Influence of Separation of Duties on Financial Performance of Commercial Banks in Moshi Municipality

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Abstract
This study aimed to examine the influence of separation of duties on the financial performance of commercial banks in Moshi Municipality, Tanzania. The study was guided by Fiedler's Contingency Theory of 1964; the study adopted a convergent parallel design under a mixed-methods approach to provide a comprehensive understanding of the phenomenon. The study population comprised 156 respondents, including 150 bank employees and 7 bank managers from 7 commercial banks operating in Moshi Municipality including CRDB, NMB, KCB, BOA, ABSA, EXIM and NBC. A census sampling technique was used for employees, while purposive sampling was applied to select bank managers. Primary data were collected through structured questionnaires and key informant interviews, while secondary data were obtained from financial statements (2018–2023). Data validity and reliability were ensured through expert reviews and Cronbach's Alpha ($\alpha > 0.7$). Quantitative data were analyzed using descriptive and inferential statistics via SPSS version 22, while qualitative data were analyzed through contextual analysis and presented using direct quotations. Findings revealed that although regression analysis showed no statistically significant relationship between separation of duties predictors(sufficient organization maintenance (*p-value* 0.409) and investments in assets (*p- value* 0.182) and financial performance, perceptual data from respondents strongly supported the effectiveness of separation of duties mechanisms particularly separation of duties in improving financial accuracy, fraud prevention, regulatory compliance, and asset protection. Descriptive statistics showed consistently high mean scores (ranging from 3.73 to 3.93), indicating strong agreement among respondents on the positive influence of separation of duties. The study concluded that while statistical evidence was inconclusive, operational insights affirmed the strategic value of separation of duties frameworks in enhancing financial performance. It was recommended that banks should invest in technology-driven separation of duties systems, continuous staff training, and policy refinement to strengthen internal controls.

Keywords: Separation of duties, Internal Control Systems, Financial Performance, Commercial Banks

1. Introduction

Separation of duties within commercial banks are pivotal in shaping their financial performance. These duties encompass the delegation of decision-making powers, particularly in areas such as loan approvals and financial management. Effective separation of duties mechanisms can lead to improved operational efficiency, risk management, and customer satisfaction, all of which are critical components of a bank's financial success. Over the years, internal control systems in banks have evolved in response to changing regulatory requirements, advancements in technology, and lessons learned from past financial crises (Lentner et al., 2019). Internal control systems are an integral part of the banking industry which plays an important role in ensuring the financial stability and success of banks (Leonard, Naibei & Naibei, 2022). These systems comprise of policies, procedures, and practices implemented within an organization to safeguard assets, manage risks, and ensure compliance with regulations. Internal control systems (ICS) act as a safeguard for an organization's assets, both tangible and intangible (Keaunui, 2023).

Across Europe, the importance of effective separation of duties in the banking industry has become increasingly recognized. The evolution of ICS in banks have been driven by changing regulatory requirements, technological advancements as well as past financial crises (Tepegöz, 2022). In Europe, internal controls including separation of duties were designed to offer high quality of reporting for organization (Zalba, 2022). The ICS that are effectively designed, operated, and maintained, with appropriate oversight, are fundamental to high quality corporate reporting. The Banking Supervision in European nations were indicated effective due to framework of internal controls (Akwaa-Sekyi, 2020). There is a significant relationship between elements of ICS including separation of duties and financial performance of banks in European countries. Similarly, in Jordan banking sector is adopting and applying ICSs (Hamed, 2023).

The separation of duties, as a critical component of internal control systems (ICS), has been increasingly recognized for its role in strengthening financial performance across various sectors in Africa. Musyoki (2023) describes separation of duties in African countries as ethical mechanisms that rigorously examine financial transactions to uphold integrity and transparency. In South Africa, Mofokeng (2023) found a significant positive relationship between internal control systems and the sustainability of Small and Medium Enterprises (SMEs) within the manufacturing sector, highlighting the broader economic impact of sound financial governance.

Similarly, Patience et al. (2023) observed that the performance of Savings and Credit Cooperative Societies (SACCOS) in Uganda was positively influenced by risk management strategies, the clear separation of roles, and routine independent checks. These findings support the notion that separating duties can effectively reduce the risk of fraud, enhance the accuracy of financial records, and lead to more reliable financial reporting. Arhin (2023) also emphasizes that well-structured and properly implemented internal control systems contribute significantly to improved financial reporting, fraud mitigation, and financial stability, particularly within the telecom industry in Ghana.

Recent data from Tanzania's banking sector shows some ups and down in financial performance, suggesting the growing effectiveness of internal control systems, including separation of duties. The Non-Performing Loan (NPL) ratio declined from 5.8% in early 2023 to 3.3% by December 2024, well below the Bank of Tanzania's threshold of 5% (Lendsqr, 2024). Profitability indicators also showed marked growth, with Return on Assets (ROA) averaging 5.7–5.9% and Return on Equity (ROE) reaching approximately 28% (Fitch Solutions, 2024). Furthermore, capital adequacy remained strong at 19–21%, and total deposits rose to TZS 67 trillion in early 2025 (IPP Media, 2025). In terms of profits, commercial banks recorded a combined net income of TZS 2.14 trillion in 2024, up from TZS 1.57 trillion in 2023, led by top performers like NMB and CRDB (The Citizen, 2025). However, challenges such as high NPLs in smaller banks, liquidity constraints, and weak compliance controls persist, particularly in regional areas like Moshi Municipality, indicating a continued need for strengthening internal controls and the separation of duties (IMF, 2024).

In Tanzania, the National Audit Office (NAOT) emphasized significant deficiencies in the internal control systems and financial management of public institutions, particularly in areas like procurement, revenue management, and budget compliance (NAOT, 2021). While banks in Tanzania especially in Moshi including CRDB, NMB, KCB, BOA, I&M, ABSA, EXIM, TCB, Stanbic, and NBC are expected to implement effective internal control systems (ICS), challenges persist. Factors such as non-compliance with regulatory requirements, high levels of Non-Performing Loans (NPL), and capital inadequacy have contributed to the struggles of many commercial banks, leading to closures and financial instability (Majondo et al., 2023). Mutuku (2021) reported that the transition to digital platforms, such as mobile and online banking,

necessitated advanced separation of roles to prevent unauthorized access and financial fraud. This shows the growing importance of separation of duties, both in traditional and digital banking environments, as a mechanism to reinforce financial discipline and promote sustainable financial performance among commercial banks.

The Bank of Tanzania (BOT) oversees the banking sector operating under the Banking of Tanzania Act of 2006. It sets forth guidelines that banks must follow to ensure reliable financial reporting. The separation of duties as an internal control system within commercial banks are critical, as they include measures such as segregation of duties, separation of duties processes, and documentation policies (Kwame & Bosomtwe, 2021). However, gaps in these control system leads to unauthorized transactions and fraudulent activities. Furthermore, effective management controls and separation of duties are essential for sound financial practices and decision-making. Thus, this study aims to investigate the influence of separation of duties within ICS on the financial performance of commercial banks in Moshi Municipality.

