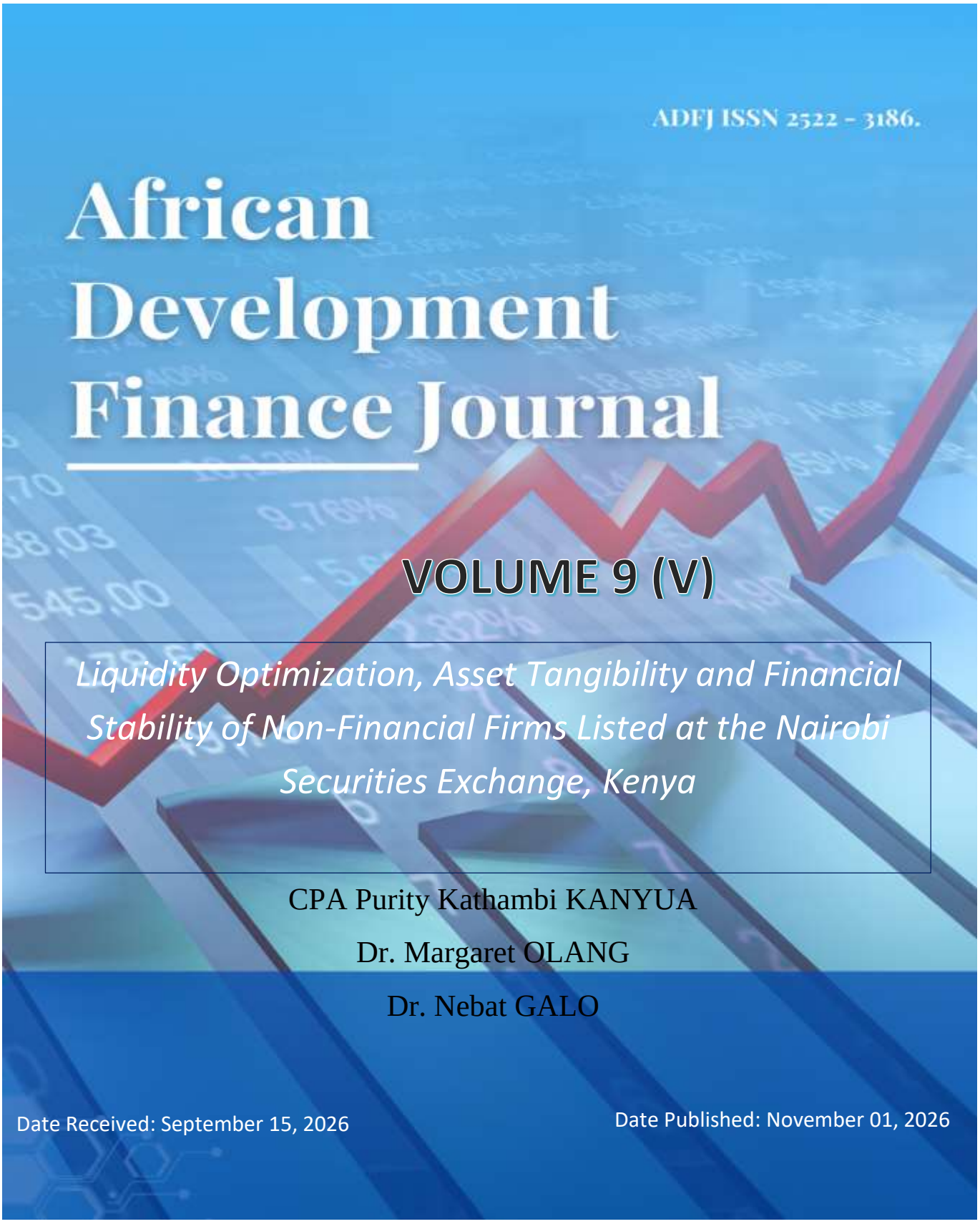
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Liquidity Optimization, Asset Tangibility and Financial Stability of Non-Financial Firms Listed at the Nairobi Securities Exchange, Kenya

