

Liquidity Risk Management and Financial Performance of General Insurance Companies in Kenya: The Moderating Role of Firm Size

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Abstract

Insurance firms in Kenya face considerable concerns regarding liquidity risks, as they depend on prompt access to the capital to fulfil claims, expenses and other financial commitments. The study investigated the effect of liquidity risk on financial performance of general insurers in Kenya. The study focused on a sample of 24 insurance firms in Kenya. The study utilized panel data spanning from 2014 to 2023. The data was collected from insurance regulatory authority and insurance websites. Analysis was conducted using pooled OLS model with the results presented through tables. The findings revealed a positive and statistically significant, relationship between the insurance liquidity risk and financial performance output proxied by return on assets and return on equity. However, firm size does not moderate the relationship between return on assets and return on equity. The research findings recommended stringent liquidity risk practices for insurers that foster profitability of insurance companies. Managers should prioritise on the importance of liquidity management to meet the obligation of claims due to the unpredictable and uncertainty in claims payout.

Keywords: Liquidity Risk, Financial Performance, Firm Size, insurance.

1. Introduction

The insurance sector has emerged as an important component of the financial services landscape, In Kenya insurance contributes approximately 3.5% to the gross domestic product (GDP) and thus providing direct and indirect employment to thousands of Kenyans (IRA, 2023). Liquidity risk is classified as a global concern even though the Kenyan insurance industry may face distinct challenges due to its specific market dynamics, the regulatory framework and economic conditions (Cummins & Venard, 2008). The salient features of the Kenyan insurance market such as the level of market development, the regulatory approaches adopted by the government and the prevailing economic environment. Contribute in shaping the nature and extent of liquidity risks faced by insurers in the country. These factors can affect insurance companies' capacity to fulfil their short-term obligations thus influencing the stability and operational efficiency.

The insurance sector in Kenya is regulated by the Insurance Regulatory Authority (IRA) responsible for implementation of diverse administrative measures aimed at strengthening financial stability, including minimum capital requirements, risk-based supervision and corporate governance standards. However, the insurance sector has showed a continuous decline in growth rates in the financial performance from the year 2012. According to the Insurance Regulatory Authority report insurance penetration rates remained low at 2.8 percent in 2017 and reduced from 2.68% in 2017 to 2.43% in 2018 while Gross premiums were calculated as a proportion of GDP (IRA, 2018). Additionally, the report highlights a decrease also in both the return on equity and return on assets of insurance sector which declined drastically to 4.9% and 1.8%, down from 16% and 5.5% respectively in 2018 (*Insurance-Industry-Annual-Report-2018*, n.d.). Moreover, 31.8% of the insurance companies experienced losses, while 68.2% recorded profits. Penetration in Kenya remained relatively low at 2.4 % compared to world average of 7.0%. As of 2023, penetration stood at around 2.4% of GDP (IRA, 2023) This points to a sector whose sustainability of the insurance companies is uncertain even though numerous consolidations aimed at improving their success and viability (D. W. Kariuki et al., 2021). The role of insurance sector is significant in driving economic growth and stability however, liquidity risk still poses a serious threat. Insurers should manage their assets and liabilities carefully to ensure they can fulfil obligation of paying future claims while collecting premiums in advance. However, like other financial institutions insurance companies are exposed to risks that significantly impact their operational stability and performance. One of the major concerns is liquidity risk, arises as a result of an insurance company failing to meet its immediate financial obligations using its available current assets.

Inadequate liquidity affects mainly financial performance and solvency of insurance companies raising challenges in firm stability and meeting obligations maintain stability. The ever-changing market dynamics highlights the importance of evaluating liquidity risks. The current economic fluctuations, regulatory framework policy changes and unforeseen events may greatly affect an insurance company's ability to maintain sufficient liquidity.

In the insurance industry, liquidity risk is less significant than in banking due to the higher frequency of money exchange. Liquidity risk management is important in both insurance and banking due to the interconnected financial systems, cash crisis and high costs associated with liquidity costs and asset-liability mismatches (Castagna & Fede, 2013). Previous research studies have not adequately addressed liquidity risk within the insurance sector. There is a significant absence of comprehensive studies investigating the correlation between liquidity risk and the financial performance of general insurance firms and firm size as a moderator with

inconsistent findings. Prior studies examined how liquidity influenced the banking sector(Lukorito et al., 2014; Maaka, 2013). The study strives to fill the research gap in the early studies by scholars.

