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Effect of Liquidity on Financial Distress of Listed Commercial and Service Firms at the Nairobi Securities Exchange, Kenya

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Abstract:
Purpose of Study: This study sought to determine the effect of liquidity on financial distress among listed commercial and service firms at the Nairobi Securities Exchange, Kenya. Specifically, the study examined how liquidity influences financial stability and assessed whether systematic risk affects the relationship between liquidity and financial distress among these firms.

Methodology: The study adopted a positivist philosophy and longitudinal research design covering 2015–2024. A census of 10 listed firms generated 100 firm-year observations. Secondary data were obtained from published financial statements and NSE reports. Descriptive statistics, Pearson correlation, and panel regression analyses were conducted using STATA version 15.0 software.

Findings: The findings revealed that liquidity significantly influenced financial distress among listed commercial and service firms. The mean current ratio was 1.32, indicating relatively limited liquidity reserves. Correlation analysis established a weak positive relationship between liquidity and Altman's Z-score ($r = 0.278$, $p < 0.05$). Panel regression demonstrated a positive and statistically significant effect ($\beta = 0.1678$, $p = 0.033$), indicating that higher liquidity reduced financial distress. However, incorporating systematic risk weakened this relationship ($\beta = 0.1456$, $p = 0.051$). The interaction between liquidity and systematic risk was statistically insignificant ($\beta = 0.0654$, $p = 0.152$), indicating no significant moderation.

Conclusion: The study concluded that liquidity significantly reduces financial distress, although its protective effect remains modest. Firms should maintain optimal liquidity levels, strengthen working capital management, and monitor financial stability regularly. Regulators should incorporate liquidity indicators into financial surveillance frameworks, while managers should complement liquidity management with broader risk mitigation strategies.

Keywords: *Liquidity; Financial Distress; Altman Z-score; Nairobi Securities Exchange.*

JEL classification: *G32, G33, G11*

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1.0 INTRODUCTION

1.1 Background of the Study

Liquidity is the ability of a firm to pay its short-term obligations as they fall due using its current assets. Financial distress occurs when a firm's cash flows are too weak to cover commitments such as supplier payments, salaries, interest and loan repayments (Mazlan & Leman, 2023). A firm with weak liquidity may delay payments to suppliers, borrow on costly terms or sell assets under pressure, and each of these actions raises the chance of failure. Distress also damages a firm's reputation and credit standing, may lead to trading restrictions by regulators and reduces the share price, which harms shareholders, lenders and employees alike (Mazlan & Leman, 2023). The COVID-19 pandemic showed how quickly a sudden shock can push firms towards distress (Aljughaiman et al., 2023). Reviews of the literature show that liquidity is closely linked to default risk, although the strength of the link differs across markets and sectors (Zhao et al., 2024).

In Europe, liquidity has been central to corporate survival during recent shocks. In Poland, Czajkowska et al. (2024) reported that government support helped businesses keep high liquidity during the COVID-19 pandemic, and the cash liquidity ratio reached a historical peak. Antonowicz and Antonowicz (2022) tested Altman's Z-score on more than 2,700 Polish firms that went bankrupt to assess its capacity to forecast insolvency. In Spain, Blanco et al. (2021) found that the pandemic sharply raised firms' liquidity needs in 2020, although public measures that eased access to credit reduced short-term liquidity risks. In Asia, Mazlan and Leman (2023) studied 30 government-linked companies in Malaysia from 2016 to 2020 and found that a higher current ratio significantly raised the Altman Z-score, while 76.7 percent of the firms scored below the distress threshold of 1.81. In Indonesia, Agatha et al. (2026) reported that liquidity significantly increased the Z-score of 13 listed textile and garment firms, which lowered their bankruptcy risk. Together, these countries show that liquidity matters for distress, although its strength depends on policy support and sector conditions.

