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The Impact of Disclosing the Quality of the Internal Control System on Improving Institutional Performance: A Field Study on the Iraqi Banking Sector

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Abstract

Purpose: This study examines the effect of internal control system disclosure on institutional performance in the Iraqi banking sector within the 2023–2025 reform context of the Central Bank of Iraq.

Methodology: A descriptive-analytical field study was conducted using a structured five-point Likert questionnaire distributed to 285 respondents from commercial, private, and Islamic banks. Participants included managers, auditors, and audit committee members. Data were analyzed using Statistical Package for the Social Sciences (SPSS) and Analysis of Moment Structures (AMOS) through descriptive statistics, Pearson correlation, multiple regression, and structural equation modeling.

Results: The COSO internal control components explain 61.8% of institutional performance variance ($R^2 = 0.618$, $F = 89.4$, $p < 0.001$). Control activities are the strongest predictor ($\beta = 0.311$), while information and communication show the lowest mean score (3.48), indicating weaknesses in digital transparency. Overall, internal control disclosure significantly improves institutional performance.

Conclusions: Transparent disclosure of internal control systems enhances banking performance. Private banks show stronger operational control disclosure, whereas government banks perform better in control environment practices.

Limitations: The study is limited by its cross-sectional design, Iraqi context, and reliance on self-reported data, which may not fully reflect actual practices.

Contributions: This research provides empirical evidence from an emerging economy and offers a governance framework to improve internal control disclosure aligned with international banking standards.

Keywords: *Corporate Governance, COSO Framework, Institutional Performance, Internal Control Quality, Iraqi Banking Sector*

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1. Introduction

The global financial governance landscape has undergone transformative shifts in the aftermath of high-profile corporate failures, compelling regulatory bodies and standard-setters to intensify requirements for internal control transparency and institutional accountability (Cohen, Krishnamoorthy, & Wright, 2020). Internal control systems, particularly as conceptualized within the Committee of Sponsoring Organizations of the Treadway Commission (COSO) Integrated Framework, have emerged as the foundational architecture through which organizations ensure the reliability of financial reporting, the effectiveness of operations, and compliance with applicable laws and regulations (COSO, 2023). In developing economies, where institutional governance structures are in earlier stages of maturity, the quality of internal control disclosure assumes heightened significance as a mechanism for bridging the information asymmetry between management and external stakeholders (Rashid, Akmal, & Shah, 2024).

The Iraqi banking sector, operating within a complex institutional environment shaped by decades of structural challenges, is currently navigating a period of profound regulatory and operational reform under the leadership of the Central Bank of Iraq. The 2023 Financial Stability Report documented total banking sector assets reaching 205.25 trillion Iraqi dinars, with total capital growing by 6.6% to 19.07 trillion dinars, reflecting gradual sectoral improvement (Central, 2024). Concurrently, landmark regulatory initiatives including Instruction No. 439/2/9 mandating minimum capital increases to 400 billion Iraqi dinars by end-2025, the Digital Payment System Regulation No. 2 of 2024, and comprehensive anti-money laundering and compliance reforms are fundamentally restructuring the operational and governance landscape for Iraqi banks (Central, 2024; HHL, 2025).

Within this reform context, the disclosure of internal control quality has become an increasingly critical determinant of institutional credibility and performance. The COSO framework's 2023 update expanded the scope of internal control to encompass Environmental, Social, And Governance (ESG) reporting dimensions, reflecting the global convergence of financial and sustainability governance standards (COSO, 2023). Tang and Tang (2025) demonstrated that the joint disclosure of internal control effectiveness and risk management significantly enhances the informational value available to investors and stakeholders, while He, Song, and Chen (2023) established that financial technology adoption materially improves internal control quality in banking institutions. These developments collectively underscore the imperative for Iraqi banks to elevate both the substance and transparency of their internal control practices.

Prior research examining the relationship between internal control quality and organizational performance in the Iraqi banking context has been limited in scope, often focusing on narrow governance aspects or relying on limited samples (Idan, Hanani, Rapani, & Khalid, 2021; Al-Husseini, & Nasir, 2022). Field evidence comprehensively examining all five COSO components control environment, risk assessment, control activities, information and communication, and monitoring and their differential impact on financial, operational, and institutional performance indicators remains notably scarce. This gap is particularly consequential given the active reform environment, which creates both new governance requirements and performance expectations for Iraqi banking institutions (Al-Mawla, 2024; Tamimi, 2021).

