in Development Finance	Africa	Robust governance in national banks supports the provision of long-term finance to underserved sectors.	Supports H2
(Monks & Minow, 2011)	Corporate Governance Fundamentals	Global	Sound governance practices enhance transparency, credibility, and investor confidence.	Supports H2
(Fernando et al., 2020)	Weak Governance & Default Risk	USA	Weak governance is associated with elevated default risk, particularly during periods of financial distress.	Supports H2
(Ko et al., 2019)	Governance & Operational Risk	Global	Effective governance mechanisms reduce operational losses and improve credit performance.	Supports H2
(Moussa, 2019)	Board Characteristics & Credit Risk	Tunisia	Board size and gender diversity are associated with variations in credit quality.	Supports H2
(Lin et al., 2020)	Governance + CSR → Credit Rating	Taiwan	Corporate governance and CSR initiatives jointly contribute to improved credit ratings.	Supports H2
(Driss et al., 2021)	Institutional Ownership & CR	57 Countries	Long-term institutional ownership enhances CR, particularly in environments with weak governance.	Supports H2
(Bhandari & Golden, 2021)	CEO Ideology & Credit Rating	USA	CEO political ideology influences CR outcomes, especially under weak governance structures.	Supports H2
(Mili & Alaali, 2023)	Governance & Credit Rating	GCC Countries	Board structure and gender diversity have a positive impact on CR.	Supports H2
(Aroul & Rodriguez, 2024)	Market Reactions to CR Changes	USA (REITs)	Strong governance mitigates abnormal market reactions following credit downgrades.	Supports H2
(Kaur & Dey, 2025)	Board Structure & Creditworthiness	India	Audit committee presence and board independence enhance CR, while insider ownership has a weakening effect.	Supports H2
(Mehedi et al., 2020)	Governance & Agricultural Credit	Bangladesh	Effective governance increases the availability of credit for agricultural purposes.	Supports H2, H3
(Li et al., 2022)	ESG, Transparency & Credit Rating	China	Transparency plays a mediating role in the relationship between ESG practices and credit ratings.	Supports H2, H3
(Ben Saad et al., 2024)	CSR, Governance & CR	France	CGMs serve as mediating variables in the relationship between CSR and CR.	Supports H3

Lin et al. (2020), in their Taiwanese study, examined the interaction between CGMs and corporate social responsibility in forming CR and found that well-governed, larger firms tended to attain better CSR performance, which enhanced their credit evaluations. Additionally, Driss et al. (2021) provided international evidence that long-term institutional ownership positively affects CR, particularly in jurisdictions with weaker governance institutions. From a behavioural standpoint, Bhandari & Golden (2021) explored how CEO ideology influences CR, revealing that conservative leadership in the United States correlates with improved ratings, particularly in firms with deficient governance. In China, Li et al. (2022) demonstrated that transparency mediates the impact of ESG disclosures on creditworthiness, thereby reinforcing the critical role of information clarity. Mili & Alaali (2023) found that board composition, gender representation, and institutional oversight enhance CR within Gulf Cooperation Council financial institutions, while frequent board meetings and ownership concentration were negatively associated with rating outcomes.
Further supporting the indirect role of CGMs, Ben Saad, Laouiti, & Ajina (2024) observed in French firms that CSR performance positively influences CR, with CGMs acting as a mediating mechanism. Using a market reaction lens, Aroul & Rodriguez (2024) discovered that in real estate investment trusts (REITs), CR downgrades triggered weaker investor responses when CGMs were strong, indicating that robust governance fosters credibility and softens adverse financial signals. Finally, Kaur & Dey (2025) analysed 131 Indian firms and concluded that institutional ownership, independent audit committees, and diverse boards contributed positively to CR, whereas insider ownership and CEO duality exerted detrimental effects. Collectively, this literature affirms that both IFRS and CGMs are conducive to improving CR, although the direction and strength of these effects depend on institutional context, regulatory enforcement, and the presence of complementary reforms. In Iraq, where financial infrastructure remains underdeveloped and the AFS is strategically vital yet underserved, coordinated efforts to implement IFRS alongside CGMs may yield substantial improvements in credit accessibility, particularly for rural and agricultural borrowers.

