

The Role of Reconciliation in Fraud Detection and Prevention of Selected Commercial Banks in Sierra Leone

<https://doi.org/10.56830/IJAMS07202603>

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Received: 28 May 2026. Accepted: 4 July 2026. Published: 30 July 2026

Abstract:

Fraud is one of the key threats to the stability and performance of commercial banks in Sierra Leone. In this study, we examine the role of reconciliation in the detection and prevention of fraud of selected commercial banks: Rokel Commercial Bank, Sierra Leone Commercial Bank, and Zenith Bank. The study ties up on the Fraud Triangle, Fraud Diamond, and the Fraud Management Lifecycle and employs an explanatory mixed-method, combining quantitative surveys with qualitative interviews involving internal audit, operations, and risk management employees. The findings of the study show that although reconciliation controls are carefully executed, they display a cynical relationship with fraud detection ($R = -0.594$, $\beta = -0.57$, $p < 0.001$), propose that existing exercise remain conventional rather than strategically fraud-oriented. Governance mechanisms including finance, audit, and investment committees also demonstrated limited moderating influence ($R = -0.401$), reflecting gaps in oversight and accountability. With respect to fraud prevention, the study finds that preventive reconciliation is poorly manage due to manual processes, weak automation, and limited forensic integration. Trend analysis further shows that political cycles and institutional disruptions undermine the preventive potential of reconciliation. The study concludes that reconciliation controls alone are insufficient for effective fraud mitigation; their impact depends on timely automation, staff capability,

forensic intelligence, and strong governance oversight. The study contributes to theory and practice by demonstrating how contextual, operational, and institutional factors shape the preventive and detective value of internal controls in high-risk banking environments.

Keywords: Commercial Banks; Fraud Detection; Fraud Prevention; Governance; Reconciliation Controls; Internal Controls.

1. Fraud Risk and Control Vulnerabilities in Sierra Leone's Banking Sector

Fraud constitutes a continuous threat to the dependability, performance, stability, of commercial banks in Sierra Leone. It results to direct financial losses. Fraudulent activities erode depositor confidence, weaken regulatory credibility, and constrain the financial system's capacity to support economic development (Bangura and Conteh, 2021). Confirmation from developing economies has shown that banking fraud is often systemic rather than occasional, reflecting deficiencies in governance structures, internal controls, and regulatory enforcement (Okoye & Gbogi, 2013).

In Sierra Leone, fraud presents as management fraud, staff-related fraud, and condonable fraud involving conspiracy between employees and external actors (Alhassan, 2018). These operations cut across commercial banks hierarchies and are expedited by weak systems of internal controls, limited automation, and inconsistent supervisory oversight. Such increase opportunities for manipulation of accounting records, hiding of unauthorised transactions, and delayed detection of irregularities. Under this circumstance, reconciliation controls constitute a fundamental downward examined structure for mitigating fraud risk in the banking sector in Sierra Leone.

1.1. Theoretical Perspectives on Fraud Behaviour

The reconciliation controls importance is grounded in established fraud theories. (Cressey, 1973) Fraud Triangle Theory predicates that fraud can arises from the interaction of opportunity, pressure, and rationalisation. In banking establishment, weak reconciliation procedures directly enlarge the opportunity dimension by reducing the likelihood that irregular transactions will be detected.

Fraud Diamond Theory (Wolfe & Hermanson, 2004) extends this framework by incorporating capability, emphasising that fraud requires individuals with sufficient authority, skills, and access to exploit control weaknesses. This dimension is important in commercial banks, where senior officers and technically skilled staff may override controls or manipulate reconciliations. Moreover, recent frameworks, including the Fraud Pentagon and Fraud Hexagon, further include behavioural and organisational factors such as arrogance and collusion (Noushad, Sukumaran, &

Thomas, 2020). Even though, collusion is salient in banking fraud, as coordinated actions among staff and external parties frequently undermine controls that was designed for individual accountability. Usually, these theories underline that fraud prevention turn on mainly reducing opportunity and increasing the perceived risk of detection functions directly served by effective reconciliation controls