In West Africa, Ukoh et al. (2024) studied 16 listed consumer goods firms in Nigeria from 2012 to 2023 and found that liquidity and firm size had significant positive effects on the Altman Z-score, meaning that more liquid firms faced a lower chance of distress. In Ghana, Lee and Poku (2022) examined nine non-financial firms listed on the Ghana Stock Exchange and reported a negative association between liquidity, measured by the current ratio, and financial performance, while firm size had a significantly positive effect. In Southern Africa, Mavengere and Gumede (2024) applied the Altman Z-score and Zmijewski models to two manufacturers listed in Zimbabwe between 2010 and 2017 and concluded that the Z-score is the better indicator of distress in emerging economies. Sibanda and Tapera (2025) also found the Z-score effective in signalling the failure of insolvent financial firms in Zimbabwe one to two years before collapse. In Zambia, Bwato et al. (2026) linked weak financial performance, poor governance and regulatory non-compliance to corporate failure among institutions listed

on the Lusaka Securities Exchange. These studies show that African evidence on liquidity is mixed and depends on context.

Kenyan listed firms operate in an economy where liquidity pressure is common. Githinji et al. (2024) noted that local banks have been prone to cycles of financial distress, which shows that distress is a recurring problem in the Kenyan financial system. Omboi (2026) analysed 61 NSE-listed firms from 2018 to 2023 and drew attention to weak early warning systems for corporate distress. Walela et al. (2022) examined firms listed at the NSE between 2009 and 2018 and reported that firm growth partly explains how financial risk leads to financial distress. On liquidity itself, Kirui and Onchangwa (2023) studied 64 listed firms from 2015 to 2021 and advised firms to hold more liquid assets such as treasury bills and bonds. Odendo et al. (2024) found that the current ratio significantly affected the financial performance of six agricultural firms listed at the NSE. These studies point to liquidity as a practical concern for Kenyan firms, but few connect it directly to distress in the commercial and services segment.

Commercial and Services Sector at the Nairobi Securities Exchange: The commercial and services segment of the NSE brings together firms in activities such as transport, retail, media and hospitality, whose revenues depend closely on consumer demand and therefore on the state of the economy. Wanzala and Obokoh (2024) stressed the importance of this segment to the Kenyan economy when they examined how working capital management affected the financial performance of its listed firms between 2003 and 2022. Because these firms rely on short-term funds to pay suppliers, staff and lenders, their ability to hold adequate liquid assets largely determines whether they remain solvent. The sector was also exposed to the COVID-19 pandemic, which disrupted demand and cash flows across many industries (Aljughaiman et al., 2023). Studying the 10 firms that stayed listed from 2015 to 2024 therefore provides a suitable setting to test whether liquidity protects firms from distress.

Liquidity: Liquidity reflects how easily a firm can turn assets into cash to settle obligations. It is commonly measured by the current ratio, which is current assets divided by current liabilities (Mazlan & Leman, 2023). A ratio above one means that current assets exceed current liabilities, so the firm has positive working capital. However, a very high ratio may show that funds are idle in low-yielding assets, which is why earlier studies have debated whether liquidity comes at the cost of profitability (Bolek, 2025). Liquidity should therefore be optimised rather than maximised.

Financial Distress and its Measurement: Financial distress is a state in which a firm cannot meet its financial obligations, and its survival is at risk (Ukoh et al., 2024). Altman's Z-score combines five financial ratios into a single score that covers liquidity, profitability, leverage and efficiency. Scores below 1.81 signal distress, scores between 1.81 and 2.99 fall in a grey zone, and scores above 2.99 indicate financial safety (Mazlan & Leman, 2023). A higher score therefore means lower distress. The model is widely used in Africa and Asia (Mavengere & Gumede, 2024; Sibanda & Tapera, 2025; Mazlan & Leman, 2023), and it uses data that are publicly available in published financial statements.