Methodology

Sample

A sample comprising ten banks listed on the ISE between 2013 and 2022 was selected for this study. The selection process focused on identifying the highest-rated Iraqi banks, which demonstrated greater adherence to the Corporate Governance Principles set forth by the Central Bank of Iraq. The sample period encompasses both the pre- and post-IFRS adoption phases, thereby enabling a comparative assessment of reporting practices and their potential implications. To assess the adequacy of the selected sample size, a statistical power analysis was conducted, as detailed in Table 2, to ensure the sufficiency of observations for the intended analyses. Moreover, Table 2 indicates that the minimum number of observations for the first model was 76, accounting for the impact of the control variable on the examined relationship. It was observed that the number of observations exceeded the minimum threshold required by the statistical model, with the actual value reaching 0.000. In the case of the second model, the lowest number of observations was recorded as 97, similarly considering the influence of the control variable. Once again, the number of observations surpassed the acceptable minimum specified by the statistical model. Accordingly, the statistical power results confirm the suitability of the data for analysis, as the sample size and variable structure were appropriate for each model. An expected effect size of 15 percent and a significance level of 5 percent were adopted, which are generally regarded as acceptable parameters within financial and administrative research.

Table 2: Statistical Power Test.

Model (2)	Model (1)	Effect Size
0.15		Anticipated Effect Size (f2)
6	3	Number of Predictors
5%		Probability Level
97	76	Minimum Required Sample Size

Variable Measurement

Table 3 presents the measurement approach employed for the variables utilised in the present study. The analysis incorporated three variables, each operationalised based on established indicators and relevant financial governance criteria.

Table 3: Variable Measurement Method.

Variables	Scale Description
Dependent Variables	CR Measuring by CAMELS Index.
Independent Variable	IFRS
IFRS	A dummy variable measures it; it is given 1 if the bank applies IFRS and 0 otherwise.
Mediator Variable	CGMs
CGM1	It is measured by the number of the Board for each bank; it should have seven or more members.
CGM2	It is measured using the ratio of SEX to the number of BZ.
CGM3	It is measured using the percentage of ownership of the largest shareholder.

Study Model and Framework

Based on the defined study variables, Figure 1 illustrates the research model and the directional nature of the interplay, which was formulated in line with the hypotheses derived from the conceptual foundations established in prior research.

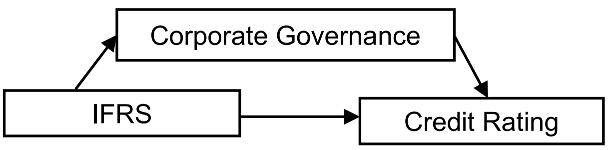

Figure 1: Study Model.

Mathematical Model

To fulfil the study's objective, which is to assess the overall influence of IFRS on CR within the framework of an "enhanced mediator" model, wherein CGMs function as a mediating factor, the research model is structured around three equations. Equation (1) presents the measurement of CR based on the CAMELS framework.

$$CR_{it} = \partial_1(CA) + \partial_2(AQ) + \partial_3(MQ) + \partial_4(E) + \partial_5(L) + \partial_6(SMR).(1)$$

Where:

CR_{it} represents the CR, where C denotes the capital adequacy ratio, A represents asset quality, M refers to management quality, E indicates earnings, L reflects liquidity, and S signifies sensitivity to market risks. The symbol ∂ corresponds to the relative weights assigned to each of these elements based on their respective importance. Equation (2) assesses the overall impact of IFRS on CR.

$$CR_{it} = \partial_0 + \partial_1 IFRS + \epsilon_t \ldots.(2)$$

Equation (3) assesses the mediating role of CGMs in the relationship between IFRS and CR.

$$CR_{it} = \partial_0 + \partial_1 IFRS + \partial_2 \sum_{C=3}^{C} CG_{it}^{C} + \epsilon_t \ldots.(3)$$

Where:

$\beta 2 \sum_{C=5}^{C} CG_{it}^{C}$ represents the vector of CGMs that includes three mechanisms: BS, SEX, and the MSP.