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Abstract

Financial stability enables firms to sustain operations, maintain adequate liquidity and withstand unexpected financial shocks. However, non-financial firms listed at the Nairobi Securities Exchange have faced financial stability challenges reflected by declining operating cash flows, cash ratios, and profitability between 2016 and 2024. These challenges underscore the importance of effective liquidity Optimization in strengthening financial resilience. The objective of the study was to examine the effect of liquidity optimization on financial stability of non-financial firms listed at the Nairobi Securities Exchange, Kenya as well as the moderating effect of asset tangibility on the relationship between liquidity optimization and financial stability. The study was anchored on cash management theory supported by liquidity preference theory. Descriptive and causal with cross-sectional research designs were adopted on a target population of 38 non-financial firms listed at the NSE using census approach. A data collection checklist was used to collect secondary data for the five-year period 2021-2025. Final population of 30 non-financial firms with complete data for a period of five years was aggregated to produce cross-sectional data structure. Pearson regression analysis was used to examine the the relationship between liquidity optimization and financial stability at a 5% significance level. Diagnostic tests for Ordinary Least Squares assumptions utilized were Normality, Heteroscedasticity, Multicollinearity and Linearity. The study established a positive and significant effect of liquidity optimization on financial stability ($\beta = 22.694$, $p=0.002 < 0.05$). Further, a statistically positive non-significant moderating effect of asset tangibility on the relationship between liquidity optimization and financial stability ($\beta = 21.86$, p-value $= 0.182 > 0.05$). The findings indicate that effective liquidity optimization enables firms to balance short-term liquidity needs with productive resource utilization, thereby strengthening financial resilience irrespective of its asset structure. The study recommends that firms maintain optimal liquidity levels to support financial stability, resilience and productive investment.

Keywords: *Liquidity Optimization, Financial Stability, Asset Tangibility, Non-financial Firms, Nairobi Securities Exchange.*

1. INTRODUCTION

1.1 Background

Liquidity optimization refers to the management of cash and other liquid assets in a manner that ensures a firm's ability to meet short-term obligations while efficiently deploying available resources to maximize returns and sustain operational continuity (Foucalt et al., 2023). Liquidity

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optimization can be defined as the process of balancing the availability of liquid resources with their strategic utilization so that an organization maintains sufficient cash flow to support day-to-day operations and financial commitments without holding excessive idle funds (Kumar, 2025). For non-financial firms, effective liquidity optimization is important because their day-to-day operations require sufficient liquid resources to meet short-term financial commitments while supporting operational continuity. A firm that maintains adequate liquidity can efficiently meet its short-term obligations, such as supplier payments, wages, and loan repayments, thus avoiding financial strain and operating with greater stability. In contrast, a firm with inadequate liquidity may struggle to meet these obligations, increasing the risk of financial distress and disruption of the daily operations (Chima et al., 2020). However, excessive liquidity can undermine financial stability by eroding the essential buffers that absorb unexpected market shocks (Chima et al., 2020).

Financial stability is the ability of firms to manage risks, absorb shocks and sustain operations, without experiencing financial distress (Ozili & Lorember, 2024). Financial stability also refers to the ability of firms to maintain consistent solvency, liquidity and operational efficiency while managing risks and absorbing economic shocks (Rexhepi, 2024). Singh et al. (2024) indicated that financial stability provides firms with the capacity to withstand market fluctuations and strategically adapt to evolving production demands. A firm's ability to remain financially stable depends significantly on how well it plans, monitors and optimizes its liquidity (Bragg, 2020). Financially stable firms are generally associated with stronger investor confidence, improved access to credit on favorable terms, and a sustained competitive advantage (Sofiyan, 2024). Such firms also tend to demonstrate greater resilience during periods of economic uncertainty, which enhances their ability to identify and take advantage of emerging growth opportunities. In contrast, financial instability increases exposure to default risk, insolvency, and possible regulatory intervention. Firms experiencing low levels of financial stability often encounter declining share prices, reduced investor participation, and negative assessments from credit rating agencies (Jackson & Schwarcz, 2021).