1.2. Forms of Banking Fraud and Control Failures

The Association of Certified Fraud Examiners categorises occupational fraud into assets misappropriation, corruption, and financial statements fraud. Assets misappropriation, the most prevalent form, includes cash theft, cheque kiting, and unauthorised fund transfers and often exploits delayed or inadequately reviewed reconciliations. Corruption schemes, such as bribery and conflicts of interest, thrive in environments characterised by weak oversight and collusion, making detection difficult. Financial statements fraud, though less frequent, has severe consequences and typically involves deliberate misrepresentation of financial information, including concealment of non-performing loans (Alhassan, 2018).

Evidence from Sierra Leone indicates that banks with deficient control environments experience repeated exposure to these fraud types (Kargbo, 2016). Assets misappropriation flourishes where transaction records are not independently verified, while financial statements fraud persists when ledger balances are not rigorously reconciled with external confirmations. These patterns highlight reconciliation as a critical control measure for identifying irregularities and preventing fraud from becoming institutionalised.

1.3. Reconciliation Controls in Fraud Management Process

Fraud management is expanding ideas as a continuous and integrated process than a reactive response. While (Wilhelm, 2004) Fraud Management Lifecycle identifies detection, deterrence, investigation, prevention, and remediation as interrelated stages, reconciliation controls play a critical role in the detection and prevention phases.

Reconciliation comprises the methodical comparison of independent records, such as subsidiary ledgers against general ledgers or internal records against external statements. (Vorhies, 2006) identifies reconciliation as one of the most effective detective controls for identifying anomalies before they escalate into material losses or financial misstatements. When conducted independently, regularly, and with appropriate documentation, reconciliation reduces fraud

opportunity by exposing discrepancies, enforcing accountability, and disrupting collusive schemes.

Technological development promotes enhance reconciliation effectiveness. Automated reconciliation and continuous monitoring systems reduce the gap for fraud concealment and improve detection timeliness. The (Institute of Internal Auditors, 2019) also reports that automating reconciliation processes greatly strengthens early anomaly detection by accelerating and refining the review process. While reconciliation is widely recognised as a post-transaction detective control, emerging scholarship argues that it equally serves as a proactive preventive mechanism when embedded within a robust system of internal controls. Studies by (Wilks & Zimbelman, 2020); (Bierstaker, Brody, & Pacini, 2021) highlight that preventive reconciliation reduces the opportunity for fraud by ensuring that transactions are validated, authorised, and system-matched at early stages of the financial reporting cycle. Whereas, automated reconciliation also limits unauthorised access, controls employee capability for manipulation, and enhances real-time anomaly detection. In Sierra Leone, commercial banks such as Zenith Bank expanding deploy International Financial Reporting Standards (IFRS) compliant, Enterprise Resource Planning (ERP) systems integrated enterprise resource planning platforms configured to support IFRSs by enforcing standardised accounting rules, audit trails, and transparent reporting structures that strengthen transparency and control consistency, thereby limiting fraudulent opportunities. As well as in fragile financial environments, preventive reconciliation, when supported with such systems, deters potential perpetrators by increasing the perceived likelihood of exposure, strengthening segregation of duties, and embedding continuous oversight within business processes. Indeed, the literature therefore positions reconciliation as a dual function control whose preventive strength depends on automation, governance quality, and organisational risk culture.

1.4. Prevention-Focused

While reconciliation is widely acknowledged as a post-transaction detective control, emerging scholars argues that it also serves as a proactive preventive apparatus when included within a system of internal controls of an organisation. Studies by (Wilks & Zimbelman, 2020); (Bierstaker, Brody, & Pacini, 2021) highlight that preventive reconciliation minimise the opportunity for fraud by making sure that transactions are authenticated, authorised, and matched at early stages of the financial reporting cycle. Automated reconciliation also limits unauthorised access, controls employee capability for manipulation, and enhances real-time anomaly

detection. In fragile financial environments such as developing nations like Sierra Leone, preventive reconciliation has been shown to deter potential perpetrators by increasing the perceived likelihood of exposure, strengthening segregation of duties, and embedding continuous oversight within business processes. Subsequently, reconciliation cannot only uncover irregularities but also show mechanism of fraudulent intent putting structural, procedural, and technological barriers. The literature therefore positions reconciliation as a dual-function control whose preventive strength depends on automation, governance quality, and organisational risk culture.