Results

Descriptive Statistics

Table 4 provides the descriptive statistics for the variables under investigation, namely CR, IFRS, and CGMs (MSP, SEX, and BS). The mean CR index is approximately 0.548, with a median of 0.462, suggesting that half of the sampled banks recorded CR values below 0.462 and the remainder above. This finding implies that the majority of banks in the sample fall short of Basel regulatory requirements, which set a minimum CR threshold of 8%. The CR values range from a minimum of 0.205 to a maximum of 1.943, indicating substantial heterogeneity in financial soundness across the institutions studied. The standard deviation (STDEV) of 0.29 denotes a moderate level of dispersion, while a kurtosis value of 7.1 signifies a leptokurtic distribution, indicating the presence of extreme outliers. The skewness coefficient of 2.334 reveals a right-skewed distribution, whereby a minority of banks exhibit disproportionately high CR values.

Table 4: Descriptive Statistics.

Variables	Mean	Median	Min	Max	Standard Deviation (STDEV)	Excess Kurtosis	Skewness
CR	0.548	0.462	0.205	1.943	0.29	7.1	2.334
IFRS	0.5	1	0	1	0.5	-2.041	0
MSP	0.194	0.1	0.062	0.79	0.195	2.053	1.891
SEX	0.032	0	0	0.333	0.069	3.861	2.111
BZ	6.58	7	4	9	0.982	0.879	-0.807

With regard to IFRS, the average value is 0.5, reflecting that approximately half of the banks had adopted IFRS during the observed period. This result aligns with the sampling design, which includes both pre- and post-adoption data. The median value of 1 suggests that a majority of institutions had transitioned to IFRS compliance. The variable ranges from 0 (non-adoption) to 1 (full adoption), with a STDEV of 0.5, indicating notable variance in the level of implementation across banks. The negative kurtosis of -2.041 suggests a platykurtic distribution, meaning the data are more dispersed around the mean than in a normal distribution. The zero-skewness value implies a symmetrical distribution of IFRS adoption. As for MSP, the mean indicates that the largest shareholder, on average, holds 19.4% of the bank's equity. The median of 0.1 implies that in at least half of the banks, the principal shareholder owns less than 10% of the shares. The range extends from 6.2% to 79%, pointing to considerable variability in ownership concentration. The STDEV of 0.195 indicates moderate dispersion. A kurtosis of 2.053 suggests a mesokurtic distribution with a concentration around the centre, whereas a skewness of 1.891 reveals a pronounced right skew, implying that a few banks have significantly high ownership concentrations.

In terms of SEX representation on boards, the mean value is 0.032, while the median is 0, indicating that most banks lack female board members. The minimum is 0 and the maximum is 0.333, showing that in some cases, up to 33.3% of the board comprises women. This indicates that 66.7% of the sample does not comply with the Central Bank of Iraq's regulation mandating the presence of at least one female board member. The STDEV of 0.069 reflects minimal variation. A kurtosis of 3.861 signifies a leptokurtic distribution concentrated around the lower end, and a skewness of 2.111 indicates a positively skewed distribution, with a small number of banks having relatively higher female representation. Finally, with respect to BS, the mean is 6.58 and the median is 7, denoting that the prevailing board size aligns with regulatory expectations. The observed range spans from 4 to 9 board members. A STDEV of 0.982 reveals limited variability, suggesting compliance with Central Bank guidance recommending a board size not exceeding seven members. The kurtosis value of 0.879 indicates a distribution approximating normality, while a skewness of -0.807 shows a slight negative skew, implying that some banks maintain larger-than-average boards. Given the reliance on secondary data sourced from publicly available records on the Iraq Stock Exchange (ISE), deviations from normality are not considered critical in this context.