1.2 Statement of the Problem

Listed firms are expected to meet their obligations as they fall due, yet many experience cash shortfalls that weaken their financial position. Kenyan evidence shows recurring distress in the banking sector (Githinji et al., 2024) and weak early warning mechanisms among NSE-listed firms (Omboi, 2026). The evidence on liquidity is also inconsistent. Liquidity significantly improved Z-scores in Malaysia (Mazlan & Leman, 2023), Nigeria (Ukoh et al., 2024) and Indonesia (Agatha et al., 2026), but it was negatively associated with performance in Ghana (Lee & Poku, 2022). In Kenya, studies of liquidity at the NSE have mainly examined shareholders' earnings (Kirui & Onchangwa, 2023), financial performance (Odendo et al., 2024; Wanzala & Obokoh, 2024) or financial risk and firm growth (Walela et al., 2022). They have not directly tested how liquidity affects distress, measured by the Altman Z-score, among commercial and service firms. In addition, few studies examine whether market-wide risk changes the protective role of liquidity. Without this evidence, managers and regulators lack a sound basis for setting liquidity policy. This study addresses these gaps.

1.3 Purpose of the Study

The purpose of the study was to determine the effect of liquidity on financial distress of listed commercial and service firms at the Nairobi Securities Exchange, Kenya.

1.4 Research Hypothesis

H03: Liquidity has no significant effect on financial distress of listed commercial and service firms at the Nairobi Securities Exchange, Kenya.

2.0 LITERATURE REVIEW

2.1 Theoretical Review

Modern Portfolio Theory

Modern Portfolio Theory (MPT) was introduced by Harry Markowitz in 1952 and explains how investors balance risk and return through diversification. The theory separates risk into two types. Unsystematic risk is specific to a firm or asset and can be reduced by diversifying, while systematic risk arises from market-wide factors such as inflation, interest rates and exchange rates, and cannot be diversified away. Recent Kenyan studies have used the theory to explain financial stability. Githinji et al. (2024) used it to examine income diversification and financial distress of commercial banks, and Muriuki and Musau (2024) used portfolio theory to explain how revenue diversification affects bank performance.

MPT is relevant to liquidity because holding liquid assets is a portfolio decision. Cash and near-cash assets carry low risk and low returns, while inventory, equipment and other productive assets carry higher risk and higher returns. A firm must therefore decide how much

of its asset portfolio to keep in liquid form. Too little liquidity exposes the firm to default when cash flows are disrupted, while too much liquidity lowers returns because idle funds earn little (Bolek, 2025). The theory therefore predicts an optimal level of liquidity rather than a maximum level.

The theory also helps to explain the role of systematic risk. Because market-wide shocks affect all firms, even a well-managed firm cannot remove them. A firm with strong liquidity may withstand a mild shock, but a prolonged downturn can drain its current assets. The COVID-19 pandemic was a clear systematic shock that raised distress risk for firms worldwide (Aljughaiman et al., 2023). In Spain, Blanco et al. (2021) showed that the pandemic raised liquidity needs sharply and that public credit support limited the short-term damage, which suggests that liquidity buffers work best when firms can also access external finance. This is why the present study tests whether systematic risk, measured by beta, changes the effect of liquidity on distress.

Finally, MPT has limits. It assumes efficient markets and complete information, conditions that are rarely met in emerging markets such as Kenya. The study therefore uses the theory to guide thinking about the trade-off between risk and liquid-asset holding, rather than as a model for predicting distress.

2.2 Empirical Review

Liquidity and Financial Distress

Mazlan and Leman (2023) examined 30 government-linked companies in Malaysia from 2016 to 2020 using panel regression. The Altman Z-score was the dependent variable, and the current ratio, return on assets and debt ratio were the predictors. The current ratio had a positive and significant effect on the Z-score ($\beta = 0.3805$, $p = 0.0001$), while debt reduced it. The study covered government-linked firms only, so its findings may not hold for other listed firms. Agatha et al. (2026) studied 13 textile and garment firms listed in Indonesia from 2020 to 2024, giving 65 firm-year observations. Using fixed-effects panel regression with firm size as a moderator, they found that liquidity significantly increased the Z-score and that larger size weakened this effect. The study was limited to one sector and did not test market-wide risk.

Ukoh et al. (2024) examined 16 listed consumer goods firms in Nigeria from 2012 to 2023 using panel regression. Liquidity (current ratio) and firm size had significant positive effects on the Z-score (liquidity coefficient = 0.3039). The study covered a single sector and did not test whether external conditions change the liquidity effect. Lee and Poku (2022) analysed nine non-financial firms listed on the Ghana Stock Exchange and reported that liquidity was negatively associated with financial performance, while firm size had a significantly positive effect. The study measured performance rather than distress, and its sample was very small.