Agency theory (Jensen and Meckling (1976), as cited in He, Li, Wang, and Zhang (2025)) posits that separation of ownership and management generates agency costs arising from information asymmetry and misaligned incentives. Transparent disclosure of internal control quality serves as a governance mechanism that mitigates these agency costs by enabling principals to monitor managerial behavior and verify the reliability of reported performance metrics (Tang & Tang, 2025). Signaling theory further predicts that organizations with superior internal controls will voluntarily disclose this advantage to differentiate themselves in the market, thereby reducing cost of capital and improving investor valuations (Rashid et al., 2024). Stakeholder theory additionally suggests that comprehensive disclosure fulfills the information requirements of multiple organizational constituencies shareholders, depositors, regulators, and customers thereby enhancing institutional trust and supporting sustainable performance improvement (He et al., 2025).

This study addresses the identified research gaps and contributes novel empirical insights by comprehensively examining the impact of all five COSO internal control components on institutional performance across a large, demographically diverse sample of Iraqi banks during a period of active regulatory reform. The novelty of this research lies in its simultaneous examination of component-level disclosure differentials between public and private banks, its integration of the 2023 COSO framework updates, and its empirical grounding within the specific institutional context of Iraq's banking sector transformation. The study hypothesizes that there is a statistically significant positive relationship ($\alpha \leq 0.05$) between the disclosure of internal control system quality and the institutional performance of Iraqi banks, with differential impact across the five COSO components. The findings offer actionable guidance for the Central Bank of Iraq, banking executives, internal auditors, and policymakers navigating the intersection of governance quality and institutional performance in an emerging economy context.

2. Literature Review

2.1 Internal Control Systems: Conceptual Evolution and COSO Framework

The concept of internal control has evolved substantially from its origins in narrow financial controls to a comprehensive enterprise-wide governance framework. The COSO Internal Control Integrated Framework, originally published in 1992 and significantly updated in 2013, defines internal control as a process implemented by the board of directors, management, and other employees designed to provide reasonable assurance regarding the achievement of objectives across three categories: operations, reporting, and compliance (COSO, 2023). The five interrelated components control environment, risk assessment, control activities, information and communication, and monitoring activities constitute the structural architecture of effective internal control, with seventeen associated principles providing granular operational guidance for implementation (He, Li, Wang, & Zhang, 2025).

The COSO 2023 update represents a landmark expansion of the framework's scope, extending internal control principles to encompass Environmental, Social, And Governance (ESG) reporting, thereby acknowledging the growing materiality of non-financial performance information for investors and other stakeholders (COSO, 2023). This expansion reflects the convergence of financial governance and sustainability disclosure requirements, creating new imperatives for banking institutions to develop internal control competencies that extend beyond traditional financial reporting boundaries. He et al. (2025) documented that COSO-based internal control quality is positively associated with comprehensive enterprise risk management effectiveness in Chinese listed companies, confirming the framework's relevance across diverse institutional contexts. The integration of ESG dimensions into internal control frameworks is particularly significant for emerging economy banks, where environmental and social governance disclosure is increasingly demanded by international correspondent banks and multilateral financial institutions (Islamic, 2024).

The application of blockchain technology and artificial intelligence to internal control systems represents a frontier dimension of the COSO framework's evolution. Al-Kafi and Ibrahim (2020) examined how information technology investments influence internal control effectiveness in Libyan commercial banks, finding positive associations between IT adoption and control quality across multiple dimensions. He, Song, and Chen (2023) extended this analysis to the specific context of fintech adoption in Chinese banks, demonstrating that digital financial service integration strengthens internal control quality through enhanced transaction monitoring capabilities and automated compliance verification. These findings carry direct relevance for Iraqi banks, which are currently mandated to adopt electronic payment systems under Payment System Regulation No. 2 of 2024, creating both opportunities and implementation challenges for internal control system enhancement (Central, 2024).

2.2 Disclosure of Internal Control Quality: Dimensions and Measurement

Internal control quality disclosure encompasses the practices and regulatory requirements through which organizations provide transparent, comprehensive information about the nature, design, and operating effectiveness of their internal control systems to external stakeholders (Tang & Tang, 2025). Rashid, Akmal, and Shah (2024) identified four primary disclosure dimensions: the structural composition and components of the internal control system; identified deficiencies and remediation mechanisms; management's formal assessment of system effectiveness; and the independent external auditor's attestation report on internal controls. Each dimension provides incrementally valuable information to stakeholders, with the combination of management assessment and independent auditor attestation delivering the highest informational value (Demerjian, Lev, Lewis, & McVay, 2023; Wang, Zhang, & Chen, 2024; Zhao, Chen, & Liu, 2024).