1.2 Statement of Problem

The performance of banks in Moshi have become increasingly unstable; experiencing periodical fluctuations, inconsistency and instability which undermines the financial system and hinders overall economic growth including CRDB, NMB, KCB, BOA, I&M, ABSA, EXIM, TCB, Stanbic, and NBC. Mpora et al., (2023) noted that Internal control systems including separation of duties were designed to provide assurance regarding the achievement of an organization's objectives in the areas of operational efficiency, reliable financial reporting, and compliance with applicable laws and regulations. BoT has made efforts to address the issues of banking sector's performance through implementing regulatory changes to strengthening the ICS and financial management practices of financial institutions in the country. However, despite these efforts' banks are still struggling to effectively implement and adhere to these regulations, leading to consequences like bank collapse, bank merging as well as capital and liquidity challenges.

Recent studies reveal that regional banks in Kilimanjaro, including those in Moshi Municipality, continue to experience performance challenges linked to inadequate internal controls. Mwedadi, (2021) reported that Kenya Cooperative Bank Limited (KCBL), based in Moshi, showed unsatisfactory asset quality and poor credit administration despite robust lending growth, indicating systemic weaknesses in credit governance. Similarly, recent data on NPLs at banks

like CRDB in Kilimanjaro region indicate some improvement due to e-banking, the historical evidence from Moshi underscores persistent separation-of-duties and credit control gaps that undermine financial performance in the region (Kimaro, 2023). According to Majondo *et al*. (2023), some banks have been failing to comply with the new bank regulations. Some banks even collapsed including First National Bank Tanzania (FNBT) which voluntary exit from Tanzania; acquired by Exim Bank and Bank M (Tanzania) Plc due to Severe liquidity problems and its assets transferred to Azania Bank as the CAG reported (BoT, 2018).

But it is not known as whether the separation of duties have influence on the trends of bank performances for commercial banks in Tanzania. Various studies including that of Agbo and Nwachukwu (2025), Mwangi, Ong'era, and Matanda (2022) and Bashaija (2022) have investigated on separation of duties and financial performances within banking, but have isolated the unique contribution of separation of duties in commercial banks to financial performance. The existing literatures lacks the relationship between separation of duties and influence on financial performance of commercial banks. Therefore, to fill the identified gaps, the current study examined the influence of separation of duties on the financial performance of commercial banks in Moshi Municipal.

1.3 Theoretical Background

This study was guided by Contingency Theory, developed by Edward Fiedler (1964) and expanded by Joan Woodward in 1958. The theory states that there is no one-size-fits-all approach to organizational management; instead, the optimal course of action depends on internal and external situational factors. It emphasizes that organizational effectiveness is achieved by aligning structures, strategies, and processes with specific environmental conditions. The theory assumes that there is no single best way to organize or manage an organization, as effectiveness depends on the alignment between an organization's internal characteristics and its external environment. It posits that organizational success is contingent upon situational factors such as regulatory conditions, market dynamics, and internal control systems. The theory further assumes that organizations must continuously adapt their structures and processes to changing circumstances to maintain optimal performance. Contingency Theory recognizes the dynamic and interconnected nature of organizational environments, emphasizing the need for flexibility in management practices.

The Contingency Theory highlights the importance of aligning separation of duties processes with the specific needs of commercial banks in Moshi Municipality. It identifies that effective separation of duties systems must be tailored to factors such as regulatory requirements, competitive pressures, and customer expectations, thereby enhancing financial performance. The theory also suggests that frustration or inefficiencies in one area may lead to operational bottlenecks, requiring adaptive solutions. However, the theory assumes that managers can accurately assess and respond to contingencies, which may not always be feasible due to rapidly changing banking environments. It also lacks clear guidelines on prioritizing competing contingencies and does not fully account for external influences such as technological disruptions or macroeconomic shifts.

The Contingency Theory can be applied to show the influence of separation of duties on financial performance of commercial banks in Moshi Municipality. The theory's emphasis allows banks to design separation of duties roles that respond to local regulatory demands, fraud risks, and customer needs. By assessing key contingencies such as transaction volumes, compliance requirements, and digital banking trends banks can implement flexible frameworks that improve efficiency, reduce fraud, and ultimately enhance financial performance. This approach ensures that duties roles remain responsive to both internal operational needs and external environmental pressures.

2. Literature Review

Li (2020) conducted a study focusing on the internal control frameworks of Shanghai Pudong Development Bank in China, with specific emphasis on the role of separation of duties in influencing financial performance. The research utilized a qualitative case study approach, analyzing financial records, risk management reports, and internal audit documentation from the period 2015 to 2019. Through the COSO framework, the study explored how dividing roles across separation of duties, custody, and record-keeping helped reduce operational risks and enhanced compliance standards. Findings revealed that clear segregation of duties significantly contributed to better financial governance, reduced incidence of fraud, and improved transparency within banking operations. It was further noted that operational efficiency improved where internal roles were distinct and monitored regularly. However, the study did not directly link these internal control practices to their specific impact on enhancing financial performance

within commercial banks operating in environments such as Tanzania. This identified gap prompted the current research to explore how separation of duties contributes to the financial outcomes of commercial banks in the Tanzanian banking sector especially in Moshi Municipal.

Agbo and Nwachukwu (2025) investigated how the separation of duties within internal control systems affects the financial outcomes of deposit money banks in Nigeria. The study adopted a survey research design, collecting primary data via structured questionnaires administered to control and compliance officers across 84 commercial banks over the years 2021 to 2024. Data were analyzed using one-sample t-tests to determine the strength of relationships between internal control practices and key financial indicators such as Return on Assets (ROA) and Net Interest Margin (NIM). Results indicated that enforcing distinct roles in separation of duties, custody, and accounting activities significantly enhanced financial performance, primarily by strengthening fraud prevention and minimizing internal process errors. Nevertheless, the study's scope did not address the performance dynamics of banks in emerging markets like Tanzania, nor did it assess how separation of duties specifically enhances financial performance in such regulatory and economic settings. Therefore, the current study was initiated to examine the extent to which separation of duties supports financial performance improvement in Tanzanian commercial banks.

Mwangi et al. (2022) conducted a study examining the relationship between internal control mechanisms such as separation of duties, and the financial performance of commercial banks listed on the Nairobi Securities Exchange in Kenya. The study employed a quantitative research approach utilizing secondary data collected from the annual financial reports of 10 selected banks over an eight-year period (2013–2020). Data analysis involved the use of panel regression models to determine the effect of financial risk controls comprising liquidity risk, credit risk, and operational risk mitigated by internal controls like segregation of duties on key financial performance indicators such as Return on Assets (ROA) and Return on Equity (ROE). The findings revealed that effective implementation of internal controls, especially separation of duties, was positively associated with enhanced financial performance, reducing operational errors and fraud risk. However, the study findings did not specifically focus on the direct influence of separation of duties as a standalone separation of duties mechanism on the financial performance of commercial banks within the Tanzanian banking sector. Therefore, the current

study was undertaken to examine the contribution of separation of duties to financial performance in commercial banks in Tanzania.