The effect of liquidity optimization on financial stability may also depend on the asset structure of a firm, particularly the extent to which its assets are tangible. Asset tangibility refers to the

proportion of the company's fixed assets to total assets, representing tangible assets that can be pledged as collateral for financing (Rajan & Zingales, 1995). Asset tangibility also refers to the extent to which a firm's assets are represented by physical assets such as property, plant, and equipment that have observable value and can often be pledged as collateral in financing (Mazumder, 2025). Firms with high proportions of fixed assets can use them as collateral when seeking debt, as tangible assets like buildings, machinery, and inventory offer greater security to lenders compared to intangible assets. This implies that firms with greater asset tangibility may have better access to external financing during periods of financial distress, which can support their ability to manage liquidity pressures and maintain financial stability (Chandrakumaran, 2020).

Empirical studies have used a variety of indicators to operationalize financial stability. Chand et al. (2021) used risk-adjusted return on assets and the risk-adjusted equity to assets ratio. Habib et al. (2022) adopted Z-Score, Non-Performing Loans ratio, Loan Loss Provisions and Systemic risk indicators such as SRISK and Marginal Expected Shortfall. Similarly, Oyamienlen (2023); Kareem and Aziz (2023) and Minev and Koeva-Dimitrova (2022) adopted Z-score as the measure of financial stability. Berger et al. (2017) adopted standard Z-index and Non-Performing Loans ratio to measure financial stability. Kumar et al. (2023); Taskin and Sariyer (2020) and GC (2020) adopted the standard Z-index as measure of financial stability. However, individual indicators such as Non-Performing Loans ratios or risk-adjusted profitability measures capture only specific aspects of financial stability, making them less comprehensive when used independently. Financial stability was measured using the Standard Z-Index, an accounting-based measure of insolvency risk. The Standard Z-Index combines profitability, capitalization, and earnings volatility (Lepetit & Strobel, 2015). Consequently, higher Z-index values indicate greater financial stability and a lower probability of insolvency, whereas lower values suggest increased financial distress risk and reduced financial stability (Strobel, 2011).

Alalade et al. (2024) conducted a study on optimizing liquidity management strategies to enhance financial performance in Nigerian manufacturing firms. Secondary data was collected from the financial statements of 10 Nigerian manufacturing firms over the period from 2017 to 2023. Liquidity management was measured using current ratio, quick ratio, cash ratio, and cash

conversion cycle. Financial performance was measured using return on assets and return on equity. The analysis revealed a negative and significant correlation between the current ratio and cash conversion cycle and return on assets. Conversely, the quick ratio and cash ratio was found to have a positive and significant impact on ROA. However, this study conceptualized liquidity management using multiple indicators simultaneously, making it difficult to isolate the impact of cash-based liquidity on financial outcomes. Ratios like the current and quick ratios include inventory and receivables, which may not fully reflect a firm's ability to meet immediate obligations. This creates a methodological gap in capturing liquidity optimization through purely cash-based measures. This study addressed this gap by using the cash ratio, which focuses specifically on cash and cash equivalents to assess short-term liquidity among non-financial firms listed at the Nairobi Securities Exchange.

Cash liquidity optimization and cross-border treasury strategies among Sub-Saharan energy firms were examined by Chima et al. (2020), highlighting key advancements in financial management practices. The study explored liquidity optimization techniques such as cash forecasting, liquidity planning, and cash concentration, while cross-border treasury strategy was assessed through currency risk management, cash management structures, and compliance with local regulations. Using case studies and examples from energy firms in the region, the study highlighted the role of digital platforms and emerging technologies, including blockchain, artificial intelligence, and machine learning, in improving treasury operations and liquidity management. The study concluded that adopting advanced liquidity optimization strategies was essential for Sub-Saharan energy firms to manage cross-border risks and remain competitive in dynamic markets. However, this study relied primarily on case studies and qualitative insights, which limit the ability to empirically test the causal relationship between liquidity optimization practices and financial outcomes. This creates a methodological gap in empirical testing. This study addressed this gap by adopting a causal and cross-sectional data research design using quantitative secondary data, enabling the statistical examination of the effect of liquidity optimization on financial stability among non-financial firms listed at the NSE.