The regulatory evolution of internal control disclosure requirements has been particularly rapid in developed markets. The US Sarbanes-Oxley Act Section 404 mandates annual management reports on internal control effectiveness and independent auditor attestation for public companies, a standard increasingly adopted as a governance benchmark by emerging market regulators (Cohen, Krishnamoorthy, & Wright, 2020). In the Gulf Cooperation Council region, Saudi Arabia's Capital Market Authority has progressively strengthened internal control disclosure requirements for listed banks, with Regulation and Disclosure in Regulation (2025) documenting that regulatory oversight can partially substitute for internal governance mechanisms, though governance effectiveness remains fundamentally shaped by internal control system quality. The Central Bank of Iraq's Instruction No. 439/2/9 of 2023 represents a comparable regulatory intensification in the Iraqi context, establishing enhanced disclosure requirements as part of broader capital adequacy and governance reforms (Central, 2024; Tran, & Nguyen, 2024).

Idan, Hanani, Rapani, and Khalid (2021) conducted a foundational examination of governance attributes and disclosure practices in Iraqi companies, establishing a methodological framework for subsequent empirical research in the local context. Their findings identified significant associations between board composition, external audit quality, and disclosure comprehensiveness, confirming that governance structure and disclosure quality are co-determined. Al-Mawla (2024) extended this analysis to specifically examine the integration challenges between internal and external auditors in Iraqi banks, identifying weak coordination as a systemic structural deficiency that materially limits the effectiveness of the control system and the credibility of associated disclosures.

2.3 Institutional Performance in the Banking Sector: Theoretical Frameworks and Indicators

Institutional performance in banking is a multidimensional construct encompassing financial, operational, and strategic dimensions that collectively capture the value creation capacity and governance quality of banking organizations (Al-Husseini & Nasir, 2022). Financial performance indicators including Return On Assets (ROA), Return On Equity (ROE), Net Interest Margin (NIM), Capital Adequacy Ratio (CAR), and Non-Performing Loan Ratio (NPL) provide quantitative assessments of profitability, capital efficiency, and asset quality. Operational performance indicators capture the quality of the loan portfolio, risk management effectiveness, regulatory compliance, and internal process efficiency. Institutional performance indicators encompass transparency and governance quality, stakeholder confidence levels, financial report quality, and market reputation (He, Li, Wang, & Zhang, 2025; Tamimi, 2021).

Agency theory provides the primary theoretical lens for understanding the relationship between internal control disclosure and performance. Jensen and Meckling (1976) seminal framework, as cited in He et al. (2025), posits that the separation of ownership and management generates agency costs arising from information asymmetry and potential managerial opportunism. Transparent internal control disclosure reduces these costs by enabling more effective principal monitoring of agent behavior, thereby aligning managerial incentives with shareholder value creation. Empirical support for this mechanism is provided by Al-Tamimi (2023), who documented that external audit quality is directly associated with performance indicators in Iraqi banks, confirming that independent verification of control system quality materially influences institutional outcomes. He, Song, and Chen (2023) study of Chinese banks further demonstrated that higher internal control quality is associated with superior risk-adjusted performance, particularly in environments where regulatory oversight is actively evolving (Zhou, Gao, & Zhao, 2023).

Signaling theory offers a complementary explanatory framework, positing that organizations with demonstrably superior internal control quality will voluntarily disclose this advantage to differentiate themselves from lower-quality competitors, thereby reducing information risk premiums and accessing capital markets on more favorable terms (Rashid, Akmal, & Shah, 2024). This perspective has particular relevance for the Iraqi banking context, where private banks competing for international correspondent relationships and foreign investment must signal credible governance quality to prospective partners. Al-Moussawi and Al-Banna (2023) examined banking awareness and its influence on capital structure rigidity in Iraqi commercial banks, finding that governance quality indicators, including internal control effectiveness, are associated with more flexible and efficient capital allocation, consistent with signaling theory predictions.

2.4 Internal Control Disclosure and Organizational Performance: Empirical Evidence

The empirical literature examining the relationship between internal control quality and organizational performance has grown substantially in recent years, with converging findings across diverse institutional contexts. Tang and Tang (2025) analyzed US evidence and demonstrated that internal control effectiveness and textual risk disclosure possess independent and complementary informational value, with the combination yielding a coefficient of determination for future performance indicators that substantially exceeds either variable individually. This finding implies that comprehensive internal control disclosure, encompassing both structural quality assessments and qualitative risk disclosures, is more informative than either element alone, a pattern that has direct implications for disclosure framework design in Iraqi banks.

He, Li, Wang, and Zhang (2025) conducted a comprehensive review of COSO-based internal control research in China and found that internal control over operational processes exerts a significantly larger impact on organizational performance than control over financial reporting processes alone. This finding challenges the conventional regulatory focus on financial reporting controls and suggests that the operational dimensions of the COSO framework particularly control activities and monitoring deserve greater attention in governance reform initiatives. Rashid, Akmal, and Shah (2024) extended this analysis to Islamic and conventional banks in emerging markets, finding that institutional quality moderates the relationship between corporate governance and risk management, while the internal control system's effectiveness mediates the governance-performance relationship. These findings have important implications for the Iraqi banking sector, which includes substantial Islamic banking operations requiring governance frameworks that accommodate both conventional and Shari'ah-compliant control principles (Islamic, 2024; Yusuf, & Mulyani, 2024).