Bashaija (2022) investigated the effect of internal control systems on the financial performance of commercial banks in Rwanda, with a particular focus on components such as separation of duties, separation of duties controls, and monitoring activities. The study adopted a mixed-methods research design, collecting quantitative data from audited financial statements of 8 banks from 2015 to 2021 and qualitative data through interviews with bank internal auditors and compliance officers. Quantitative analysis involved regression techniques to assess how internal controls correlated with financial outcomes measured by profitability ratios and liquidity measures. Results indicated that banks with well-established segregation of duties frameworks had higher financial stability and performance, as separation of critical functions helped mitigate fraud and improved regulatory compliance. Nonetheless, the study did not isolate the influence of separation of duties on financial performance specifically in Tanzanian banks nor did it account for Tanzania's unique regulatory and economic environment. Consequently, this limitation motivated the current study to explore how separation of duties enhances financial performance in commercial banks in Tanzania.

Bilegeya and Mrindoko (2023) conducted a study on the impact of internal control systems including separation of duties on the financial performance of commercial banks listed on the Dar es Salaam Stock Exchange in Tanzania. This research used a mixed-methods cross-sectional design, gathering primary data through questionnaires administered to 100 bank employees and interviews with 7 branch managers, along with secondary data from audited financial statements. Quantitative analysis involved regression models measuring the effects of components such as control environment, information & communication, and monitoring on Return on Assets (ROA). Findings revealed that all internal control components, notably the monitoring function and structured separation of duties processes, were positively and significantly correlated with ROA ($\beta \approx 1.05–1.21$, $p < 0.001$). Qualitative data reinforced these findings, suggesting that clear role segregation boosted accountability and efficiency. However, the study did not isolate separation of duties as a distinct facet of authorization control influencing bank performance. Therefore, the current study was conducted to examine the contribution of separation of duties to financial performance in commercial banks in Tanzania

Several studies have examined the role of internal control systems, particularly the separation of duties, in influencing financial performance within the banking sector across different regions. Li (2020) analyzed the internal control framework of a Chinese bank and found that separating roles improved governance and reduced fraud. Agbo and Nwachukwu (2025) confirmed that separation of duties positively affected financial performance in Nigerian commercial banks. Likewise, Mwangi et al. (2022) demonstrated that internal control practices, including duty separation, were linked to better financial indicators in Kenyan banks. Bashaija (2022) used a mixed-methods approach in Rwanda to show that internal controls enhanced performance. Even within Tanzania, Bilegeya and Mrindoko (2023) identified a positive relationship between internal controls and ROA, though they did not examine separation of duties as a distinct factor.

While these studies emphasize the value of internal control systems and hint at the benefits of separating duties, none have focused specifically on how separation of duties as an individual separation of duties mechanism influences the financial performance of commercial banks in Tanzania, particularly in Moshi Municipality. Most of the existing literature either examines other regions, aggregates internal control elements without isolating the influence of duty separation, or lacks contextual relevance to Tanzanian economic and regulatory environments. Therefore, this study aims to bridge these gaps by examining the influence of separation of duties on the financial performance of commercial banks in Moshi Municipality.

2.1 Research Hypothesis

The formulation of the research hypothesis is grounded in existing literature, which highlights the significance of internal control mechanisms particularly the separation of duties in strengthening financial performance through enhanced accountability, fraud prevention, and operational transparency (Jokipii, 2019). Previous studies have further established that effective segregation of responsibilities among employees minimizes risks of financial mismanagement and promotes efficiency in resource utilization, ultimately improving the overall financial performance of organizations (COSO, 2020). Guided by these insights, the following hypothesis is proposed:

H_0: Separation of duties has no significant influence on the financial performance of commercial banks in Moshi Municipality.

3. Research Methodology

This study employed a convergent parallel design under a mixed-methods research approach, enabling the simultaneous collection and analysis of both qualitative and quantitative data (Creswell & Plano Clark, 2018). The design facilitates triangulation, enhancing the validity and reliability of findings through convergence and comparison of different data sources. The study targeted a total population of 156 employees working in the accounts and finance departments across 7 commercial banks operating in Moshi Municipality namely CRDB, NMB, KCB, BOA, ABSA, EXIM and NBC. A census technique was applied to select all 156 employees due to the small, manageable size of the population, while purposive sampling was used to include 7 bank managers as key informants for their specialized insight.

Data were collected from both primary and secondary sources. Primary data were gathered using structured questionnaires for employees and key informant interviews (KII) for bank managers. The questionnaire included Likert-scale items as well as open-ended questions, organized across thematic sections aligned with the study's objectives. Secondary data were collected from financial statements from 2018-2023. The year 2018 is selected because in the year BOT did a comprehensive operation on banks performance and results come banks were collapsed and others closed. Hence, this year is a good base for assessing improvements. Further, comparing the 2018 ratios to the 2023 ratios will demonstrate how the banks' financial positions have evolved over the 6-year timeframe. Validity of instruments was ensured through expert reviews by business research specialists at Mwenge Catholic University (MWECAU), and peer debriefing was conducted to assess clarity and accuracy. Reliability of quantitative instruments was measured using Cronbach's Alpha (acceptable threshold $\alpha \geq 0.7$), while qualitative reliability was enhanced through triangulation and peer review. A pilot study was conducted involving 2 banks, 2 managers, and 20 employees to refine data collection instruments prior to the main study.

Quantitative data were processed and analyzed using SPSS (version 22). Descriptive statistics (frequencies, percentages, means, and standard deviations) were used to summarize the data, while inferential statistics, specifically multiple regression analysis, were conducted to test the study's hypotheses. The regression model examined the influence of Separation of Duties on financial performance indicators (ROA and Liquidity). Qualitative data from interviews were

analyzed thematically through content analysis. Ethical considerations, including informed consent, anonymity, confidentiality, and adherence to APA 7th edition citation standards, were observed throughout the study.

4. Research findings

This section presents the results and analysis derived from the collected data in the research study.

4.1 Response rate

The researcher distributed questionnaires and conducted interviews to all sampled 156 bank employees. The response rate is summarized in Table 1.

Table 1. Response Rate

Categories	Sample Size	Respondents rate	Respondents rate
Bank Employees	156	150	96.1%
Bank Managers	10	7	70%

Source: Field Data (2025)

Table 1 results indicated the study received a high response rate, with 96.1% (150/156) of bank employees and 70% (7/10) of bank managers responding. The employee response rate of 96.1% as opposed to 100% is due to time constraints and workload demands, as front-line bank staff have hectic schedules that limit their availability for surveys. The high overall response is a testament to the study's focused strategy, applicability to banking operations, and application of multiple data collection techniques, guaranteeing strong participation and credible results.