2. Theories and Hypothesis Development

2.1 Theoretical Review

The Theory of Liquidity Preference

According to Keynes (1936) proposed the concept of liquidity preference theory. Keynes argued that the demand for money extends beyond its role as a medium of exchange and emphasized on the intrinsic value of liquidity against uncertainty. Advanced three motives for holding money: transactions, precautionary and speculative. Based on the theory investors who seek high interest rates with a long maturity period do so because these investments are associated with significant risks. Holding all the factors constant investors prefer to retain cash or other easily convertible assets that involve lower levels of risk. High liquidity refers to the simplicity and efficiency of turning an investment into cash at its fair market value (Maug, 1998) . This creates a trade-off between liquidity and profitability. Implies that higher liquidity buffers may lead to lower investment income and overall financial performance(Tche, 2025). However, lower liquidity buffers may improve on returns on investment but increase the risk of failing to meet claims obligations(Culham, 2020). Insurance company investors often prefer short-term bonds over long-term debt to retain capital. This is due to the higher liquidity of short-term bonds, which makes them easier to convert to cash with a lower risk of losing the principal. Conversely, insurance companies prefer opting for long-term debt is over current liabilities due to the inherent risks linked to the emergency loan and the requirement to repay the borrowed amount under difficult conditions. Jarrow et al. (2005) contended that considering both sets of assumptions leads to a positive maturity risk premium that grows over time. The preference for liquidity by insurance firms influences the matching of its assets and liabilities to maintain a strong financial outcome position(Kipnetich, 2019). Critics argue that that interest rates are influenced by real factors like productivity and savings. No definite clarification on the amount of money for speculative demand without knowing transaction demand. Moreover, critics to argue that the theory of interest rates oversimplifies their determination by focusing mainly on money demand(Wray, 2023). Insurers that prioritise liquidity will fulfil credit requests in addition also assess the estimated returns and liquidity of all available assets before making a decision. The study finds liquidity preference theory suitable as it demonstrates the importance of insurance companies to maintain a suitable equilibrium between their assets and liabilities. This ensures that insurers are able to fulfil their debt obligations as it arises and mitigate potential liquidity risks. Firm size and liquidity when managed well will improve insurers performance.

2.2 Empirical Reviews

Previous empirical studies have examined the relationship between liquidity risk and financial performance, yielding inconsistent results. This review presents significant research in chronological order.

According to Mutua & Joseph Theuri (2023) studied the effect of insurance risks on the financial performance of insurance companies in Kenya. The moderating variable was GDP. Explanatory research design and positivism research philosophy were utilized. Secondary data was gathered from audited financial statements submitted to Insurance Regulatory Authority for the period between 2015 to 2020. The research study employed panel data.

The findings of multiple regression results revealed that liquidity risk had a negative significant effect on financial performance.

In South Africa Msomi & Nzama (2023) investigated the effect of firm-specific factors on the financial performance of South African insurance companies. The study selected 36 insurers that are publicly traded from year 2008 to 2019. The research findings of the regression analysis of firm-specific factors with liquidity did not have a statistically significant influence on the financial performance of South African insurance companies.

A study by Ogunsola (2023) evaluated the effect of financial risks on the financial performance of publicly traded insurance companies in Nigeria. The study data was obtained from annual reports for 10 years from 2015 to 2021. Panel data method was employed for analysis using E-view 10.0. Results revealed that liquidity risk had negative and significant effect on financial performance

Moreover A. M. Kamau et al. (2021) examined the influence of firm attributes on the financial performance of insurance firms in Kenya. The study collected secondary data from the Insurance Regulatory Authority (IRA), the Association of Kenya Insurers (AKI) and individual company websites. The target population was 52 insurers operating in Kenya for a period of 10 years (2010-2018). The unbalanced panel data was analysed using Random and Fixed effect model where Hausman test was employed to establish to test the hypothesis. Research findings from the study found that leverage and liquidity had a significant negative effect on financial performance of insurance firms in Kenya

Saleh & Abu Afifa (2020) the researchers analysed how liquidity risk, credit risk, and capital were examined to determine their impact on profitability of Jordanian banks was examined applying econometric panel data with the generalized method of moments to evaluate the associations between the variables. The study findings revealed negative and significant effect on both return on equity and return on assets. However, the research was limited to commercial banks revealing a contextual gap since the findings do not extend to insurance companies.

Akenga (2017) research aimed to assess the effect of current ratio, cash reserves and debt ratio on financial performance of firms listed at the Nairobi Securities Exchange (NSE). Causal research design was adopted and purposive sampling technique was used to select 30 firms. The findings showed that current ratio and cash reserves have a significant effect on ROA. However, the debt ratio had no significant effect on the ROA.

2.4 Hypotheses Development

2.4.1 Liquidity risk and financial performance

Liquidity risk refers to the possibility of running out of cash required to pay for policy payouts including surrenders, expenses and short-term securities. In the event of illiquidity, a financially stable insurer company may be forced to sell assets at prices lower than market prices incurring losses. This includes rapid asset sales at low prices, borrowing money and paying interest to meet payout obligations to the insured may impair liquidity. Both liabilities and assets contribute to liquidity risk (Nikolaou, 2009).