Model Validity Test

The findings outlined in Table 5 detail the results of the model's validity and reliability evaluations, based on structural validity measures obtained through structural equation modelling indicators. The results demonstrate that the Outer Loadings for all variables were recorded at 1.000, indicating a perfect correlation between the observed indicators and the latent constructs they are designed to measure. The CA coefficient, commonly employed to assess internal consistency and model reliability, is generally regarded as acceptable when exceeding 0.7, and very good when above 0.8. In this case, all CA values reached 1.000, suggesting complete consistency among the items associated with each construct and an absence of measurement error. While this implies exceptionally high reliability, it may also indicate possible overestimation or an underlying issue in the data processing methodology.

Table 5: Model Validity Test Results.

Variables	Outer Loadings	Cronbach's Alpha (CA)	rho_A	Composite Reliability (CR)	Average Variance Extracted (AVE)
CR	1.000	1.000	1.000	1.000	1.000
IFRS	1.000	1.000	1.000	1.000	1.000
MSP	1.000	1.000	1.000	1.000	1.000
SEX	1.000	1.000	1.000	z1.000	1.000
BZ	1.000	1.000	1.000	1.000	1.000

Similarly, the rho_A coefficient, which serves as a more robust alternative to Cronbach's Alpha, also yielded values of 1.000, reinforcing the conclusion of perfect consistency. The CR coefficient, which evaluates the consistency of each latent construct with its associated indicators, likewise returned values of 1.000, further suggesting no observable measurement error across variables—an outcome rarely encountered in empirical data. In addition, the AVE, which assesses the proportion of variance captured by each latent construct relative to the variance due to measurement error, reported values of 1.000 for all constructs. This implies that each latent variable accounts for 100% of the variance in its observed indicators, a result that is theoretically ideal but rarely realised in practice. Overall, while these results denote perfect reliability and validity for the model, such outcomes are atypical in empirical research and may warrant further scrutiny. Figure 2 illustrates the structural model employed to evaluate the model's validity.

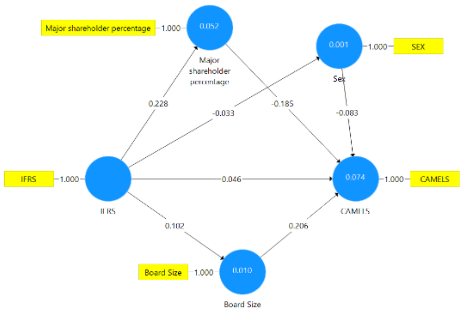

Figure 2: Structural Model for Testing Model Validity.

Inferential Statistics and Hypothesis Testing

Inferential Statistics for Direct Effects

Table 6 displays the results of the inferential statistical analysis regarding the direct effects among the study variables. The analysis reveals a positive path coefficient for the relationship between BS and CR, suggesting that an increase in BS is linked to an improvement in CR. This relationship is statistically significant, as indicated by a t-value of 3.283 and a p-value of 0.001, which falls below the 0.05 significance level. These findings suggest that larger BS is positively associated with higher CR assessments. In relation to the influence of IFRS on BS, the results indicate a marginal positive association; however, this effect lacks statistical significance. The t-value of 1.035 and p-value of 0.301 suggest that IFRS does not meaningfully affect BS. This could imply that decisions regarding board composition are influenced by internal governance practices rather than compliance with IFRS. The direct effect of IFRS on CR was found to be extremely weak and statistically insignificant, with a t-value of 0.435 and a p-value of 0.664. This suggests that the adoption of IFRS alone does not exert a measurable impact on CR among the banks studied.

Table 6: Inferential Statistics for Direct Effects.