Kumar (2025) conducted a study on cash flow management techniques for liquidity optimization among businesses in Delhi, India. The study collected quantitative data from 180 businesses across

different industries and ownership structures. Liquidity optimization was measured using indicators such as efficient inventory management, real-time cash flow monitoring, predictive analytics, regular cash flow audits, and maintenance of liquidity reserves. Demographic factors, including firm size, industry type, and ownership structure, were examined as moderating factors influencing cash flow practices and liquidity outcomes. The findings revealed significant variations in liquidity performance across industries, with the service sector reporting the highest liquidity optimization. Additionally, the study found a strong positive relationship between efficient inventory management and liquidity optimization, while firms that adopted advanced technological tools and proactive cash flow management practices demonstrated greater financial resilience and stability. However, this study measured liquidity optimization primarily through managerial practices and operational strategies rather than objective financial indicators that directly measure liquidity position. This creates a gap in the operationalization of liquidity optimization. This study addressed this gap by measuring liquidity optimization using the cash ratio, which provides an objective financial indicator of a firm's capacity to meet immediate obligations using available cash resources.

The determinants and optimization of liquidity management strategies in modern financial institutions in India, with a focus on how liquidity efficiency influences profitability and financial resilience, were investigated (Mintah, 2021). The study adopted Liquidity Coverage Ratio (LCR), Net Stable Funding Ratio (NSFR), and Loan-to-Deposit Ratio (LDR) as key liquidity indicators. A combination of descriptive and explanatory research designs was employed, utilizing secondary data from 50 financial institutions comprising of commercial banks, cooperative banks and non-banking financial companies over the period 2016–2020. The findings revealed that higher LCR and NSFR levels significantly enhance profitability, while excessive loan exposure, reflected by a high LDR, adversely affects liquidity soundness. However, a methodological gap arises in that the study employed both descriptive and explanatory research designs, which are limited in establishing clear cause-and-effect relationships between liquidity management and financial performance. This study also focused exclusively on financial institutions, whose liquidity management is heavily influenced by regulatory requirements, deposit-taking obligations, and capital adequacy frameworks. In contrast, non-financial firms operate under different liquidity dynamics, that are not necessarily regulated by liquidity thresholds therefore these findings may

not accurately reflect the realities in non-financial firms. This study sought to address this gap by adopting causal research design and examining effect of liquidity optimization on financial stability of non-financial firms listed at the NSE.

Weshah (2021) examined the impact of liquidity and solvency management on the financial performance of Jordanian manufacturing companies listed on the Amman Stock Exchange. The study covered a period of 10 years from 2010 to 2019. The size of the company was used as a control variable. The study employs Return on Assets (ROA) and Earnings Per Share (EPS) to measure financial performance. Current ratio and total debts to total assets were used as proxies for liquidity and solvency management, while logarithm of total assets were used to measure the size. Regression analysis was applied to analyze the data. The results showed that liquidity had a negative insignificant effect on financial performance. Solvency had a negative significant effect on performance while the moderating effect of size was significant and positive. However, this study was conducted in Indonesia whose regulatory frameworks and economic environment differs significantly from the Kenyan context. Therefore, this study seeks to examine effect of liquidity optimization on financial stability of non-financial firms listed at the NSE.

The effect of liquidity, solvency and activities on profitability in saving and loan cooperatives (SLC) in Indonesia was conducted (Dewi &Abundanti, 2022). Secondary data for the period between 2015-2019 was used. The target population was 9 savings and loan cooperatives. Purposive sampling techniques were adopted. Multiple linear regressions were used to analyze the data. The results showed that liquidity has no significant effect on profitability and Solvency has a significant negative effect on profitability. However, the use of purposive sampling, a non-probability sampling technique, may have limited the representativeness and generalizability of the findings. This study sought to address this methodological gap by conducting a census of all non-financial institutions listed at the NSE, thereby enhancing the comprehensiveness and generalizability of the findings.

1.2 Research Objective

The objective of the study was to examine the effect of liquidity optimization on financial stability and the moderating effect of asset tangibility on this relationship among non-financial firms listed at the Nairobi Securities Exchange.

1.4 Research Hypotheses

The study was guided by the following research hypotheses,

H_{01}: There is no statistically significant relationship between liquidity optimization and the financial stability of non-financial firms listed at the Nairobi Securities Exchange.

H_{02}: There is no statistically significant moderating effect of asset tangibility on the relationship between liquidity optimization and the financial stability of non-financial firms listed at the Nairobi Securities Exchange.