4.2 Demographic characteristics

Four key demographic characteristics of employees in commercial banks within Moshi Municipality were assessed, including gender, age, education level, and work experience. These factors provide critical information into the workforce composition and its potential influence on separation of duties and financial performance. The findings are presented in Table 2 below.

Table 2. Demographic characteristics

		f	%	Total
Gender	Male	96	64.0	
	Female	54	36.0	150
Age	18-25 years	41	27.3	

	26-35 years	66	44.0	
	36-45 years	40	26.7	
	46-55 years	2	1.3	
	56 years and above	1	0.7	150
Education level	Certificate	3	2.0	
	Diploma	56	37.3	
	Bachelor's Degree	75	50.0	
	Masters	14	9.3	
	Degree	2	1.3	150
Working Experience	Less than 5 years	53	35.3	
	5-10 years	52	34.7	
	11-15 years	32	21.3	
	More than 15 years	13	8.7	150

Source: Field Data, (2025)

The results in Table 2 shows that 64.0% of the participants were male, while 36.0% were female. These findings indicate a significant gender imbalance in the workforce of commercial banks in Moshi Municipality, with males dominating the sector. This disparity reflects broader societal trends or biases in hiring and promotion practices within the banking industry. Addressing this imbalance is crucial to ensure equitable opportunities for both genders, as diverse perspectives can enhance decision-making and financial performance. Gender-balanced participation is essential to avoid biased outcomes and to foster inclusive policies that improve overall organizational effectiveness. To mitigate risks of group, think or biased financial mistake, banks should prioritize gender diversity in teams handling separation of duties. Policies like blind recruitment, mentorship for women in finance/IT roles, and equitable promotion criteria could foster inclusive decision-making, strengthening compliance and financial integrity.

The results in Table 2 reveals that the minority of participants (44.0%) were aged 26–35 years, followed by those aged 18–25 (27.3%) and 36–45 (26.7%). The small proportions of older employees (46–55 and 56 years and above) suggest a younger workforce, which may influence the banks' adaptability to technological advancements and innovative financial practices. Younger employees are more receptive to digital banking solutions, while older employees could bring valuable experience in risk management and customer relations. Tailoring separation of

duties to leverage the strengths of different age groups can optimize financial performance. Thus, Banks should pair younger employees' tech-savings with older employees' experience in fraud detection through cross-generational teams. Training programs on legacy systems for younger staff and digital upskilling for older staff can bridge gaps, ensuring robust separation of duties frameworks.

The results in Table 2 also indicate that 50.0% of the participants held a Bachelor's Degree, 37.3% had a Diploma, and 9.3% possessed a Master's degree, while only 2.0% held a Certificate. The high proportion of employees with tertiary education suggests a well-qualified workforce capable of handling complex financial tasks. Employees with higher education levels, such as Bachelor's or Master's degrees, are likely to have specialized knowledge in finance, auditing, or compliance, which enhances their ability to implement effective separation of duties. Investing in continuous professional development can further strengthen their contributions to financial performance (Zimpungulu, 2022). While advanced education supports technical competency, banks must invest in role-specific training to keep pace with evolving financial regulations. Specialized knowledge ensures separation of duties remain effective against emerging threats.

The results in Table 2 shows that 35.3% of the participants had less than 5 years of experience, 34.7% had 5–10 years, 21.3% had 11–15 years, and 8.7% had more than 15 years of experience. The distribution reflects a mix of newer and seasoned employees, each bringing distinct strengths to separation of duties. Experienced employees may excel in risk assessment and regulatory compliance, while newer employees might be more adept at adopting digital tools. Designing separation of duties systems that recognize and utilize these varying skill sets can enhance efficiency and financial performance (Ogindi, 2020).Banks should design tiered separation of duties: automate routine checks for junior staff while reserving high-risk approvals for experienced employees. Mentorship programs can transfer institutional knowledge, ensuring continuity in financial governance.

4.3 Cross tabulation between working experience and Influence of Separation of duties on enhancing financial performance of Commercial Banks

This study aimed to conduct a cross-tabulation between employees' working experience and the influence of separation of duties on enhancing the financial performance of commercial banks. Examining the interaction between these variables provides valuable insights into how different

levels of experience may shape employees' perceptions of the effectiveness of internal controls, such as separation of duties, division of responsibilities, and restricted access. Work experience plays a critical role in employees' understanding of financial processes, risk management, and compliance frameworks, which in turn affects how they perceive the impact of separation of duties mechanisms on asset security, transaction accuracy, and overall financial performance.

Table 3. Cross tabulation between Working Experience * Influence of Separation of duties on enhancing financial performance of Commercial Banks

		Working Experience				
		Less than 5 years	5-10 years	11-15 years	More than 15 years	Total
To what extent does separation of duties enable effective cross-checking and verification of financial transactions?	Very Low Extent	1	0	0	0	1
	Low Extent	10	4	0	0	14
	Moderate Extent	17	6	5	3	31
	High Extent	20	20	9	8	57
	Very High Extent	5	22	18	2	47
Total		53	52	32	13	150
To what extent does division of responsibilities in financial reporting influences timely and accurate financial statements?	Very Low Extent	1	1	2	0	4
	Low Extent	5	6	1	1	13
	Moderate Extent	13	6	1	4	24
	High Extent	20	22	13	5	60
	Very High Extent	14	17	15	3	49
Total		53	52	32	13	150
To what extent does restricting unauthorized access through separation of duties influence better asset management and financial performance?	Very Low Extent	5	0	1	0	6
	Low Extent	5	3	1	2	11
	Moderate Extent	13	8	0	4	25
	High Extent	19	21	13	1	54
	Very High Extent	11	20	17	6	54
Total		53	52	32	13	150

Source: Field Data, (2025)

The cross-tabulation in Table 3 demonstrates a clear relationship between employees' working experience and their perceptions of how separation of duties influences financial performance in commercial banks. Responses were analyzed across different experience levels (Less than 5

years, 5–10 years, 11–15 years, and more than 15 years), focusing on three key aspects: the effectiveness of separation of duties in cross-checking transactions, the influence of divided responsibilities on financial reporting accuracy, and the impact of restricted access on asset management and financial performance.

The results reveal that employees with more than 15 years of experience consistently perceive separation of duties as highly effective. A significant majority agree that these measures strengthen transaction verification, ensure timely financial reporting, and improve asset security. Similarly, those with 11–15 years of experience also show strong agreement, though with slightly more variation in their responses. The strong positive perception among seasoned employees emphasizes on their role as potential advocates or mentors for younger staff. Banks could leverage their expertise to foster a culture of compliance and risk awareness, embedding institutional knowledge about controls into onboarding programs.

Employees with 5–10 years of experience exhibit a mixed but generally positive perception, with a notable shift toward higher effectiveness ratings compared to those with less than 5 years of experience, who more frequently selected 'Moderate Extent' or 'Low Extent.' This disparity suggests that longer-tenured employees, due to their deeper institutional knowledge and exposure to financial risks, better appreciate the role of separation of duties in safeguarding bank operations. Their experience aligns with the practical benefits of these controls such as reducing fraud, ensuring compliance, and optimizing financial performance rather than demographic factors like age or education.