Mavengere and Gumede (2024) compared the Altman Z-score and Zmijewski models on two manufacturers listed in Zimbabwe from 2010 to 2017 and concluded that the Z-score is the

better indicator of distress in emerging economies. Only two firms were studied, and the effect of liquidity was not tested statistically.

Sibanda and Tapera (2025) used a mixed-methods approach to assess insolvent financial firms listed in Zimbabwe and confirmed that the Z-score signalled failure one and two years before insolvency. The study focused on prediction rather than on the drivers of distress and covered financial institutions only. Zhao et al. (2024) reviewed the literature on liquidity, informational efficiency and firm default risk, which reflects wide interest in liquidity as a source of distress. As a review, it did not test the relationship in a single market such as Kenya. Blanco et al. (2021) simulated the financial position of about 300,000 Spanish firms and found that the pandemic raised liquidity needs in 2020, although credit support eased the pressure, and the share of firms at risk of becoming non-viable rose by between 2 and 3 percentage points. The study relied on simulations rather than observed distress scores.

Walela et al. (2022) examined 66 firms listed at the NSE from 2009 to 2018 using time series cross-sectional regression and found that firm growth partly mediates the relationship between financial risk and financial distress. Liquidity was not isolated as a separate predictor, and the period ended in 2018. Kirui and Onchangwa (2023) studied 64 listed firms from 2015 to 2021 using a descriptive design and recommended that firms invest more in liquid assets. The outcome was shareholders' earnings, not distress. Odendo et al. (2024) analysed six agricultural firms listed at the NSE from 2015 to 2022 and found that the current ratio significantly affected financial performance. The outcome was performance, and only one sector was studied.

Wanzala and Obokoh (2024) studied commercial and service firms listed at the NSE from 2003 to 2022 and examined how working capital management affects financial performance. The study used performance rather than the Altman Z-score and did not test the role of systematic risk. In summary, most studies outside Kenya report that liquidity lowers distress, but the evidence is mixed and depends on the sector and the outcome measured. Kenyan studies largely examine performance, and none of those reviewed tests the effect of liquidity on the Z-score of commercial and service firms while also considering systematic risk. This study fills that gap.

Financial Distress

Financial distress describes a stage in which a firm cannot meet its obligations on time, such as supplier payments, salaries, interest and loan repayments, and its survival becomes uncertain (Ukoh et al., 2024). It usually develops gradually. Falling sales and profits reduce cash inflows, short-term debts accumulate, and the firm begins to borrow to fund routine operations. If the trend is not corrected, the firm may restructure its debts, be delisted or become insolvent. Mazlan and Leman (2023) explained that distress damages reputation and credit standing, may attract trading restrictions and lowers the share price, which affects shareholders, lenders and employees.

The causes of distress are both internal and external. Internally, weak profitability, high debt and poor management of working capital reduce a firm's ability to pay its bills. Externally, economic shocks can raise distress risk quickly, as the COVID-19 outbreak showed (Aljughaiman et al., 2023). Ukoh et al. (2024) observed that inflation, currency instability and unpredictable policy create a harsh operating climate for Nigerian firms. Kenyan firms face similar pressures, and Githinji et al. (2024) noted that local banks have experienced repeated cycles of distress.

Researchers measure distress using bankruptcy prediction models. Billios et al. (2024) reviewed the numerical indicators used in these models and showed that the field relies heavily on financial ratios. For banks, Githinji et al. (2024) used the Bankometer and Zmijewski scores. For non-bank firms, the Altman Z-score is the most common choice (Mazlan & Leman, 2023; Mavengere & Gumede, 2024). Its performance has been tested in new settings such as Poland (Antonowicz & Antonowicz, 2022) and Zimbabwe, where it outperformed the Zmijewski model (Mavengere & Gumede, 2024) and signalled failure up to two years in advance (Sibanda & Tapera, 2025). A score below 1.81 indicates distress, a score between 1.81 and 2.99 is a warning zone, and a score above 2.99 indicates safety (Mazlan & Leman, 2023). Because a higher score means lower distress, a positive regression coefficient shows a protective effect.The Z-score is closely linked to liquidity because working capital relative to total assets is one of its five components. However, the score also reflects retained earnings, operating profit, the market value of equity and sales, so liquidity alone does not decide a firm's score. This gives the study a fair test of whether liquidity adds protection beyond what other firm strengths provide. Agatha et al. (2026) found that liquidity significantly increased Z-scores, which supports this link.