2. METHODOLOGY

The study was conducted in Nairobi County, Kenya. Descriptive and causal with cross-sectional data research designs were adopted because it allowed the researcher to understand how changes in one variable directly influence outcomes in another, while cross-sectional data research design aggregates data across firms for different years to make a single observation for each firm (Steiner & Kim, 2024). The study covered all the 38 non-financial firms listed at the Nairobi Securities Exchange. Census technique was used since the population was small and manageable. Secondary data was extracted from the audited published financial statements of the non-financial firms listed at the NSE using a data collection checklist for the period between 2021 and 2025. However, the data for 30 non-financial firms listed at the NSE was analysed because it had complete financial statements for the five-year period 2021-2015. Descriptive and Inferential statistics were used to analyse data. Simple linear regression and hierarchical regression analysis were then conducted using SPSS software version 29.0 in order to address study objective. The assumptions of linear regression model of multicollinearity, homoscedasticity, normality and linearity were tested before analysing the data.

3. RESULTS

3.1 Liquidity Optimization and Financial Stability

Liquidity optimization was measured using the cash ratio proxy, computed as the difference between current assets and current liabilities divided by total assets. The measure reflects the extent to which a firm's liquid resources exceed its short-term obligations relative to its total asset base, with higher values indicating a stronger liquidity position (Alalade et al., 2024). The descriptive statistics for liquidity optimization are presented in Table 1

Table 1: Descriptive Statistics for Liquidity Optimization

Variable	N	Minimum	Maximum	Mean	Std. Deviation
Liquidity Optimization	30	-0.5694	0.4740	0.0457	0.3069

As shown in Table 1, the minimum liquidity optimization value of −0.5694 indicates that at least one firm had current liabilities exceeding current assets relative to its total asset base. This negative position reflects a short-term funding deficit and suggests weaknesses in the firm's ability to optimize liquidity and meet its short-term obligations. The maximum liquidity optimization value of 0.4740 indicates that some firms maintained current assets that substantially exceeded their current liabilities relative to total assets. Such a position reflects strong liquidity optimization, enabling firms to maintain adequate liquidity buffers to support their day-to-day operations. On average, firms reported a liquidity optimization value of 0.0457, indicating that net working capital represented only a small proportion of total assets. This suggests that, although firms generally maintained a positive liquidity position, their liquidity buffers were relatively modest, leaving limited room to absorb unexpected short-term financial pressures. The standard deviation of 0.3069 reveals substantial differences in liquidity optimization across firms. While some firms maintained strong liquidity buffers, others operated with liquidity deficits, indicating variations in the effectiveness of liquidity optimization practices within the sample.

3.2 Pearson Correlation Between the Study Variables

Correlation is a statistical term that describes how two variables are related to one another (Schober & Vetter, 2020). It measures the extent to which a change in one variable is related to a change in another. The positive or negative sign of the coefficient indicated the direction of the relationship,

with positive values representing relationships in the same direction and negative values representing relationships in opposite directions. A correlation coefficient of zero indicates no linear relationship between the variables (Schober et al., 2018). The results are shown in Table 2.

Table 2: Pearson Correlation Between the Study Variables

		Financial Stability	Liquidity Optimization
Financial Stability	Pearson Correlation	1	.553**
	Sig. (2-tailed)		.002
	N	30	30
Liquidity Optimization	Pearson Correlation	.553**	1
	Sig. (2-tailed)	.002	
	N	30	30

**Correlation is significant at the 0.01 level (2-tailed).

As shown in Table 2, the correlation coefficient between financial stability and liquidity optimization was 0.553 with a *p*-value of 0.002 < 0.05 indicating a statistically significant strong positive relationship between liquidity optimization and financial stability. This suggests that firms with higher levels of liquidity optimization tend to exhibit higher levels of financial stability.

3.3 Linear Regression

This study examined the significance of liquidity optimization on financial stability. A simple linear regression model was used to examine the relationship between liquidity optimization on financial stability. The univariate model equation used to test this hypothesis was $Y = \beta_0 + \beta_1 X_1 + \varepsilon$

Where Y is financial stability, β_0 is the intercept term, β_3 is the coefficient for liquidity optimization and ε is the error term. Tables 3, 4 and 5 show the results of regression analysis.