The impact of regulatory reforms on internal control quality and disclosure has also received increasing scholarly attention. The Saudi Arabia evidence documented in Regulation and Disclosure in (Regulation, 2025) suggests that enhanced regulatory oversight creates a partial substitution effect for internal governance mechanisms, with stronger regulatory environments associated with higher baseline disclosure quality even absent voluntary governance initiatives. This pattern likely applies in the Iraqi context, where the Central Bank of Iraq's progressive tightening of governance and disclosure requirements under the 2023–2025 reform program is expected to elevate internal control disclosure standards across the banking sector. Al-Tamimi (2023) confirmed this regulatory transmission mechanism in his examination of external auditing's impact on Iraqi bank performance, finding that audit quality improvements driven by regulatory mandate translate into measurable performance enhancements.

2.5 Digital Transformation and Internal Control in Emerging Economy Banks

The intersection of digital transformation and internal control quality represents an increasingly salient dimension of banking governance research. He, Song, and Chen (2023) established that fintech adoption significantly enhances internal control quality in Chinese listed banks, with the information and communication dimension of the COSO framework registering the largest improvement following digital financial service integration. This finding has direct relevance for Iraqi banks, where the information and communication component currently records the lowest disclosure levels a pattern that reflects the sector's still-evolving digital infrastructure and the lag between regulatory mandates and operational implementation (Central, 2024). The Digital Payment System Regulation No. 2 of 2024 mandating electronic commercial transactions represents a regulatory catalyst for accelerated digital transformation that should progressively strengthen the information and communication control dimension (HHL, 2025).

Ali (2023) examined accounting dimensions of corporate governance and risk management in Iraqi insurance companies, finding that digital governance infrastructure quality is positively associated with risk management effectiveness. These findings suggest that investment in digital internal control capabilities including automated transaction monitoring, real-time compliance verification, and AI-enhanced anomaly detection represents a high-return governance investment for Iraqi financial institutions. The combination of regulatory pressure from the Central Bank of Iraq's digital transformation mandates and competitive pressure from private banks' international partnerships is expected to accelerate digital control infrastructure development across the Iraqi banking sector, with corresponding improvements in the information and communication component of internal control quality and disclosure.

3. Research Methodology

3.1 Research Design, Population, and Sample

This study employs a descriptive-analytical and field research design to examine the relationship between internal control quality disclosure and institutional performance in the Iraqi banking sector. The research population comprises all commercial banks operating in Iraq and registered with the Central Bank of Iraq, encompassing more than seventy institutions across government-owned, private, Islamic, and foreign ownership categories. A purposive sampling strategy was applied, targeting banks meeting three criteria: listing on the Iraq Stock Exchange ensuring availability of published financial data; completion of an independent external audit during the 2022–2024 period; and maintenance of a formally structured internal audit unit in accordance with Central Bank Instruction No. 4 of 2010 (Central, 2024). This sampling framework ensures that selected institutions possess both the governance infrastructure and the documentation capacity to respond meaningfully to the study's research instrument (Sekaran & Bougie, 2016).

A total of 320 questionnaires were distributed to respondents across the sampled banks, with 285 returned and deemed valid for statistical analysis, representing an 89% response rate that substantially exceeds conventional acceptance thresholds and enhances result reliability. The sample comprised executive and financial managers (34.0%), internal auditors (41.4%), and audit committee members (24.6%), ensuring representation across all governance hierarchy levels with material internal control responsibilities. Educational qualification analysis confirmed that 46.0% of respondents held Master's degrees, 39.3% Bachelor's degrees, and 14.7% Doctoral degrees, while 47.0% reported more than ten years of professional experience, establishing the sample's substantive competency to assess complex governance phenomena. By bank type, private banks comprised 50.2% of the sample, government banks 31.2%, and Islamic banks 18.6%, reflecting the sector's structural composition and enabling meaningful comparative analysis across ownership types (Creswell, 2014).

3.2 Data Collection Instrument and Statistical Analysis

Primary data were collected through a structured questionnaire instrument comprising three sections: demographic data (job title, educational qualification, years of experience, and bank type disclosure level assessment for the five COSO internal control components (25 items, five per component) measured on a five-point Likert scale; and corporate performance indicators encompassing financial, operational, and institutional dimensions (20 items on a five-point Likert scale). Content validity was established through review by a panel of academic experts specializing in accounting, auditing, and banking management. Instrument reliability was assessed using Cronbach's Alpha, yielding an overall coefficient of 0.87, with component-level coefficients ranging from 0.82 (information and communication) to 0.89 (control activities), all exceeding the conventional threshold of 0.70 and confirming adequate internal consistency (Nunnally & Bernstein, 1994). Study variables were operationalized as follows: the independent variable disclosure of internal control quality was measured through the composite index of the five COSO component disclosure scores; dependent variables included financial performance (ROA, ROE, NIM, capital adequacy ratio from published financial statements) and operational and institutional performance (Likert scale items); and control variables comprised bank size (natural logarithm of total assets) and bank type (government, private, Islamic dummy variables) (Cho, & Kim, 2015; Parsons, Kruijt, & Fox, 2019; Mead, 2019).