1.5. Governance Conditions and Implementation Challenges

The success of reconciliation controls is dependent upon the broader governance environment. Strong corporate governance is characterised by active audit committees, independent oversight, and board-level risk management, control enforcement and make sure that reconciliation findings are acted upon (Schachler, Juleff, & Paton, 2007). The empirical findings demonstrated a negative relationship between governance quality and fraud incidence (Othman & Ameer, 2014).

Although, Bank of Sierra Leone (BSL) set a regulatory requirement, various challenges such as, weak enforcement, limited technological capacity, skills gaps, and cultural pressures that facilitate management override and collusion undermine reconciliation effectiveness, (Bangura & Conteh, 2021); (Kanu & Bangura, 2020). These systematic challenges suggest that reconciliation controls must be embedded within a broader ethical and governance framework to achieve sustained effectiveness.

2. Conceptual Framework Linking Theory, Controls and Fraud Outcome

Taking from fraud theories and empirical evidence, this study conceptualises reconciliation controls as a pitch independent variable influencing fraud detection and prevention outcomes in Sierra Leone commercial banks. The framework shows that reconciliation controls measured through automation, independence, timeliness, and direct quality review reduce fraud chances and increase detection probability, as predicted by the Fraud Triangle, Fraud Diamond, and Fraud Lifecycle theories. Financial governance mechanisms, including audit committee oversight function as moderating variables that strengthen the effectiveness of reconciliation processes. The dependent variable in the study shows the level of fraud detection and prevention, reflected in reduced fraud activities, improved detection timeliness, and enhanced loss prevention. The framework for this provides a theoretical basis for

empirically examining the role of reconciliation controls in Sierra Leone Commercial Banks.

3. Methodology

This study embraces an explanatory design that examines the effect of reconciliation control structures on fraud detection and prevention in commercial banks in Sierra Leone. For this reason, explanatory designs are appropriate for analysing causal relationships between control systems and organisational outcomes, particularly in theory-driven fraud and governance study (Saunders, Lewis, & Thornhill, 2016). Furthermore, a mixed-methods approach was employed for enhanced analytical depth through the integration of quantitative and qualitative evidence.

The study is position on the commercial banking sector due to its systemic importance and high exposure to fraud risk. Three banks: Rokel Commercial Bank, Sierra Leone Commercial Bank, and Zenith Bank; were purposively selected based on their operational scale, complexity, and formal structures of internal controls. The study population comprised employees directly involved in internal controls and fraud management functions, targeting staff in Compliance, Internal Audit, and Risk Management Departments. The total population across these units was 150 employees. Given the manageable size and expertise of respondents, a census sampling technique that ensures comprehensive coverage and eliminate sampling bias was adopted.

Primary quantitative data were collected using a structured questionnaire consisting of three sections: reconciliation controls, financial governance controls, and fraud detection and prevention outcomes. Responses were measured on a five-point Likert scale. Questionnaire items were adapted from established literature and aligned with the Fraud Triangle and Fraud Management Lifecycle theories (Vorhies, 2006); IIA, 2019). Instrument validity was confirmed through expert review and pilot testing, while the reliability analysis produced Cronbach's Alpha coefficients above 0.70, indicating acceptable internal consistency (Taber, 2018) and a full response rate was achieved.

In complementing the survey, semi-structured interviews were conducted with five senior officials of the various commercial banks (Heads of Internal Audit and Risk) to acquire background insights into reconciliation practices, automation challenges, collusion risks, and management override.