Table 3: Model Summary for Liquidity Optimization on Financial Stability

Model	R	R Square	Adjusted R Square	Sig. F Change
1	0.553	0.305	0.281	.002

a. Predictors: (Constant), Liquidity Optimization
b. Dependent Variable: Financial Stability

The results in table 3 show the model summary statistics for regression between liquidity optimization and financial stability. R-squared value was 0.305. The R-squared suggests that 30.5% of financial stability fluctuations may be attributed to the independent variable liquidity optimization whereas 69.5% could be accounted for by other factors not included in the model.

Table 4: ANOVA for Liquidity Optimization and Financial Stability

ANOVA						
Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	1407.132	1	1407.132	12.306	0.002
	Residual	3201.539	28	114.341		
	Total	4608.671	29			

a. Dependent Variable: Financial Stability
b. Predictors: (Constant), Liquidity Optimization

The ANOVA statistics shown in Table 4 indicate that the model testing the influence of liquidity optimization on financial stability was statistically significant (F = 12.306, *p*-value = 0.002 < 0.05). This implies that the regression model provides a significantly better prediction of financial stability than a model based solely on the mean value of financial stability. Therefore, liquidity optimization significantly improves the model's ability to explain variations in financial stability.

Table 5: Coefficient Estimates for Liquidity Optimization and Financial Stability

		Unstandardized Coefficients			
Model		B	Std. Error	T	Sig.
1	(Constant)	12.862	1.974	6.514	.000
	Liquidity Optimization	22.694	6.469	3.508	.002

a. Predictors: (Constant), Liquidity Optimization
b. Dependent Variable: Financial Stability

According to Table 5 the constant term of regression was 12.862 units, and this could imply that at zero level of liquidity optimization (LO = 0), the model predicts financial stability would be 12.862 units. The computed regression model's slope was 22.694 indicating a positive effect of liquidity optimization on financial stability implying that as liquidity optimization rises by one-unit financial stability increases by 22.694 units. The regression co-efficient for liquidity optimization variable was significant $\beta_0 = 22.694$, *t*-statistic = 3.508, *p*-value = 0.002 < 0.05, hence the null hypothesis was rejected. This signifies that liquidity optimization has a positive and

statistically significant effect on financial stability. The simple regression model for effect of liquidity optimization on financial stability can be presented by the equation below.

$$Financial\ Stability = 12.862 + 22.694\ Liquidity\ Optimization$$

These findings imply that liquidity optimization positively affects financial stability because firms that efficiently optimize their liquidity levels can maintain an appropriate balance between liquidity and profitability. By holding an optimal level of liquid assets, firms can efficiently allocate resources to productive investments while simultaneously meeting their short-term obligations. Consequently, liquidity optimization enhances financial flexibility and reduces the likelihood of financial distress, thereby improving the financial stability of firms. These findings are in line with the liquidity preference theory, which posits that firms and economic agents prefer to maintain adequate liquidity in order to meet transaction, precautionary and speculative needs. According to the theory, maintaining sufficient liquid resources enables firms to respond to unforeseen financial obligations and economic uncertainties, thereby promoting financial stability (Ghani & Hossain, 2023). The positive and significant relationship between liquidity optimization and financial stability observed in this study is therefore consistent with the propositions of the liquidity preference theory. The findings are also consistent with cash management theory, which emphasizes the importance of efficiently managing cash resources to maximize firm value and ensure organizational sustainability. By optimizing liquidity, firms are able to allocate resources efficiently, minimize liquidity shortages and improve their overall financial position, ultimately contributing to greater financial stability (Baumol, 1952; Miller & Orr, 1966).

These findings are comparable with those of Chima et al. (2020) who found out that adopting liquidity optimization strategies were essential for Sub-Saharan energy firms for competitive financial management. Kumar (2025) also found out that liquidity optimization had a strong positive relationship with cash flow management for business firms in Delhi in India. Contrary, the current findings differ with those of Weshah (2021) who found that liquidity had a negative significant effect on financial performance of Jordanian manufacturing firms listed on the Amman Stock Exchange. The difference may be as a result of the 10-year period (2010-2019) data covered in the study of Weshah (2021) which could not have reflected the current market trends. The current study focused on a five-year period (2021-2025) data analysis that reflect current market

trends and concluded that liquidity optimization had a positive significant effect on financial stability non-financial firms listed at the NSE, Kenya.