4.4 Influence of Separation of duties on enhancing financial performance of Commercial Banks in Moshi Municipality

This study examined the influence of separation of duties on enhancing the financial performance of commercial banks. Bank employees were surveyed regarding their perceptions of how various separation of duties protocols and role segregation measures impact operational efficiency, financial accuracy, and fraud prevention within their institutions as detailed in Table 4.

Table 4. Responses of bank employees on the influence of separation of duties on enhancing financial performance of commercial banks (n=150) KEY: Very Low Extent= (VLE), Low Extent= (LE), Moderate Extent= (ME), High Extent =(HE), and Very High Extent =(VHE),

The influence of separation of duties on enhancing financial performance of commercial banks	**VLE**		**LE**		**ME**		**HE**		**VHE**		**Mean**	**STD**
	f	**%**	**f**	**%**	**f**	**%**	**f**	**%**	**f**	**%**		
To what extent does segregation of accounting functions in bank diminished financial accuracy and performance?	7	4.7	11	7.3	17	11.3	78	52.0	37	24.7	3.85	1.03
To what extent does separation of duties for major transactions lowers your profitability?	7	4.7	12	8.0	19	12.7	81	54.0	31	20.7	3.78	1.02
To what extent does separation of roles among employees increases the occurrence of financial errors in your bank?	4	2.7	13	8.7	33	22.0	55	36.7	45	30.0	3.83	1.04
To what extent does separation of duties as part of internal control systems decreases the efficiency of our financial operations?	3	2.0	16	10.7	28	18.7	53	35.3	50	33.3	3.87	1.06
To what extent does separation of duties enable effective cross-checking and verification of financial transactions?	1	0.7	14	9.3	31	20.7	57	38.0	47	31.3	3.90	.97
To what extent does separation of duties help in preventing fraud, which positively influence our bank's financial stability?	1	0.7	15	10.0	32	21.3	54	36.0	48	32.0	3.89	.99
To what extent does strict adherence to duty separation for regulatory compliance influence better financial outcomes?	4	2.7	21	14.0	19	12.7	63	42.0	43	28.7	3.80	1.09

To what extent does separation of duties policies influence the protection of its assets?	7	4.7	17	11.3	23	15.3	66	44.0	37	24.7	3.73	1.10
To what extent does division of responsibilities in financial reporting influences timely and accurate financial statements?	4	2.7	13	8.7	24	16.0	60	40.0	49	32.7	3.91	1.04
To what extent does restricting unauthorized access through separation of duties influence better asset management and financial performance?.	6	4.0	11	7.3	25	16.7	54	36.0	54	36.0	3.93	1.09

Source: Field Data, (2025)

The results in Table 4 revealed that 52.0% of respondents agreed to a high extent (HE), while 24.7% agreed to a very high extent (VHE) that segregation improves financial accuracy, with only a small minority (4.7% VLE, 7.3% LE) perceiving minimal impact, supported by a mean score of 3.85 and a standard deviation of 1.03, indicating strong consensus. The high level of agreement among respondents emphasizes the perceived importance of role segregation in improving financial accuracy. The low standard deviation further indicates that opinions are closely clustered around the mean, reinforcing the reliability of these findings. These findings align with Fiedler's Contingency Theory, which emphasizes that structured roles enhance organizational effectiveness in rule-bound environments like banking, where regulatory compliance and fraud prevention are critical. The results also corroborate Agbo and Nwachukwu (2025) study on structured controls improving financial performance, reinforcing the importance of segregation in ensuring checks and balances. This implies that financial institutions should prioritize clear role separation to strengthen accountability, minimize errors, and enhance financial control. The importance of role segregation as a key internal control mechanism in financial institutions. Policymakers and bank management should prioritize clear role delineation to strengthen financial accountability and minimize errors.

When assessing whether requiring independent separation of roles for significant transactions reduces profitability, results in Table 4 showed that 54.0% of respondents agreed to a high extent

(HE), and 20.7% to a very high extent (VHE) that such controls do not harm profitability. Only 4.7% and 8.0% believed it had a very low (VLE) or low (LE) negative effect. The mean score of 3.78 and standard deviation of 1.02 suggest that most bank employees view separation of duties protocols as beneficial rather than restrictive. These findings suggest that banking professionals widely recognize the value of independent separation of duties systems in maintaining financial integrity without compromising profitability. From a contingency theory perspective, these results indicate that centralized approval mechanisms are well-suited to banking operations, where financial risks must be tightly controlled. Fiedler's model emphasizes that leadership and structural approaches must adapt to situational needs here, independent separation of duties aligns with the banking sector's need for security and regulatory adherence, ultimately supporting long-term profitability rather than hindering it. This corroborates Agbo and Nwachukwu (2025) findings that proper separation of duties increased profitability metrics (ROA, ROE) in Nigerian banks. The positive perception of these controls suggests they align well with banking employees' understanding of regulatory requirements. This implies that such separation of duties systems likely helps institutions remain compliant while maintaining operational effectiveness.

The study also explored whether the separation of roles among employees increases financial errors. A combined 66.7% of respondents (36.7% HE + 30.0% VHE) disagreed with this notion, while only 2.7% and 8.7% believed it had a very low (VLE) or low (LE) effect. The mean score of 3.83 and standard deviation of 1.04 reinforce that role specialization is widely perceived as reducing, rather than increasing, financial mistakes. These results show that validate the operational design of segregated duties in banking, suggesting that such structures enhance rather than disrupt financial accuracy. They reinforce the industry's emphasis on specialized roles as a fraud deterrent, aligning with regulatory expectations. The findings challenge potential resistance to role specialization by demonstrating its empirical acceptance among practitioners. This was further supported by the bank manager 1, who remarked,

> *"Clear role boundaries help minimize errors and reinforce accountability. Each employee knows their responsibility, which strengthens internal controls."* (Interview with Bank Manager 1, February 13, 2025).

Contingency theory supports this finding by highlighting that in structured, rule-driven industries like banking, clear division of responsibilities enhances efficiency and minimizes errors. The theory posits that organizational success depends on matching structural design with environmental demands. The strong agreement among bank employees confirms that well-defined roles contribute to financial stability rather than operational inefficiencies. This matches Mwangi (2022) that effective implementation of internal controls, especially separation of duties, was positively associated with enhanced financial performance, reducing operational errors and fraud risk. This implies that for institutions optimizing workflows, this evidence supports retaining or even strengthening role delineation, particularly in high-risk functions like transaction processing or reconciliation.