The quantitative data that assess the relationship between reconciliation controls and fraud detection and prevention, controlling for governance and reporting mechanisms were analysed using descriptive statistics and multiple linear regression analysis. Statistical tests were conducted at a 5% significance level ($p < 0.05$). At the same time, qualitative data that support interpretation of the quantitative results were analysed thematically.

4. Results and Discussion

4.1. Descriptive Evidence on Reconciliation Controls and Governance Oversight

Reconciliation exercise in Sierra Leone commercial banks is formally governed by the BSL's Financial Controls Guidelines and informed by international standards such as the Basel Committee on Banking Supervision (BCBS) (Basel Committee on Banking Supervision, 2012) that provides internationally recognised standards for banking regulation, internal controls, operational risk management, and governance.

Although, these frameworks require periodic balancing of accounts, transaction verification, and timely resolution of discrepancies, consistent with prior empirical evidence highlighting reconciliation as a core internal control mechanism (Ndungu, 2013); (Kimani, 2011).

However, benchmarking current practices against the Committee of Sponsoring Organisations of the Treadway Commission (COSO) (Committee of Sponsoring Organisations of the Treadway Commission, 2013) Internal Controls Framework and the Basel Committee's principles on effective banking supervision reveals notable implementation gaps. Specifically, three recurring weaknesses emerged across the sampled banks: irregular reconciliation frequency, continued reliance on manual reconciliation procedures, and limited staff expertise in forensic reconciliation techniques. These deficiencies are consistent with (Omondi, 2013) assertion that internal controls in African financial institutions often lack the analytical depth required for effective fraud detection. The findings support (Kimani, 2011) contextual governance perspective, which posits that control effectiveness is shaped by institutional capacity and environmental pressures rather than formal policy design alone.

Table 4.1 presents the average frequency of finance and investment committee meetings between 2018 and 2021. Committee activity peaked in 2019, reflecting heightened governance engagement following the national election cycle, before stabilising in subsequent years.

**Table 4.1: Average Finance and Investment Committee Meeting Frequency
(2018-2021)**

Year	Average Meeting Frequency
2018	2.87
2019	3.92
2020	3.58
2021	3.56

Source: Study Survey, 2025

4.2. Empirical Relationship between Reconciliation Controls and Fraud Detection and Prevention:

Empirical analysis reveals an unexpected, but statistically significant relationship between reconciliation controls and fraud risk management outcomes. As presented, reconciliation controls show a strong negative correlation with fraud detection ($R = -0.594$, $p < 0.001$), indicating that stronger or more frequent reconciliation practices are not currently translating into improved fraud identification within the selected banks. A similar pattern emerges in relation to fraud prevention, where reconciliation controls also demonstrate limited preventive influence, suggesting that existing reconciliation processes may be largely procedural, compliance-driven, or inadequately automated. These findings imply that in their current form, reconciliation controls are not functioning effectively as either a detective or preventive mechanism, underscoring weaknesses in system design, staff capability, and governance oversight.

The regression results show a 0.57 unit reduction in fraud detection ($\beta = -0.57$, $p < 0.001$) for every unit increase in reconciliation effort, with 53.9 per cent of the variation explained ($R^2 = 0.539$). Beyond detection, the results also point to weak fraud prevention capacity, as reconciliation practices do not appear to deter fraudulent behaviour or provide timely signals to prevent fraud from occurring. This reflects a broader pattern where reconciliation controls serve as formal compliance routines rather than strategic fraud risk management tools. As (Wanyama, 2012) argues, internal controls become symbolic when they emphasise

procedural compliance over genuine accountability; an interpretation that aligns strongly with the findings for both fraud detection and fraud prevention in Sierra Leone's banking sector.

4.3. Trend Analysis and Institutional Disruptions

Figure 1 illustrates trends in reconciliation activity and reported fraud incidents from 2018 to 2021. Despite relatively high reconciliation activity in 2018 (average of 8.47 accounts reconciled), fraud incidents peaked during the same period (mean = 6.19 cases). Conversely, both reconciliation activity and incidences of fraud declined steadily by 2021. This pattern indicates that increased reconciliation alone does not necessarily translate into improved fraud detection or prevention.