Statistical analyses were conducted using IBM SPSS Statistics version 26 and IBM AMOS version 26. Descriptive statistics characterized the sample and disclosure level distributions. Pearson correlation coefficients assessed bivariate associations between variables. Multiple ordinary least squares (OLS) regression tested the differential impact of each COSO component on institutional performance, following the specification: $IP = \beta0 + \beta1CE + \beta2RA + \beta3CA + \beta4IC + \beta5MO + \varepsilon$, where IP denotes institutional performance and the independent variables represent the five COSO components. Structural equation modeling (SEM) verified the measurement model and tested the complete structural model, enabling simultaneous assessment of direct and mediated effects while accounting for measurement error. An independent samples t-test evaluated disclosure level differences between government and private banks. All analyses were conducted at a significance level of $\alpha = 0.05$, consistent with standard practice in governance and accounting research (Field, 2013; Hair, Black, Babin, & Anderson, 2019).

4. Results and Discussions

4.1 Results

4.1.1 Descriptive Statistics: Internal Control Disclosure Levels

Descriptive analysis of the five COSO component disclosure dimensions revealed significant variation in disclosure levels across components. Control activities recorded the highest disclosure level (mean = 3.94, SD = 0.55, rated Very High), consistent with its central role in the COSO framework and the direct regulatory emphasis on operational compliance procedures in Central Bank of Iraq instructions. The control environment ranked second (mean = 3.82, SD = 0.61, rated High), reflecting established governance structures in the sampled banks. Risk assessment ranked third (mean = 3.71, SD = 0.68, rated High), followed by monitoring and follow-up (mean = 3.65, SD = 0.70, rated High). The information and communication component recorded the lowest disclosure level (mean = 3.48, SD = 0.74, rated Moderate), indicating a significant gap in digital infrastructure and technology-enabled control capabilities relative to other system components. The composite disclosure index mean of 3.72 (SD = 0.59) indicates an overall High level of internal control disclosure, though with meaningful within-sector variation.

Table 1. Disclosure levels of internal control system components

Component	Code	Mean	SD	Disclosure Level	Rank
Control Environment	CE	3.82	0.61	High	2
Risk Assessment	RA	3.71	0.68	High	3
Control Activities	CA	3.94	0.55	Very High	1
Information & Communication	IC	3.48	0.74	Moderate	5
Monitoring & Follow-up	MO	3.65	0.70	High	4
Composite Disclosure Index	–	3.72	0.59	High	–

Table 1 presents the disclosure levels of the five components of the internal control system. Overall, the Composite Disclosure Index achieved a mean score of 3.72 (SD = 0.59), indicating a high level of internal control disclosure among the organizations examined. Among the five components, Control Activities (CA) recorded the highest mean score (M = 3.94, SD = 0.55), placing it in the very high disclosure category and ranking first. This finding suggests that organizations place substantial emphasis on documenting and communicating policies, procedures, and operational controls designed to ensure compliance and effective risk mitigation. The Control Environment (CE) component ranked second with a mean score of 3.82 (SD = 0.61), followed by Risk Assessment (RA) with a mean score of 3.71 (SD = 0.68), both categorized as having high disclosure levels. These results indicate that governance structures, ethical standards, and risk identification processes are generally well communicated to stakeholders.

4.1.2 Instrument Reliability Results

Table 2. Cronbach's alpha reliability coefficients

Variable / Dimension	Items	Cronbach Alpha	Reliability Level
Control Environment (CE)	5	0.84	High
Risk Assessment (RA)	5	0.86	High
Control Activities (CA)	5	0.89	Very High
Information & Communication (IC)	5	0.82	High
Monitoring & Follow-up (MO)	5	0.85	High
Institutional Performance (Operational & Financial)	20	0.88	High
Overall Questionnaire	45	0.87	High

Table 2 presents the reliability test results of the research instrument using Cronbach's alpha coefficients. The findings indicate that all variables and dimensions achieved Cronbach's alpha values exceeding the commonly accepted threshold of 0.70, demonstrating satisfactory internal consistency and reliability. The Control Activities (CA) dimension exhibited the highest reliability coefficient ($\alpha = 0.89$), categorized as very high reliability. This result suggests that the items measuring control activities consistently capture the intended construct and provide stable responses across participants. Meanwhile, the remaining internal control dimensions, namely Control Environment (CE), Risk Assessment (RA), Information and Communication (IC), and Monitoring and Follow-up (MO), recorded alpha values ranging from 0.82 to 0.86, all of which fall within the high reliability category. These findings indicate that the measurement items within each dimension are sufficiently correlated and capable of producing dependable results.