3.5 Test of the Moderating Effect

Asset Tangibility was hypothesized as moderating variable. When a moderating variable is introduced, the direction or strength of the link between the two variables is altered. Hierarchical regression was used to test the moderating effect of asset tangibility on the relationship between liquidity optimization and financial stability. Two steps were involved in establishing the moderating effect. Regression results in Table 6 show the value R and R squared for model 1 without the effect of moderation and model 2 with effect of moderation.

Table 6: Moderating Summary Statistics for Effect of Asset Tangibility

Model	R	R^2	Adjusted R^2	F change	Sig F change
1	0.645	0.416	0.373	9.617	0.001
2	0.675	0.455	0.393	1.880	0.182

a. Predictors: (Constant), Asset Tangibility, Liquidity Optimization
b. Dependent Variable: Financial Stability

The moderating summary statistics in Table 6 show that Model 1, comprising liquidity optimization and asset tangibility, explained 41.6% of the variation in financial stability (R^2 = 0.416). Following the introduction of the interaction term between liquidity optimization and asset tangibility, the explanatory power of the model increased to 45.5% (R^2 = 0.455). This represents an additional 3.9% variation in financial stability explained by the interaction term. However, the increase in R^2 was not statistically significant (ΔR^2 = 0.039, F change = 1.880, p = 0.182 > 0.05), indicating that the interaction between liquidity optimization and asset tangibility did not significantly improve the model.

The coefficient estimates in Table 7 show that the intercept of the final model was 15.237, implying that when liquidity optimization, asset tangibility and interaction term are equal to zero, the predicted financial stability is 15.237 units. The intercept was statistically significant (t = 7.461, p

= 0.00). The coefficient of liquidity optimization was 31.346, indicating a positive relationship with financial stability. This implies that, holding asset tangibility constant, a one-unit increase in the liquidity optimization is associated with an estimated increase of 31.346 units in financial stability. This relationship was statistically significant (t = 4.543, p = 0.000). The coefficient of asset tangibility was 21.865, indicating a positive and statistically significant relationship with financial stability (t = 2.242, p = 0.034). The interaction term coefficient of 41.290 shows positive and insignificant (t = 1.371, p-value = 0.182 > 0.05). The insignificant interaction term indicates that asset tangibility does not significantly alter the relationship between liquidity optimization and financial stability. Therefore, asset tangibility does not moderate the effect of liquidity optimization on financial stability. These findings imply that firms with different levels of asset tangibility may possess varying asset structures, but these differences do not alter the relationship between liquidity optimization and financial stability. Although firms may differ in the proportion of tangible assets they own, the effectiveness of liquidity optimization in enhancing financial stability remains largely the same.

Table 7: Coefficient Estimates for Moderating Effect of Asset Tangibility

Model	Coefficients	Std error	t-statistic	p-value
Model 1				
(Constant)	13.899	1.823	7.625	0.000
Liquidity Optimization	30.665	6.993	4.385	0.000
Asset Tangibility	22.404	9.903	2.262	0.032
Model 2				
(Constant)	15.237	2.042	7.461	0.000
Liquidity Optimization	31.346	6.900	4.543	0.000
Asset Tangibility	21.865	9.754	2.242	0.034
Asset tangibility*Liquidity optimization	41.290	30.116	1.371	0.182

4. DISCUSSION

Liquidity optimization showed a positive significant effect on the financial stability of non-financial firms listed at the NSE. The regression results showed a coefficient of $\beta = 22.694$, which was statistically significant ($p = 0.002 < 0.05$). This means that as liquidity optimization increases by one-unit, financial stability will increase by 22.694 units. These findings imply that liquidity

optimization positively affects financial stability because firms that efficiently optimize their liquidity levels are able to maintain an appropriate balance between short term liquidity needs and productive resource utilization. By holding an optimal level of liquid assets, firms can efficiently allocate resources to productive investments while simultaneously meeting their short-term obligations. Consequently, liquidity optimization enhances financial flexibility and reduces the likelihood of financial distress, thereby improving the financial stability of firms. These findings are in line with the liquidity preference theory, which posits that firms and economic agents prefer to maintain adequate liquidity in order to meet transaction, precautionary and speculative needs.