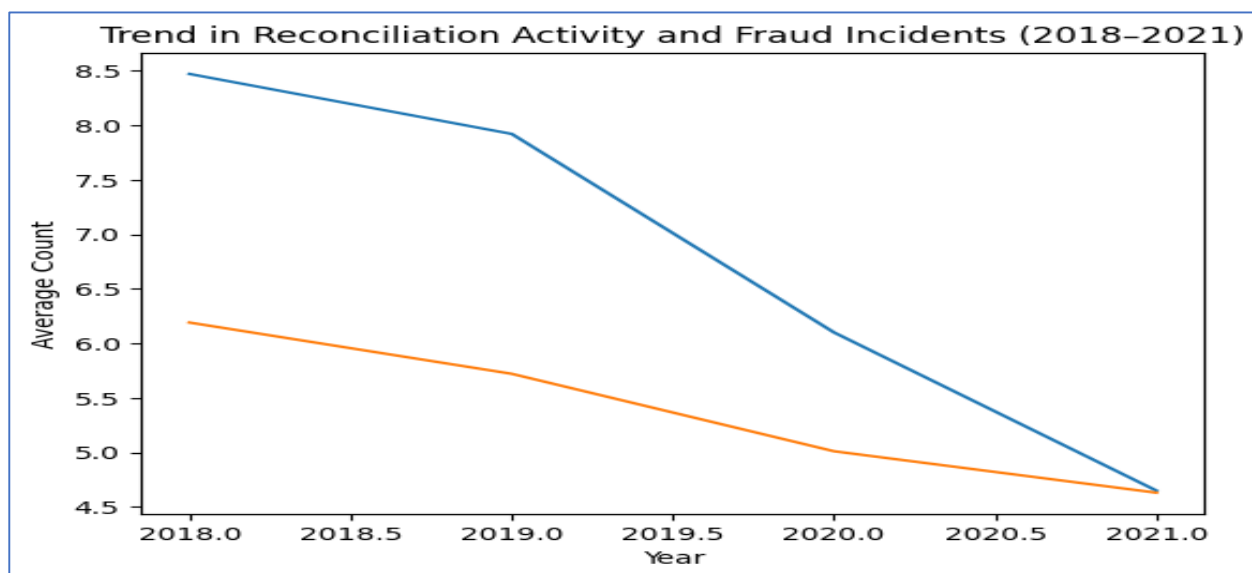


Figure 1: Trend in Reconciliation Activity and Fraud Incidents (2018-2021)

Source: Study Survey, 2024

Political cycles appear to exacerbate this dynamic. Reconciliation activity declined markedly during periods of electoral uncertainty, suggesting that operational consistency and control enforcement are vulnerable to broader institutional disruptions

4.4. Governance Moderation Effects

Governance oversight mechanisms also showed limited moderating influence. Although finance and investment committees met an average of 3.56 times annually, governance variables demonstrated a negative correlation with fraud detection ($R = -$

0.401). Figure 2 shows that committee activity increased sharply in 2019, but did not correspond with improved fraud detection outcomes.