Path Coefficients	Original Sample (O)	STDEV	T Statistics	P Values
BS -> CR	0.206	0.063	3.283	0.001
IFRS -> BS	0.102	0.098	1.035	0.301
IFRS -> CR	0.046	0.106	0.435	0.664
IFRS -> MSP	0.228	0.084	2.730	0.007
IFRS -> Sex	-0.033	0.098	0.339	0.735
MSP -> CR	-0.185	0.075	2.465	0.014
Sex -> CR	-0.083	0.071	1.178	0.239

On the other hand, IFRS demonstrated a moderately positive and statistically significant relationship with MSP. The path coefficient, supported by a t-value of 2.730 and a p-value of 0.007, indicates that IFRS adoption may be associated with an increase in MSP. This result could reflect improved transparency or regulatory confidence attracting more concentrated ownership. Regarding the interplay between IFRS and SEX, the path coefficient indicated a very weak and negative effect that was not statistically significant. With a t-value of 0.339 and a p-value of 0.735, the findings suggest that IFRS has no observable influence on SEX. This may imply that decisions regarding female board participation are shaped by organisational or cultural factors rather than financial reporting standards.

The relationship between MSP and CR revealed a moderately negative and statistically significant effect. The t-value of 2.465 and a p-value of 0.014 indicate that higher MSP is associated with lower CR. This may be due to the concentrated influence of major shareholders potentially undermining effective governance, thereby diminishing creditworthiness. Lastly, the path from SEX to CR showed a very weak negative relationship that was statistically insignificant. The t-value of 1.178 and p-value of 0.239 suggest that SEX does not have a direct or significant impact on CR. This outcome may reflect the limited presence or influence of female members in governance structures across the sample.

Inferential Statistics for Indirect Effects

Table 7 presents the results related to the indirect effects, aimed at evaluating whether CGMs (BS, MSP, and SEX) mediate the relationship between IFRS adoption and CR. The findings indicate that the indirect effect along the path

(IFRS → BS → CR) is minimal and lacks statistical significance. The impact coefficient was 0.021, with a t-value of 0.908, which is below the acceptable threshold for significance. Additionally, the p-value of 0.364 exceeds the 0.05 criterion, confirming the absence of a significant mediating role for BS in the relationship between IFRS and CR. These results suggest that changes in BS do not mediate the influence of IFRS adoption on CR, indicating that BS does not serve as an effective intermediary in this context.

Table 7: Inferential Statistics for Indirect Effects.

Specific Indirect Effects	Original Sample (O)	Standard Deviation	T Statistics	P Values
IFRS -> BS -> CR	0.021	0.023	0.908	0.364
IFRS -> MSP -> CR	-0.042	0.025	1.691	0.091
IFRS -> Sex -> CR	0.003	0.011	0.248	0.804

With regard to the path (IFRS → MSP → CR), the results imply that MSP may act as a weak mediating factor between IFRS and CR. However, this effect fails to meet the criteria for statistical significance. The indirect effect was recorded at 0.042, indicating a slight negative influence, and the corresponding t-value was 1.691. While this suggests a possible effect, it lacks sufficient statistical confirmation. The p-value stood at 0.091, which, being greater than 0.05, denotes that the effect is not statistically validated, although it may carry some contextual relevance. These findings imply that a higher MSP could diminish the influence of IFRS on CR, potentially due to the dominant role of concentrated ownership in shaping financial decisions in ways that may diverge from sound governance principles. For the path (IFRS → SEX → CR), the analysis indicates that SEX does not act as a mediator between IFRS and CR. The coefficient was merely 0.003, pointing to a minimal and effectively insignificant effect. The associated t-value of 0.248 and a p-value of 0.804 provide further confirmation of the lack of statistical significance. These results suggest that the presence of women on boards neither amplifies nor diminishes the influence of IFRS on CR, indicating that gender composition is not a salient mediating factor in this context. Figure 3 presents the structural equation model underpinning the study's conceptual framework.

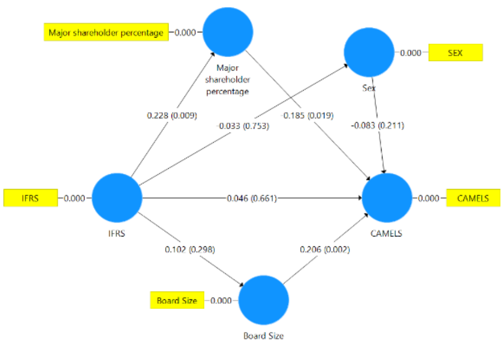

Figure 3: Structural Equation Modelling of the Basic Study Model.