According to the theory, maintaining sufficient liquid resources enables firms to respond to unforeseen financial obligations and economic uncertainties, thereby promoting financial stability (Ghani & Hossain, 2023). The positive and significant relationship between liquidity optimization and financial stability observed in this study is therefore consistent with the propositions of the liquidity preference theory. The findings are also consistent with cash management theory, which emphasizes the importance of efficiently managing cash resources to maximize firm value and ensure organizational sustainability (Salas-Molina. 2023). By optimizing liquidity, firms are able to allocate resources efficiently, minimize liquidity shortages and improve their overall financial position, ultimately contributing to greater financial stability (Baumol, 1952; Miller & Orr, 1966). These findings are comparable with those of Chima et al. (2020) who found out that adopting liquidity optimization strategies were essential for Sub-saharan energy firms for competitive financial management. Kumar (2025) also found out that liquidity optimization had a strong positive relationship with cash flow management for business firms in Delhi in India. Contrary, the current findings differ with those of Weshah (2021) who found that liquidity had a negative significant effect on financial performance of Jordanian manufacturing firms listed on the Amman Stock Exchange. Likewise, the current findings are inconsistent with those of Dewi and Abundanti (2022) who concluded that liquidity had no significant effect on profitability and solvency had a significant negative effect on profitability. This could be as a result of employing purposive sampling technique whereby the findings were limited to representativeness and generalizability. In addition, the 10-year period (2010-2019) data covered in the study of Weshah (2021) could not have reflected the current market trends. The current study focused on a five-year period (2021-

2025) data analysis that reflect current market trends and concluded that liquidity optimization had a positive significant effect on financial stability non-financial firms listed at the NSE, Kenya.

On the moderating effect, the regression results showed that asset tangibility did not moderate the relationship between liquidity optimization and financial stability, as indicated by a non-significant p-value ($p = 0.182 > 0.05$). The insignificant interaction term indicates that asset tangibility does not significantly alter the relationship between liquidity optimization and financial stability. These findings imply that firms with different levels of asset tangibility may possess varying asset structures, but these differences do not alter the relationship between liquidity optimization and financial stability. This indicates that although firms may differ in the proportion of tangible assets they own, the effectiveness of liquidity optimization in enhancing financial stability remains largely the same.

4.2 Conclusions

Liquidity optimization had a positive and statistically significant effect on financial stability, demonstrating that maintaining an optimal balance between short term liquidity needs and productive resource utilization enhances the financial stability of non-financial firms listed at the NSE. This suggests that firms that efficiently optimize their liquidity are better able to meet their financial obligations while maintaining operational efficiency. The findings are consistent with the liquidity preference theory, which posits that maintaining adequate liquidity enables firms to meet transaction, precautionary and speculative needs, thereby promoting financial stability. The findings are also consistent with Cash Management Theory, which emphasizes the importance of efficient liquidity management in achieving firm's stability. Asset tangibility had no statistically significant moderating effect on the relationship between liquidity optimization and financial stability. This suggests that the contribution of liquidity optimization to financial stability does not depend on a firm's asset tangibility but rather on the effectiveness of liquidity optimization itself. The findings suggest that the principles of cash management theory and liquidity preference theory apply regardless of a firm's level of asset tangibility, implying that liquidity optimization remains fundamental in enhancing financial stability.

4.3 Recommendations

Liquidity optimization strategies should focus on maintaining an appropriate balance between short term liquidity needs and productive resource utilization allocation to improve financial flexibility and enhance financial stability. Strategies aimed at strengthening liquidity optimization should target non-financial firms regardless of their level of asset tangibility, since the effectiveness of liquidity optimization in enhancing financial stability does not depend on a firm's asset composition.

4.4 Suggestions for further Research

Future research could investigate other firm-specific factors, such as firm size, corporate governance or financial leverage, as potential moderating variables in the relationship between liquidity optimization and financial stability. Future studies could replicate this study in other sectors, such as financial institutions, manufacturing firms or small and medium-sized enterprises, to determine whether the findings are consistent across different organizational contexts.

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