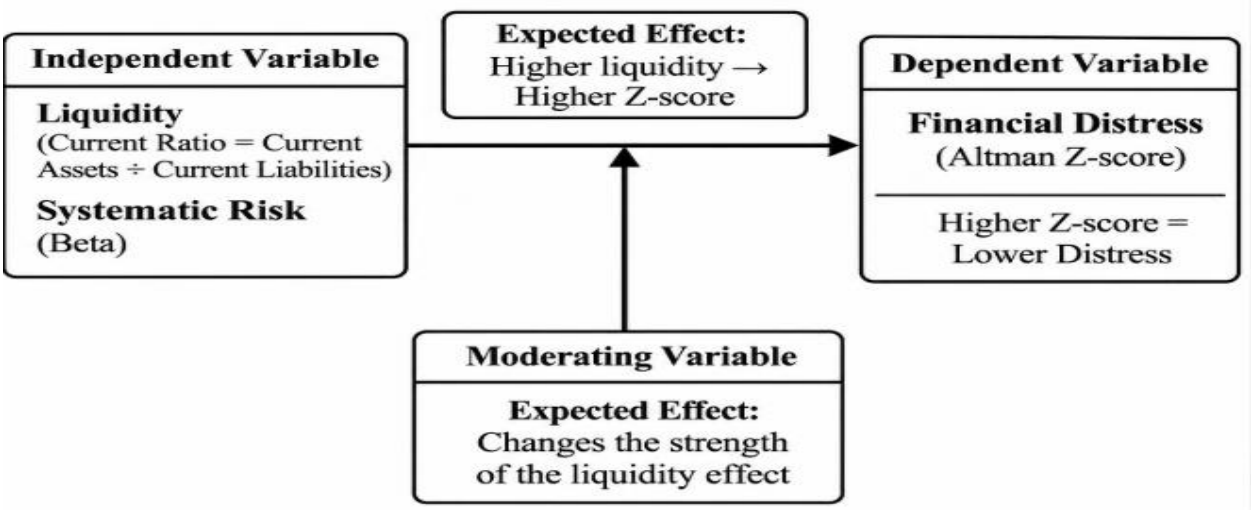
The model has practical value for Kenya. Omboi (2026) highlighted weak early warning systems for corporate distress among NSE-listed firms. The Z-score offers a simple early warning tool that managers, investors and regulators can compute from public financial statements. Nevertheless, it is based on accounting data and should be interpreted alongside other information, such as cash flow trends and market conditions.

2.3 Conceptual Framework

A conceptual framework shows the main variables in a study and the relationships expected between them. In this study, the independent variable is liquidity, measured by the current ratio. The dependent variable is financial distress, measured by the Altman Z-score, where a higher score means lower distress. Systematic risk, measured by beta, enters the analysis as an additive and a moderating variable, to test whether market-wide risk changes the effect of liquidity. The framework expects that higher liquidity raises the Z-score and therefore lowers financial distress.

Figure 1.0

Conceptual Framework



3.0 RESEARCH METHODOLOGY

The study adopted a positivist research philosophy to establish the effect of liquidity on financial distress among listed commercial and service firms at the Nairobi Securities Exchange (NSE), Kenya. The philosophy was appropriate because it facilitated objective measurement of study variables using quantitative financial data and statistical techniques. A longitudinal research design was employed to examine changes in liquidity and financial distress among the selected firms over ten years, covering the period 2015–2024.