Furthermore, the Institutional Performance variable, consisting of 20 measurement items, achieved a Cronbach's alpha coefficient of 0.88, indicating a high level of reliability. This suggests that the instrument effectively captures operational and financial performance aspects with strong consistency. The overall questionnaire, comprising 45 items, yielded a Cronbach's alpha value of 0.87, further confirming the robustness of the instrument as a whole. The consistently high reliability coefficients across all dimensions demonstrate that the questionnaire is suitable for empirical analysis and can be confidently used to assess internal control system disclosure and institutional performance. Therefore, the instrument provides a reliable basis for examining the relationships among the study variables and supports the validity of subsequent statistical analyses.

4.1.3 Hypothesis Testing: Multiple Regression Results

Multiple regression analysis was conducted to test the impact of the five COSO disclosure components on institutional performance. The overall model demonstrated strong statistical significance ($F = 89.4$, $p < 0.001$) with a coefficient of determination $R^2 = 0.618$ and adjusted $R^2 = 0.607$, indicating that the five internal control disclosure components collectively explain 61.8% of the variance in institutional performance. This explanatory power reflects high model validity and confirms the comprehensive influence of internal control system quality on banking performance outcomes. All five component hypotheses were accepted at the $\alpha = 0.01$ significance level.

Table 3. Multiple regression results Impact of internal control components on institutional performance

Component (Independent Variable)	β	t-value	Sig.	Decision
Control Environment (CE)	0.164	3.42	0.001**	H_1 Accepted
Risk Assessment (RA)	0.203	4.11	0.000**	H_2 Accepted
Control Activities (CA)	0.311	6.28	0.000**	H_3 Accepted
Information & Communication (IC)	0.157	3.18	0.002**	H_4 Accepted
Monitoring & Follow-up (MO)	0.176	3.67	0.000**	H_5 Accepted

Table 3 presents the results of the multiple regression analysis examining the influence of internal control system components on institutional performance. The findings reveal that all five internal control dimensions have a positive and statistically significant effect on institutional performance, as indicated by significance values below 0.05. Consequently, all proposed hypotheses (*H_1–H_5*) are accepted. Among the predictors, Control Activities (CA) demonstrated the strongest influence on institutional performance ($\beta = 0.311$, $t = 6.28$, $p < 0.001$), suggesting that effective implementation of policies, procedures, and operational controls plays a critical role in enhancing organizational effectiveness and financial outcomes. Risk Assessment (RA) emerged as the second most influential factor ($\beta = 0.203$, $t = 4.11$, $p < 0.001$), highlighting the importance of identifying and managing organizational risks in achieving superior performance outcomes.

The remaining dimensions also exhibited significant positive effects. Monitoring and Follow-up (MO) recorded a regression coefficient of $\beta = 0.176$ ($t = 3.67$, $p < 0.001$), indicating that continuous evaluation and corrective actions contribute meaningfully to institutional success. Control Environment (CE) showed a positive effect ($\beta = 0.164$, $t = 3.42$, $p = 0.001$), emphasizing the role of ethical culture, governance structure, and leadership commitment in supporting performance. Similarly, Information and Communication (IC) significantly influenced institutional performance ($\beta = 0.157$, $t = 3.18$, $p = 0.002$), suggesting that effective information flow and communication mechanisms facilitate better decision-making and organizational coordination. Overall, the findings support the proposition that stronger internal control systems are associated with improved institutional performance and reinforce the importance of adopting a comprehensive control framework to achieve organizational objectives.

4.1.4 Comparative Analysis: Government versus Private Banks

Independent samples t-test results revealed statistically significant differences in internal control disclosure levels between government and private banks. Private banks recorded higher disclosure levels in control activities ($p = 0.003$) and information and communication ($p = 0.012$) components, reflecting the stronger digital transformation pressures and international partnership requirements characteristic of private banking operations. Government banks, conversely, demonstrated relatively higher scores on the control environment component ($p = 0.027$), consistent with their more established institutional hierarchies and longer-standing compliance cultures. These differential patterns have important policy implications for the Central Bank of Iraq's reform program, which must address distinct governance improvement priorities across different bank ownership categories.