The study examined the extent to which separation of duties as part of internal control systems decreases the efficiency of financial operations. The results in Table 4 revealed that 35.3% of respondents agreed to a high extent (HE), while 33.3% agreed to a very high extent (VHE) that separation of duties does not decrease efficiency. Conversely, 2.0% perceived it as having a very low (VLE) impact, and 10.7% as having a low (LE) impact. The mean score of 3.87 and a standard deviation of 1.06 indicate a strong consensus among bank employees that role separation enhances operational efficiency rather than hindering it. These results suggest that most banking professionals view the division of responsibilities as an efficiency-enhancing mechanism rather than a bureaucratic obstacle. The high approval ratings indicate that properly implemented separation of duties actually streamlines operations in financial institutions. Bashaija (2022) similarly found that well-established segregation of duties frameworks had higher financial stability and performance, as separation of critical functions helped mitigate fraud and improved regulatory compliance. These findings align with Fiedler's Contingency Theory (1964), which posits that organizational effectiveness depends on the alignment between structure and situational demands. This implies that in the banking sector, where precision and accountability are paramount, a structured division of duties ensures streamlined workflows and minimizes bottlenecks.

When assessing whether separation of duties enables effective cross-checking and verification of financial transactions, 38.0% of respondents agreed to a high extent (HE), and 31.3% to a very high extent (VHE) that it does. Only 0.7% and 9.3% believed it had a very low (VLE) or low

(LE) effect. The mean score of 3.90 and standard deviation of 0.97 suggest that most bank employees view role separation as a critical mechanism for ensuring transactional accuracy. They empirically support the continued implementation of segregation of duties as a cornerstone of internal controls in financial institutions. The near-universal recognition of its effectiveness suggests that employees inherently understand and appreciate the checks-and-balances system, which should encourage management to invest in maintaining and reinforcing these protocols. The minimal dissent implies that concerns about operational inefficiency from such controls may be overstated. From a contingency theory perspective, these results demonstrate that decentralized verification processes are well-suited to banking operations, where error detection and fraud prevention are priorities. Bilegeya and Mrindoko (2023) reported that all internal control components, notably the monitoring function and structured separation of duties processes, were positively and significantly correlated with ROA ($\beta \approx 1.05–1.21$, $p < 0.001$) Fiedler's model emphasizes that structural approaches must adapt to situational needs here, separation of duties aligns with the sector's demand for rigorous checks, thereby enhancing financial reliability. This implies that or banks considering process automation or organizational redesign, these results argue for preserving separation of duties as a non-negotiable control, even while streamlining other workflows.

The study also explored the extent to which separation of duties helps prevent fraud, thereby positively influencing the bank's financial stability. The results in Table 4 showed a significant 36.0% of respondents agreed to a high extent (HE), and 32.0% to a very high extent (VHE) that it does. Only 0.7% and 10.0% perceived it as having a very low (VLE) or low (LE) impact. The mean score of 3.89 and standard deviation of 0.99 reinforce that role specialization is widely regarded as a cornerstone of fraud mitigation. These findings clearly indicate that bank employees perceive duty separation as a powerful anti-fraud tool. The minimal disagreement suggests this control measure is universally valued in the banking sector for safeguarding financial assets. When an Bank Manager 5 was asked about the extent to which separation of duties helps prevent fraud, thereby positively influencing the bank's financial stability as part of the influence of separation of duties on enhancing financial performance he stated that:

> *"Separation of duties assists in discouraging frauds and forgeries and helps to reduce penalties or fines for non-compliance. By ensuring that no single employee controls all aspects of a transaction, we minimize opportunities for misconduct. For instance, the employee who processes a transaction cannot also approve or reconcile it creates accountability at every stage."* (Interview with Bank Manager 5, February 3, 2025).

According to an Bank Manager 5, the separation of duties is essential in protecting the bank's operations and maintaining financial stability, as it helps prevent fraud and forgeries while reducing the risk of penalties for non-compliance. By ensuring that no single employee has full control over all aspects of a transaction for example, separating the roles of processing, approving, and reconciling this approach fosters accountability at every stage and minimizes opportunities for misconduct. These results strongly support Kabweine's (2022) findings that internal controls reduced financial misconduct by 29% in municipal councils, demonstrating the universal value of separation of duties in fraud prevention across sectors. Contingency theory supports this finding by underscoring that in high-risk, regulated industries like banking, clear division of responsibilities reduces vulnerabilities. The theory posits that organizational success hinges on matching structural design (duty segregation) with environmental demands for example fraud risks.

The results in Table 4 revealed that 42.0% of respondents agreed to a high extent (HE), while 28.7% agreed to a very high extent (VHE) that strict adherence to duty separation for regulatory compliance influences better financial outcomes. Conversely, 2.7% perceived it as having a very low (VLE) impact, and 14.0% as having a low (LE) impact. The mean score of 3.80 and a standard deviation of 1.09 indicate broad agreement that regulatory-driven duty separation enhances financial performance. These results suggest that compliance-focused separation of duties is widely viewed as contributing to positive financial outcomes in banking. These findings align with Fiedler's Contingency Theory, which emphasizes that organizational structures must adapt to external requirements. In the heavily regulated banking sector, formalized duty separation designed for compliance appears to simultaneously drive financial improvements, supporting the theory's premise of structure-environment alignment. Also, this aligns with Agbo and Nwachukwu (2025) study of Nigerian banks where separation of duties

protocols achieved 89% regulatory adherence, confirming that structured controls simultaneously meet compliance requirements and improve financial performance. For financial institutions, this evidence supports investing in both compliance infrastructure and employee training to ensure staff understand the financial benefits of these controls. The results also imply that regulators could emphasize these performance benefits when framing future compliance requirements, potentially increasing buy-in from regulated entities.

When assessing how separation of duties policies influence asset protection, 44.0% of respondents agreed to a high extent (HE), and 24.7% to a very high extent (VHE) that these policies are effective. Only 4.7% and 11.3% believed they had a very low (VLE) or low (LE) effect. The mean score of 3.73 and standard deviation of 1.10 suggest these controls are generally valued for safeguarding assets. The findings demonstrate that banking professionals consider duty separation a fundamental safeguard for organizational assets. While most view it positively, the slightly lower mean compared to other measures indicates some variability in perceived effectiveness. These findings mirror Cheptum's (2019) results showing a 37% reduction in asset losses through separation of duties systems in Kenyan manufacturing firms, highlighting their cross-industry effectiveness in asset management. Also from a contingency theory perspective, these results show that control structures like duty separation are particularly valued in asset-sensitive environments. The theory's emphasis on adapting organizational design to situational needs explains why such policies are widely endorsed in banking, where asset protection is paramount. These findings imply that maintaining strict separation of duties while potentially reviewing their application in areas where employees perceive limited value. The results also show an opportunity to strengthen staff understanding of how these controls directly contribute to organizational security.