Conclusion

The present study sought to examine the mediating influence of CGMs in the relationship between IFRS and the CR of Iraqi banks listed on the Iraq Stock Exchange. The findings reveal notable variation among banks in terms of IFRS compliance, BS, ownership concentration, and the presence of SEX on boards. Certain variables, particularly SEX and MSP, were positively skewed, suggesting that a limited number of banks reported substantially higher values than the rest of the sample. The analysis indicates that CGMs (BS, MSP, and SEX) do not serve as strong mediators in the association between IFRS and CR. Nonetheless, there was a marginal indication that MSP may exert some influence on this relationship, although it did not achieve statistical significance. In contrast, neither BS nor SEX demonstrated any meaningful mediating role, suggesting that the influence of IFRS on CR is not contingent upon these factors. This outcome diverges from theoretical expectations that effective governance mechanisms contribute to enhanced CR.

Future research is encouraged to further explore the dynamics among CR, CGMs, and IFRS, as the current findings suggest only limited intermediation by CGMs. The observed weaknesses may be attributed to several limitations, notably the inclusion of both pre- and post-IFRS adoption periods, which were selected due to the limited availability of post-adoption data. This approach, however, facilitated a comparative assessment of IFRS implementation and its interplay with governance structures and CR. It is recommended that subsequent investigations re-examine the model using alternative mediators such as audit quality, financial disclosure, or the strength of internal controls, as these elements may exert a more substantial influence on the relationship between IFRS and CR in the banking sector.

Implications of the Study

Policy and Development Related Implications

This study has direct policy implications for reform initiatives that aim to enhance financial inclusion for the rural and agricultural sectors. In emerging markets such as Iraq, agriculture tends to be credit-rationed owing to weak institutional capacity, weak disclosure practices in finance, and weak risk-assessment frameworks. The study presents evidence that IFRS implementation, together with enhancements in CGMs—examined most extensively for BS, dispersion of ownership, and proportion represented by female directors—determines a bank's CR substantially. Greater CR, in its own accord, enables access to cheaper capital for financial institutions, which can be deployed in strategic sectors such as agriculture. These insights support the formulation of regulatory reforms that mandate IFRS compliance and effective governance performance as prerequisites for both public and private financial institutions seeking to operate in rural credit markets. The findings should be integrated into broader financial sector development strategies, particularly those aligned with the Sustainable Development Goals, such as SDG 2 (Zero Hunger) and SDG 8 (Decent Work and Economic Growth). It can be refined through oversight agencies advancing governance-based models for risk assessment designed to minimize systemic lending biases toward smallholder farmers and agribusiness operations, thereby enhancing equitable credit access and fostering rural structural transformation.

Agribusiness Related Implications

The significance of this research is particularly high for the agribusiness market, which tends to operate under conditions of high risk and has access to very limited formal-financing instruments. The study concludes that lenders showing good governance—characterized by diversity and board independence and strong transparency in reporting—have a greater tendency to adopt comprehensive risk-assessment models. This capacity is especially important when evaluating agribusiness loan applications, which often involve irregular cash flows, vulnerability to climatic shocks, and insufficiently documented collateral. A rural-based financial institution applying the expected credit loss methodology outlined in IFRS 9, supported by a transparent and accountable board, may be capable of effectively distinguishing between high- and low-risk agricultural borrowers by assessing their historical performance and governance standards. Such capability can reduce perceived credit risk, lower non-performing loan ratios, and allow for more assertive expansion of rural lending portfolios. As such, raising governance quality for financial institutions holds not only the promise to enhance CRs, but more significantly, to be a strategic enabler for financing agriculture. This is even more relevant in Iraq, where agriculture is a fundamental feature in the national development agenda's economic diversification strategies.

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