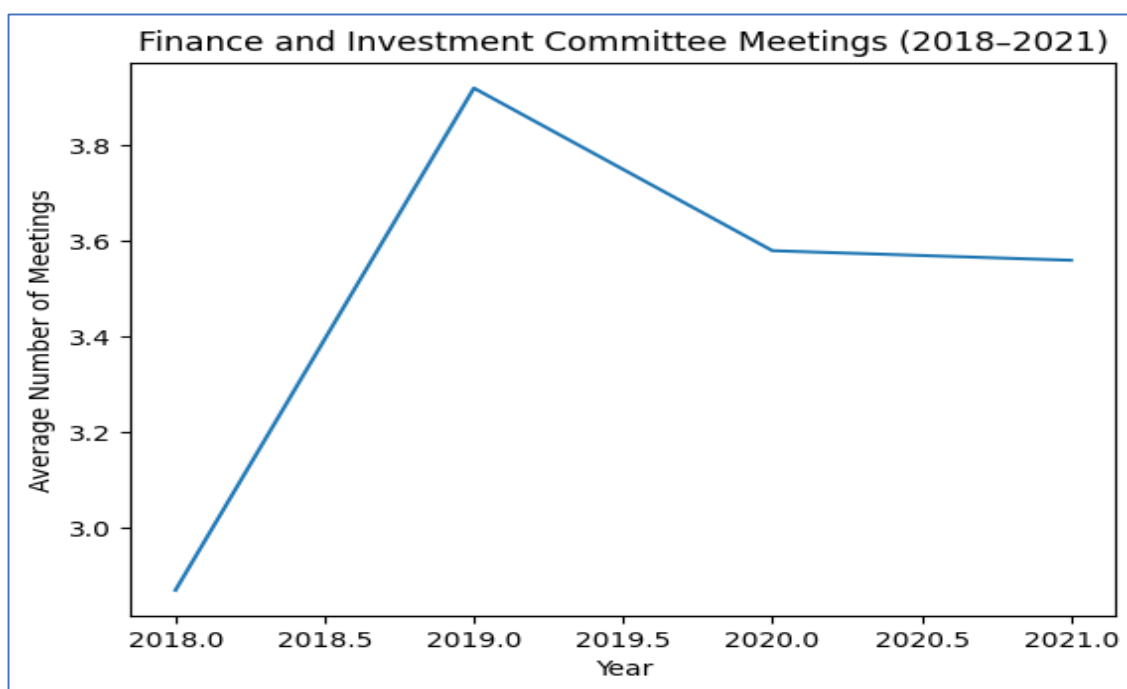


Figure 2: Finance and Investment Committee Meetings (2018-2021)

Source: Study Survey, 2024

This finding implies that while governance structures are formally present, their engagement with reconciliation outcomes and fraud-specific risks remains weak, echoing earlier evidence from developing banking systems (Othman & Ameer, 2014).

4.5. Interpretation within the Conceptual Framework

Within the study's conceptual framework, the results indicate that reconciliation controls fail to reduce fraud opportunity in Commercial banks as anticipated by the Fraud Triangle and the Fraud Diamond when key enabling conditions such as timeliness, independence, automation, and forensic capability are lacking. Because opportunity is central to both theories, ineffective reconciliation processes do not meaningfully constrain the conditions under which fraud can occur, thereby weakening both fraud detection and fraud prevention.

From a fraud prevention perspective, the findings show that reconciliation controls do not function as early-warning mechanisms capable of deterring fraudulent behaviour or interrupting fraud attempts before they materialise. Inadequate automation and delayed reconciliations create information gaps that fail to close the “opportunity window,” allowing employees to exploit system weaknesses without rapid detection. Furthermore, the absence of forensic analytics means that subtle patterns indicating potential fraud are not identified early enough to serve a preventive function.

Weak governance moderation also hampers prevention. Without active oversight by audit and risk committees, reconciliation anomalies are not escalated promptly, control breaches are not sanctioned, and recurrent issues are not addressed systematically. This limits the controls’ capacity to disrupt collusion, strengthen deterrence, or influence organisational risk culture all of which are essential preventive outcomes within the Fraud Management Lifecycle, particularly in its prevention and deterrence phases.

Consequently, reconciliation controls when applied in isolation do not enhance detection probability nor prevent fraud from occurring. They neither deter fraudulent activities nor close procedural loopholes that perpetrators may exploit. This undermines their intended role as a combined detective and preventive mechanism within the fraud management lifecycle.

Invariably, the findings demonstrate that while reconciliation controls are a necessary component of fraud risk management, they remain insufficient on their own for both fraud detection *and* fraud prevention in Sierra Leone’s commercial banks. Their detective and preventive effectiveness depends heavily on complementary investments in automation, real-time analytics, forensic skills, robust oversight structures, and governance enforcement.

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