The target population comprised 10 commercial and service firms listed at the NSE that remained operational throughout the study period. A census sampling technique was adopted, incorporating all 10 firms and generating 100 firm-year observations. The study relied exclusively on secondary data obtained from published financial statements and NSE reports. Data collection sheets were used to extract relevant financial information, including current assets, current liabilities, and the financial indicators required to calculate financial distress.

Liquidity was operationalized using the current ratio, calculated as current assets divided by current liabilities. Financial distress was measured using Altman's Z-score model. Data analysis involved descriptive statistics, Pearson correlation analysis, and panel regression analysis using STATA version 15.0. Diagnostic tests were conducted to assess multicollinearity, normality, heteroscedasticity, autocorrelation, linearity, stationarity, and model specification. Statistical significance was evaluated at a 5% significance level and a 95% confidence level. Results were presented using tables to facilitate interpretation of the relationship between liquidity and financial distress.

4.0 RESEARCH FINDINGS AND DISCUSSION

4.1 Descriptive Statistics: Liquidity

Table 1

Descriptive Statistics for Study Variables

Variable	Mean	Std. Dev.	Min	Max
Liquidity (Current Ratio)	1.3245	0.8765	0.45	4.12

The mean current ratio of 1.32 shows that, on average, the firms held slightly more current assets than current liabilities. However, it is below the conventional benchmark of 2.0, which suggests that many firms had limited room to absorb unexpected cash shortfalls. The standard deviation of 0.88 shows wide differences across firms and years. The minimum of 0.45 means that, in some firm-years, current assets covered less than half of current liabilities, which points to severe short-term pressure. The average is higher than the 1.07 reported for Nigerian consumer goods firms (Ukoh et al., 2024) and lower than the 1.67 reported for Malaysian government-linked companies (Mazlan & Leman, 2023). This places Kenyan commercial and service firms in a moderate position, with notable variation between firms.

4.2. Correlation Analysis: Liquidity

Table 2

Correlation Matrix: Liquidity Row

Variable	**Z-Score**	**Profitability**	**Size**	**Liquidity**	**Capital Adequacy**	**Systematic Risk**
Liquidity (r)	0.278**	0.187*	0.156*	1.000		
p-value	0.002	0.0000	0.0000			

Note. ** and * denote significance at the 1% and 5% levels respectively.

Liquidity has a weak positive correlation with the Z-score ($r = 0.278$, $p < 0.05$). This means that firms with higher current ratios tend to have higher Z-scores and therefore lower distress. The coefficient of determination ($r^2 = 0.077$) shows that liquidity alone shares about 7.7% of the variation in the Z-score, so liquidity helps but is not enough to prevent distress on its own. The weak link may also reflect the trade-off between safety and returns. Holding too much cash and other current assets can reduce profitability, while holding too little raises default risk (Bolek, 2025). The practical lesson for managers and policymakers is that liquidity should be optimised rather than maximised.

The positive direction agrees with Mazlan and Leman (2023) and Ukoh et al. (2024), who found that liquid firms have higher Z-scores. It also fits the conclusion of Agatha et al. (2026) that stronger short-term solvency reduces bankruptcy risk. The relatively modest strength

suggests that, in Kenya, other firm characteristics such as profitability and size may matter as much as liquidity.

4.3 Diagnostic Tests: Liquidity

Table 3
Multicollinearity Test: Liquidity Row

Variable	VIF	Tolerance (1/VIF)
Liquidity	1.28	0.781

Table 4
Normality Test: Liquidity Row

Variable	Skewness	Kurtosis	Jarque-Bera	Probability	Normal?
Liquidity	1.876	5.123	4.567	0.102	Yes

Table 5
Panel Unit Root Test: Liquidity Row

Variable	Fisher-type p-value	Decision
Liquidity	0.0000	Stationary

Table 6
Hausman Test Results: Liquidity Row

Variable	(b) Fixed	(B) Random	(b − B) Difference	S.E.
Liquidity	0.1532	0.1605	−0.0073	0.0094

The diagnostic tests support the reliability of the results. The variance inflation factor (VIF) of 1.28 is far below 10, so liquidity does not overlap with the other predictors. The Jarque-Bera probability of 0.102 is above 0.05, so the normality assumption is accepted. The unit root test shows that liquidity is stationary, which means that its average level and variation do not drift over time, so the regression is not driven by trends. The fixed and random effects estimates are very close, and their difference (−0.0073) is small relative to its standard error (0.0094). This supports the use of the random effects model.