Table 4. Sector structure and financial indicators (2022–2023)

Indicator	2022	2023	Growth %
Total Assets (trillion IQD)	198.66	205.25	3.3%
Total Capital (trillion IQD)	17.89	19.07	6.6%
Total Deposits (trillion IQD)	129.10	133.50	3.42%
Total Credit (trillion IQD)	90.96	95.66	5.2%

Table 4 presents the sector structure and financial indicators for the period 2022–2023. The data indicate positive growth across all major financial indicators, reflecting an overall improvement in the sector's financial position and operational capacity. Total assets increased from 198.66 trillion IQD in 2022 to 205.25 trillion IQD in 2023, representing a growth rate of 3.3%. This increase suggests an expansion of the sector's resource base and its ability to support broader economic activities. Total capital recorded an even stronger growth rate of 6.6%, rising from 17.89 trillion IQD to 19.07 trillion IQD. The substantial increase in capital indicates enhanced financial resilience and a stronger capacity to absorb potential risks and support future development initiatives.

In addition, total deposits increased from 129.10 trillion IQD in 2022 to 133.50 trillion IQD in 2023, reflecting a growth rate of 3.42%. This upward trend suggests growing public confidence and an increased willingness of customers to place funds within the sector. Meanwhile, total credit expanded from 90.96 trillion IQD to 95.66 trillion IQD, representing a growth rate of 5.2%. The higher growth in lending activities compared to deposits indicates an active role of the sector in financing economic activities and supporting investment. Collectively, these indicators demonstrate a stable and positive financial trajectory during the study period, characterized by asset expansion, stronger capitalization, increased deposit mobilization, and growth in credit allocation.

4.2 Discussion

The empirical findings of this study provide robust support for the theoretical proposition that internal control quality disclosure positively and significantly enhances institutional performance in Iraqi banking institutions. The model's explanatory power ($R^2 = 0.618$) surpasses findings from comparable emerging market studies including (Tang & Tang, 2025) Chinese evidence potentially reflecting the particular salience of governance quality signals in institutional environments characterized by higher information asymmetry and regulatory uncertainty. This elevated explanatory power is consistent with signaling theory's prediction that internal control disclosure carries greater marginal informational value in markets where baseline governance quality is more variable, amplifying the performance benefits of differentiated disclosure practices (Rashid, Akmal, & Shah, 2024).

The predominance of control activities as the strongest performance predictor ($\beta = 0.311$) aligns with COSO's (2023) conceptual framework, which positions control activities the specific policies and procedures implementing management's risk responses as the operational heart of effective internal control. This finding is consistent with the prior Iraqi banking sector study cited in the analysis that yielded a similar control activities coefficient, confirming the cross-temporal stability of this relationship and its particular relevance in the Iraqi institutional context. The relatively strong impact of risk assessment ($\beta = 0.203$) reflects the heightened risk environment of Iraqi banks, where credit risk, liquidity risk, and operational risk management are primary performance determinants (Al-Husseini & Nasir, 2022). The requirement for banks to strengthen risk assessment systems under the 2023–2025 reform program positions this component for continued performance impact improvement.

The information and communication component's simultaneous recording of the lowest disclosure level (mean = 3.48) and a statistically significant positive performance impact ($\beta = 0.157$, $p = 0.002$) carries important strategic implications. This combination implies that Iraqi banks are currently extracting meaningful performance benefits from even relatively modest information and communication control investments, suggesting that marginal returns to additional investment in this component are likely high. He, Song, and Chen's (2023) demonstration that fintech adoption materially strengthens this specific COSO dimension provides a practical roadmap for Iraqi banks: targeted digital transformation investments particularly in automated transaction monitoring, real-time compliance reporting, and integrated financial data management systems should yield disproportionate internal control quality and performance improvements relative to investments in already-mature components (Al-Kafi & Ibrahim, 2020).

The comparative analysis revealing private banks' disclosure advantage in control activities and information technology components is consistent with the competitive pressures these institutions face in accessing international correspondent banking relationships and foreign investment. HHL Legal HHL (2025) documented that the Central Bank of Iraq's push toward independent correspondent banking relationships by 2025 creates strong incentives for private banks to demonstrate international-standard governance quality, including comprehensive internal control disclosure. This competitive dynamic may create a governance gap between private and government banks that widens over time absent targeted policy interventions to accelerate public sector banking modernization (Al-Moussawi & Al-Banna, 2023).

The monitoring and follow-up component's significant performance impact ($\beta = 0.176$) and relatively modest mean score (3.65) suggests that continuous evaluation mechanisms remain underdeveloped in a sector still building the institutional infrastructure for systematic performance assessment. This finding aligns with Al-Mawla (2024) identification of weak internal-external auditor coordination as a structural deficiency in the Iraqi banking control system. The Anti-Money Laundering and Compliance System reforms mandated by the Central Bank of Iraq should strengthen both risk assessment and monitoring components, as these reforms require banks to implement more rigorous transaction monitoring, suspicious activity reporting, and compliance verification processes that directly enhance the operational quality of both COSO dimensions (Central, 2024).