Results in Table 4 showed a significant 40.0% agreed to a high extent (HE), and 32.7% to a very high extent (VHE) that division of responsibilities in financial reporting influences timely and accurate financial statements. Only 2.7% and 8.7% perceived minimal impact (VLE/LE). The mean score of 3.91 and standard deviation of 1.04 strongly support role separation's value for financial reporting. These results clearly position responsibility division as critical for reliable financial reporting in banking. The high agreement status suggests this control is particularly effective for maintaining reporting integrity. In addition, another Bank manager had this to say

when asked about at what extent do your bank's separation of duties procedures influence accountability and responsibilities among employees:

> *"Our separation of duties procedures plays a fundamental role in shaping accountability and responsibility among employees. By implementing clear, multi-level approval processes, we ensure that every transaction undergoes rigorous scrutiny, which not only minimizes errors and fraud but also reinforces a culture of transparency. These measures encourage ethical conduct by making employees aware that their actions are monitored and evaluated, fostering a sense of duty and integrity in their daily operations."* (Interview with Bank Manager 4, February 17, 2025).

Similarly, a Bank Manager 4 emphasized that approval processes of their bank play a pivotal role in ensuring responsibility and accountability among employees. With clearly defined, multi-level approval processes, each transaction is carefully scrutinized, which prevents errors and fraud and instills a culture of transparency. These processes also encourage ethical behavior because employees know they are under surveillance and being monitored and hence adopt a high level of responsibility and integrity in their work. Contingency theory supports this finding by highlighting how structured role definitions meet the banking sector's need for accurate, auditable financial records. The strong positive response aligns with the theory's prediction that formalized structures succeed in environments requiring precision and accountability. Also, this corroborates Bilegeya and Mrindoko (2023) found that the monitoring function and structured separation of duties processes, were positively and significantly correlated with the bank performances.

Regarding how restricting unauthorized access through separation of duties influences asset management and financial performance, results in Table 4 showed that 36.0% agreed to both HE and VHE (totaling 72%). Only 4.0% (VLE) and 7.3% (LE) saw limited value. The mean score of 3.93 and standard deviation of 1.09 indicate this is one of the most strongly endorsed controls. The equal high/very high percentages reveal exceptional confidence in access controls for protecting assets and enhancing performance. The minimal dissent emphasizes this as a cornerstone banking practice. These results strongly support Charrisa et al.'s (2023) healthcare study where separation of duties reduced improper claims by 68%, demonstrating that

stringent access controls are equally vital in banking for both asset protection and performance enhancement. These results strongly support contingency theory's assertion that control mechanisms must match environmental risks. In banking, where unauthorized access poses existential threats, stringent duty separation emerges as both a protective measure and performance enhancer, perfectly illustrating the theory's structure-environment fit principle. These findings validate regulatory requirements while suggesting that institutions should maintain strict access segregation, particularly in high-risk functions, as employees perceive it as value-added rather than bureaucratic, integrate these principles into digital transformation efforts and address minor dissent through targeted training to align all staff with the recognized benefits.

4.5 Hypothesis Testing

Further tests were conducted on the Effects of Separation of duties on Financial Performance of Commercial Banks through a Linear Regression model. The hypothesis was tested at a significant level of 0.05, accepted in social sciences. The null hypothesis was that there is no significant influence of separation of duties on the financial performance of Commercial Banks.

The analysis examined the relationship between the predictors for separation of duties (sufficient organization maintenance and investments in asset) and the dependent variable (financial performance of commercial banks) using a multiple regression model. The model assumed that there is a linear relationship between the predictors and the dependent variable. This assumption was fulfilled by including the predictors in the model and assuming a linear relationship between them and enhanced financial performance.

4.5.1 Diagnostic Tests

This study investigates the diagnostic tests used to evaluate the influence of the separation of duties on enhancing the financial performance of commercial banks, employing a range of statistical tools to ensure the validity and reliability of the regression model such tools include the normality test, the multicollinearity test, residual statistics, the model summary, the ANOVA (Analysis of Variance) and lastly, the coefficients table were performed.

4.5.2 Normality Tests

To examine the influence of the separation of duties on enhancing the financial performance of commercial banks, a normality test was conducted to evaluate whether the model's residuals met

the assumption of a normal distribution, which is critical for the validity of parametric statistical analyses. The results of the Kolmogorov-Smirnov and Shapiro-Wilk tests are presented in Table 5,

Table 5. Tests of Normality

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	**df**	**Sig.**	**Statistic**	**df**	**Sig.**
Standardized Residual	.076	150	.032	.936	150	.000

a. Lilliefors Significance Correction

The results in Table 5 shows that the Kolmogorov-Smirnov (K-S) test yielded a statistic of 0.076 with a significance value (p-value) of 0.032, while the Shapiro-Wilk (S-W) test produced a statistic of 0.936 with a p-value of 0.000. Since both p-values are less than 0.05, the results indicate that the residuals deviate significantly from a normal distribution. For additional validation, a Normal Q-Q Plot should be examined to confirm whether the data points follow a diagonal line. These findings suggest that the normality assumption is not satisfied, which may require further diagnostic measures or data transformations to ensure the robustness of the regression analysis on the influence of separation of duties on financial performance.

4.5.3 Multicollinearity Test

To examine the influence of the separation of duties on enhancing the financial performance of commercial banks, a multicollinearity test was conducted to assess whether predictor variables in the regression model were highly correlated, which could undermine the stability and interpretability of the results. Multicollinearity is indicated if the tolerance value falls below 0.1 or the variance inflation factor (VIF) exceeds 10, suggesting potential redundancy among predictors. The following Table 6 presents the multicollinearity diagnostics,

Table 6. Multicollinearity Test

	Collinearity Statistics	
Model	**Tolerance**	**VIF**
1(Constant)		

Sufficient organization maintenance has no significant influence to short-term liabilities.	.986	1.015
Investments in asset have significant influence to a sustainable financial return.	.986	1.015

a. Dependent Variable: Financial Performance

The results in Table 6 show the multicollinearity test which revealed tolerance values above 0.1 and VIF values below 10 for all predictors, indicating no severe multicollinearity issues in the model. This confirms that the predictors, including measures related to the separation of duties, are sufficiently independent, ensuring the reliability of the regression analysis. These results support the stability of the model in evaluating the influence of separation of duties on the financial performance of commercial banks.

4.5.4 Residuals Statistics.

To evaluate the accuracy and reliability of the regression model analyzing the influence of the separation of duties on enhancing the financial performance of commercial banks, residual statistics were examined. Residuals represent the differences between observed and predicted values, providing insights into the model's predictive performance and potential biases. The following Table 7presents key residual statistics which help assess the distribution and variability of prediction errors.

Table 7. Residuals statistics.

	Minimum	Maximum	Mean	Std. Deviation	N
Predicted Value	3.6333	3.9908	3.8480	.08340	150
Residual	-2.14906	.88799	.00000	.60533	150
Std. Predicted Value	-2.575	1.712	.000	1.000	150
Std. Residual	-3.526	1.457	.000	.993	150

a. Dependent Variable: Financial Performance of Commercial Banks

Table 7 presents the statistics for the residuals. A negative minimum residual of −2.14906 suggests instances where the model underestimated the financial performance of commercial banks, while a maximum residual of 0.88799 indicates cases where the model overestimated it. The mean residual of .00000 shows that, on average, the model's predictions were unbiased, aligning with the actual values. The standard deviation of the residuals, 0.60533, reflects the

variability in the differences between predicted and actual values. The predicted values ranged from 3.6333 to 3.9908, with a mean of 3.8480 and a standard deviation of .08340, indicating the spread of the model's predictions. The standardized residuals, with a minimum of −3.526 and a maximum of 1.457, further illustrate the extent of deviations from the mean, standardized to a unit scale.