4.4 Panel Regression Results: Liquidity

Table 7
Panel Regression Coefficient: Liquidity Row

Variable	**Coef.**	**Std. Err.**	**z**	**P>z**	**95% Conf. Interval**
Liquidity	0.1678	0.0789	2.13	0.033	0.0131 to 0.3225

Liquidity and Financial Distress

Liquidity (current ratio) has a positive and significant effect on the Z-score (β = 0.1678, p = 0.033). Because a higher Z-score means lower distress, firms with higher current ratios have a lower chance of financial distress. Each one-unit rise in the current ratio is associated with a 0.17-unit rise in the Z-score. The 95% confidence interval (0.0131 to 0.3225) does not include zero, which confirms the result at the 5% level. For illustration, raising the average current ratio from 1.32 to the benchmark of 2.0 would be linked to a Z-score gain of about 0.11. This is a modest gain compared with the 1.18-point width of the warning zone (1.81 to 2.99).

The finding agrees with studies that used the Altman Z-score. Mazlan and Leman (2023) found a significant positive effect of the current ratio on the Z-score of Malaysian government-linked companies (β = 0.3805), and Ukoh et al. (2024) reported a similar effect for Nigerian consumer goods firms (β = 0.3039). Agatha et al. (2026) also found that liquidity significantly raised the Z-score of Indonesian textile and garment firms. The Kenyan coefficient is smaller than those in Malaysia and Nigeria, which suggests that liquidity protects Kenyan commercial and service firms, but less strongly. Evidence from Kenya on related outcomes points in the same direction. Kirui and Onchangwa (2023) advised listed firms to hold more liquid assets, and Odendo et al. (2024) found that the current ratio significantly affected the financial performance of agricultural firms at the NSE.

The result differs from Lee and Poku (2022), who found a negative association between liquidity and performance among Ghanaian firms. The difference may arise because that study measured performance, not distress. Holding more current assets can lower returns while still protecting a firm from default, which is the trade-off described by Modern Portfolio Theory.

The result supports the precautionary motive for holding liquid assets, which is that firms keep cash and near-cash assets to meet unexpected needs. Since the mean current ratio is only 1.32, the firms are not holding excessive idle cash. Instead, higher liquidity between the observed minimum of 0.45 and higher levels acts as a real buffer against distress. The result has two practical implications. First, managers should treat working capital management as a priority, but should not sacrifice profitability for excess liquidity. Second, regulators such as the Capital Markets Authority and the NSE should consider liquidity measures when assessing the financial health of listed firms.

4.5 Hierarchical Regression Results: Liquidity

Table 8
Model 1: Random Effects Regression, Liquidity Row

Variable	Coef.	Std. Err.	z	P>z	95% Conf. Interval
Liquidity	0.1678	0.0789	2.13	0.033	0.0131 to 0.3225

Table 9
Model 2: Additive Effect of Systematic Risk, Liquidity Row

Variable	Coef.	Std. Err.	z	P>z	95% Conf. Interval
Liquidity	0.1456	0.0745	1.95	0.051	−0.0005 to 0.2917

Table 10
Model 3: Full Moderation Model, Liquidity Rows

Variable	Coef.	Std. Err.	z	P>z	95% Conf. Interval
Liquidity	0.1234	0.0678	1.82	0.069	−0.0096 to 0.2564
Liquidity × Beta	0.0654	0.0456	1.43	0.152	−0.0241 to 0.1549

In Model 2, the liquidity coefficient fell from 0.1678 to 0.1456 and became marginally insignificant (p = 0.051) after systematic risk was added. This does not contradict Model 1. The confidence interval now just includes zero, and the fall in the coefficient is small. It shows that part of the explanatory power of liquidity overlaps with market-wide risk. During periods of market stress, a firm's own liquid assets can be overwhelmed by shocks that affect every firm, a pattern that agrees with the experience of the COVID-19 pandemic (Aljughaiman et al., 2023).