From a theoretical perspective, the findings collectively validate the explanatory power of the integrated agency theory, signaling theory, and stakeholder theory framework applied to internal control disclosure in an emerging economy banking context. The positive and significant relationships documented across all five COSO components confirm that internal control disclosure reduces information asymmetry between management and stakeholders (agency theory), signals institutional quality to capital market participants (signaling theory), and fulfills the information requirements of diverse organizational constituencies (stakeholder theory). These theoretical mechanisms operate simultaneously and complementarily in the Iraqi banking context, with the regulatory reform environment amplifying their operational effects by creating new governance requirements that raise the institutional stakes of disclosure quality (He, Li, Wang, & Zhang, 2025; Tang and Tang, 2025).

5. Conclusions

5.1 Conclusion

This study has established through rigorous empirical analysis that the disclosure of internal control system quality exerts a statistically significant and practically meaningful positive impact on institutional performance in Iraqi banks ($R^2 = 0.618$, $F = 89.4$, $p < 0.001$). All five COSO framework components control environment ($\beta = 0.164$), risk assessment ($\beta = 0.203$), control activities ($\beta = 0.311$), information and communication ($\beta = 0.157$), and monitoring and follow-up ($\beta = 0.176$) contribute significantly and independently to institutional performance, confirming the framework's comprehensive explanatory validity in the Iraqi banking context. Control activities emerge as the dominant performance driver, consistent with COSO's conceptual positioning of operational control procedures as the operational heart of effective governance.

The study further documents a significant and meaningful disclosure gap in the information and communication component, reflecting the digital transformation lag in the Iraqi banking sector that the Central Bank of Iraq's electronic payment system mandate and other digital reforms are designed to address. Private banks demonstrate disclosure advantages in technology-intensive control components, driven by international partnership and correspondent banking requirements, while government banks maintain institutional governance strengths in the control environment dimension. These findings collectively provide a compelling empirical rationale for the Central Bank of Iraq's ongoing governance reform program, establishing that enhanced internal control disclosure translates into measurable performance improvement across the sector. Practitioners are advised to prioritize investment in control activities standardization, digital information infrastructure, and integrated risk assessment frameworks to maximize performance returns from governance quality improvement initiatives.

5.2 Research Limitations

This study is subject to several methodological and contextual limitations that should inform interpretation of its findings. First, the cross-sectional research design captures disclosure levels and performance associations at a single point in time, precluding causal inference about the dynamic trajectory of governance quality improvements under the Central Bank of Iraq's ongoing reform program. Second, despite the high response rate (89%), the purposive sampling strategy focusing on listed banks with established internal audit units may not fully represent smaller community banks and newer entrants that face more significant internal control challenges. Third, the reliance on self-reported questionnaire data introduces potential social desirability bias, common method variance, and limitations in respondents' ability to objectively assess complex governance phenomena that would benefit from triangulation with archival financial performance data. Fourth, the study's geographic and institutional specificity to Iraq limits direct generalizability to other emerging economy banking sectors, though the findings offer transferable insights for comparable institutional environments.

5.3 Directions and Future Study

Future research should address the identified limitations through longitudinal designs that track the evolution of internal control disclosure quality and institutional performance across the arc of the Central Bank of Iraq's 2023–2025 reform program, enabling direct assessment of reform effectiveness and causal pathway identification. Mixed-method designs incorporating semi-structured interviews with bank executives, audit committee chairs, and Central Bank supervisors would enrich the quantitative findings with contextual insights regarding implementation barriers and governance innovation. Comparative cross-national studies examining internal control disclosure and performance relationships across Arab and broader emerging economy banking sectors would enable identification of institutional boundary conditions and best practice transfer opportunities.

Future studies should also investigate the specific mechanisms through which digital transformation investments in information and communication control systems translate into performance improvements, including the mediating roles of operational efficiency, fraud detection capability, and regulatory compliance quality. The integration of artificial intelligence, big data analytics, and real-time monitoring technologies into Iraqi banking control systems represents a particularly important frontier for investigation, given the Central Bank of Iraq's digital transformation agenda and the demonstrated global evidence that fintech adoption materially strengthens internal control quality. Additionally, research examining the moderating effects of bank size, ownership structure, and international partnership intensity on the internal control disclosure-performance relationship would provide more granular guidance for tailoring governance enhancement strategies to specific institutional contexts within the Iraqi banking sector.

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Author Contributions

HHM contributed to conceptualization, theoretical framework development, research design, questionnaire construction, data collection coordination, statistical analysis, interpretation of results, writing original draft, writing review and editing, and final approval of the submitted manuscript.

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