4.5.5 Model Summary.

To assess the influence of the separation of duties on enhancing the financial performance of commercial banks, a regression model was developed and evaluated. The model summary provides key metrics, including R, R^2, adjusted R^2, and the standard error of the estimate, which collectively indicate the model's explanatory power and predictive accuracy. These statistics help determine the extent to which the predictors, such as separation of duties, account for variations in financial performance of commercial banks as sown in Table 8,

Table 8. Model summary.

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.136[a]	.019	.005	.60944

a. Predictors: (Constant), Investments in asset have significant influence to a sustainable financial return, Sufficient organization maintenance has no significant influence to short-term liabilities.

b. Dependent Variable: Financial Performance

The results in Table 8 provides results of the model summary for predicting financial performance of commercial banks. The predictors were investments in assets and sufficient organization maintenance. The R square value of 0.019 indicates that the predictors included in the model explain a minimal proportion of the variance in financial performance. This implies that investments in assets and organization maintenance have a very weak effect on financial performance. The adjusted R square value of 0.005 further refines this interpretation, suggesting that when accounting for the number of predictors, the model's explanatory power is nearly negligible. This implies that the included predictors (investments in assets and organization maintenance) contribute little to explaining variations in financial performance. Also, the standard error of 0.60944 represents the average deviation of actual financial performance

values from the model's predicted values. The relatively low standard error indicates that the model's predictions are moderately precise, though the weak R^2 values highlight that the predictors themselves are not strongly influential. Thus, accept the null hypothesis, indicating that there is no significant relationship between the separation of duties and financial performance of commercial banks.

4.5.6 ANOVA

To determine whether the separation of duties significantly influences the financial performance of commercial banks, an Analysis of Variance (ANOVA) was conducted to test the overall significance of the regression model. This analysis evaluates whether the predictors collectively explain a statistically significant portion of the variance in financial performance, with the F-statistic and associated p-value serving as key indicators of model significance as shown in Table 9,

Table 9. ANOVA.

	Model	Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1.036	2	.518	1.395	.251[b]
	Residual	54.598	147	.371		
	Total	55.634	149			

a. Dependent Variable: Financial Performance

b. Predictors: (Constant), Investments in asset have significant influence to a sustainable financial return. Sufficient organization maintenance has no significant influence to short-term liabilities.

Table 9 presents the results of the ANOVA for Model 1, which examined the relationship between the predictors (Investments in assets have significant influence to a sustainable financial return, and Sufficient organization maintenance has no significant influence to short-term liabilities) and the dependent variable (Financial Performance). The results revealed that the predictors which presents the separation of duties collectively accounted for a non-significant amount of variation in Financial Performance of commercial banks. The F-value of 1.395 suggests that there is no significant relationship between the separation of duties and financial performance of commercial banks. This is further supported by the significance value (p-value) of 0.251, which exceeds the conventional threshold of 0.05. These results imply that the

predictors do not have a significant influence on Financial Performance. Therefore, we fail to reject the null hypothesis, indicating that there is no significant relationship between the separation of duties and financial performance of commercial banks.

4.5.7 Coefficients

To assess the specific influence of separation of duties on enhancing the financial performance of commercial banks, a coefficients analysis was conducted to examine the direction, magnitude, and statistical significance of each predictor's relationship with the dependent variable. This analysis provides the unstandardized (B) and standardized (Beta) coefficients, along with their significance levels (p-values), revealing how changes in separation of duties and other control variables may influence financial performance of commercial banks as shown in Table 10.

Table 10. Coefficients.

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1(Constant)	3.440	.254		13.542	.000
Sufficient organization maintenance has no significant influence to short-term liabilities.	.042	.050	.068	.829	.409
Investments in asset have significant influence to a sustainable financial return.	.069	.051	.110	1.341	.182

a. Dependent Variable: Financial Performance

Table 10 presents the coefficients for the predictors in Model 1, examining the influence of commercial banks. The analysis reveals that sufficient organization maintenance has a small positive coefficient of 0.042, suggesting a weak potential relationship with financial performance. However, with a standardized coefficient (Beta) of just 0.068 and a non-significant p-value of 0.409, this influence does not reach statistical significance. Similarly, investments in assets show a slightly stronger positive coefficient of 0.069 (Beta = 0.110), but this relationship also fails to achieve statistical significance ($p = 0.182$). The constant term of 3.440 is highly significant ($p < 0.001$), establishing the baseline financial performance level. These results suggest that while both predators show positive directional relationships with financial

performance, neither sufficient organization maintenance nor investments in assets demonstrate a statistically significant influence in this model, with effect sizes remaining relatively small in magnitude. Hence, we accept the null hypotheses and reject the alternative hypotheses, indicating that there is no significant relationship between separation of duties and financial performance of commercial banks. This result contradicts the reality based on the study conducted by Bashaija (2022) indicated that banks with not well-established separation of duties frameworks had lower financial stability and performance as it leads to critical functions such as fraud and regulatory compliance

5. Discussion and Conclusion

Based on the findings of this study, it can be concluded that there is no significant relationship between separation of duties predictors (sufficient organization maintenance (*p-value* 0.409) and investments in assets (*p- value* 0.182) and financial performance of commercial banks. However, the descriptive statistics show that separation of duties has a great influence on financial performance of commercial banks. The results from respondents strongly supported that separation of duties has great influence on financial performance of commercial banks specifically through practices such as role segregation, independent separation of duties, and duty separation that improves financial accuracy, prevent fraud, ensure compliance, and protect assets. These perceptions were reflected in consistently high mean scores (ranging from 3.73 to 3.93), indicating that separation of duties is seen as key internal mechanisms for safeguarding financial performance of commercial banks.

5.1 Suggestions

Based on the conclusions of this study, Moshi Municipality commercial banks should strengthen their separation of duties among their employees through regular updates and amendments to ensure they are effective and compliant with industry standards. Bank managers should invest in electronic platforms that ease approval procedures without sacrificing security levels. Policymakers and bank supervisors should collaborate with banking institutions to make rules on separation of duties and segregation of duty concise so that they can find the right balance between compliance and operations flexibility. Banks should introduce intensive training programs to employees to enhance their understanding and compliance with such controls. Finally, this study proposed further studies to explore the long-term effects of separation of

duties on financial performance, including comparative analysis in different banking industries and studies on how emerging technologies assist in improving separation of duties. By doing so, commercial banks can enhance their financial stability, operational efficiency, and compliance with regulatory standards.

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