In Model 3, the interaction between liquidity and beta was not significant (β = 0.0654, p = 0.152). Liquidity therefore did not become more or less protective as systematic risk changed. A plausible explanation is that liquidity is a short-term buffer, while market-wide shocks can last longer than the period that current assets can cover. A high current ratio cannot protect a firm from a prolonged fall in revenue. Blanco et al. (2021) support this view. They found that access to credit under favourable conditions, and not firms' own liquid assets alone, softened the pandemic's liquidity pressure in Spain. Agatha et al. (2026) also found that the effect of liquidity changes with firm size, which suggests that other firm features shape how liquidity works. For managers, liquidity alone is not enough to guard against market-wide shocks, and profitability, access to external finance and firm size should be strengthened alongside it.

4.6. Summary of Hypothesis Testing: Liquidity

Table 11

Hypothesis Results Summary: H03

Hypothesis	Statement	Finding	Decision
H03	Liquidity has no significant effect on financial distress	Positive and significant (β = 0.1678, p = 0.033)	Reject

The rejection of H03 confirms that liquidity is a significant determinant of financial distress among listed commercial and service firms at the NSE. This is consistent with Mazlan and Leman (2023), Ukoh et al. (2024) and Agatha et al. (2026), who all found that higher liquidity

improved Z-scores. It differs from the negative liquidity link reported for Ghanaian performance by Lee and Poku (2022), which was based on a different outcome measure.

5.0 SUMMARY OF THE STUDY

The study determined the effect of liquidity on financial distress of 10 commercial and service firms listed at the NSE from 2015 to 2024, using 100 firm-year observations. The mean current ratio was 1.32, which is below the benchmark of 2.0 and varies widely between firms. Liquidity had a weak positive correlation with the Z-score ($r = 0.278$). Panel regression showed a positive and significant effect of liquidity on the Z-score ($\beta = 0.1678$, $p = 0.033$), so H03 was rejected. When systematic risk was added, the effect became marginally insignificant ($\beta = 0.1456$, $p = 0.051$), and the interaction between liquidity and beta was not significant ($\beta = 0.0654$, $p = 0.152$). Diagnostic tests supported the validity of the estimates.

6.0 CONCLUSION

The study concludes that liquidity significantly reduces financial distress among listed commercial and service firms at the NSE. Firms with higher current ratios have higher Z-scores and are therefore safer. However, the protection is modest and weakens when market-wide risk is considered, which means that liquidity cannot replace sound profitability, prudent borrowing and access to external finance. The average current ratio of 1.32 shows that there is room for firms to strengthen their short-term position. The results also show that the precautionary reason for holding liquid assets is stronger than the concern about idle funds for firms in this sector.

7.0 RECOMMENDATIONS

Managers of listed commercial and service firms should keep their current ratios at levels that cover short-term obligations without locking up too many funds in idle assets. Firms with ratios below 1.0 should give priority to collecting receivables on time, negotiating supplier terms and arranging standby credit. Managers should also monitor liquidity regularly alongside the Z-score as an early warning signal. The Capital Markets Authority and the NSE should include liquidity measures and distress scores in their monitoring of listed firms. Early warning reports based on public financial statements would help to identify weak firms before they fail, which responds to the weak early warning systems described by Omboi (2026). Investors and lenders should assess liquidity together with profitability and leverage, because liquidity alone does not fully protect a firm from distress. Policymakers should support access to affordable short-term credit during market-wide shocks, since own liquid assets alone may not be enough.

8.0 AREAS FOR FURTHER RESEARCH

Future research should replicate this study in other NSE segments, such as manufacturing and agriculture, and in other East African markets. Studies should compare the Altman Z-score with other measures, such as the Zmijewski and Ohlson models. Researchers should also include cash flow measures, the quick ratio and the cash conversion cycle as alternative measures of liquidity. Studies using data from after 2024 could test whether the effect of liquidity changes as economic conditions change.

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