Previous empirical studies conducted in Kenya insurance industry of the relationship between liquidity risk and financial performance. Established mixed results for instance (Ngunguni et al., 2020) found that liquidity risk has a positive and statistically significant effect on profitability. However, the contradictory results showed that

liquidity risk has a negative and statistically significant effect on financial performance (Mutua et al., 2023; Negese et al., 2024; Sisay, 2017). Insurance companies with high liquidity have greater profitability margin compared to those with low liquidity. This is because they can cover short term debts and operational expenses. Therefore, effective liquidity management on firm has a positive impact on performance (Kiptoo et al., 2021). Similarly, (Kamel & Naoual, 2024) argued that greater liquidity risk may lead to higher economic profitability due to better investment opportunities. The research study hypothesizes on the basis of the empirical evidence:

Ha1: Liquidity risk has a significant positive effect on the financial performance of general insurance companies in Kenya.

2.4.2 Firm Size as a Moderating Variable on the relationship Liquidity Risk and financial performance

The size of a firm refers to the scale of the firm's operations and is proxied by using total assets, total revenue, gross written premiums or the natural log of total assets (Meiryani et al., 2020). Insurers with a larger asset base may have a better financial capacity, benefit from economies of scale, have a better risk-bearing capacity, access to capital and able to diversify their risks better.

Empirical evidence from previous studies on the moderating effect of firm size on the nexus of liquidity risk and financial performance is found to be inconsistent. For instance studies by (Dewi et al., 2026) found a negative and significant effect while (Nishan & Fernando, 2021) findings revealed a positive and significant effect. Theoretically, larger firms are expected to have better governance mechanisms, greater ability to absorb risk and better access to capital markets to cushion the adverse effects of liquidity risk (Ben Fatma & Chouaibi, 2023).

However, Kenyan empirical evidence shows that firm size has no statistically significant moderating effect on the relationship between risk factors and profitability (Gitau et al., 2026). Following these contradictory findings, this study hypothesizes:

Ha2: Firm size has a significant moderating effect on the relationship between liquidity risk and financial performance of general insurance companies in Kenya.

3. Materials and Methods

This study employed panel data regression to establish correlation, regression and Hausman test. Liquidity assessed using the current ratio was considered the independent variable and Firm size served as a moderating factor, with the dependent variable is financial performance, which is calculated as return on assets (ROA). The analysis utilized statistical data obtained from the publicly disclosed financial statements of insurance businesses and IRA website. Purposive sampling (Rai & Thapa, 2015) was conducted out 54 insurance companies 24 companies were selected over a period of ten years 2014 to 2023 and 240 observations examined. Diagnostic tests were conducted to confirm the absence of autocorrelation and homoscedasticity and to ensure that errors followed a normal distribution. Furthermore, the pooled OLS panel data model was appropriate for the analysis. The study employed a moderated multiple regression (MMR) model with interaction effects to examine the moderating role of firm size (FSIZE) on the relationship between liquidity risk (LR) and financial performance (FP) proxied by ROA and ROE. The model is considered appropriate since it allows to test the direct effects of LR on FP, as well

as the interactive effect of LR and FSIZE on FP. The relationship between liquidity risk, firm size and financial performance is modelled as:

$$FP = f(LR, FSIZE) \dots\dots\dots \text{Eq. (3.1)}$$

From the equation (1) above, the Moderated Multiple Regression model is specified as follows:

$$FP_{it} = \beta_0 + \beta_1 LR_{it} + \beta_2 FSIZE_{it} + \beta_3 (LR * FSIZE)_{it} + \epsilon_{it} \dots\dots\dots \text{Eq. (3.2)}$$

Where:

- a) FP_{it} represents the financial performance of firm, (proxied by ROA or ROE)
- b) β_0 is Intercept or the constant term
- c) LR_{it} stands for coefficient for liquidity risk
- d) $FSIZE_{it}$ means the coefficient for firm size
- e) $LR * FSIZE$ is the interaction effect between Liquidity risk and Firm size
- f) ϵ_{it} represents error term assumed to be normally distributed with zero mean
- g) $\beta_1 - \beta_3$ the coefficients of regression
- h) i represents insurers and time period denoted by t

The Moderated Multiple Regression model is represented by the equations below:

$$ROA_{it} = \beta_0 + \beta_1 LR_{it} + \beta_2 FSIZE_{it} + \beta_3 (LR * FSIZE)_{it} + \epsilon_{it} \dots\dots\dots \text{Eq. (3.3)}$$

$$ROE_{it} = \beta_0 + \beta_1 LR_{it} + \beta_2 FSIZE_{it} + \beta_3 (LR * FSIZE)_{it} + \epsilon_{it} \dots\dots\dots \text{Eq. (3.4)}$$

Previous studies such as (Ezekwe, 2025; Ogunsola, 2023; Olaiya, 2025) have effectively utilised the MMR model to investigate similar relationships, demonstrating its capability in elucidating the interactions among variables.

3.1 Measurement of study Variables

Variable	Notation	Operationalization	Source
Liquidity risk	LR	$\frac{\text{Current Assets}}{\text{Current Liabilities}}$	Devraj (2014)
Return on Assets	ROA	$\frac{\text{Net profit after tax} * 100}{\text{Total Assets}}$	Waswa et al. (2018) ;Banafa (2016);Malik (2011)

Return on Equity	ROE	$\frac{\text{Net profit after tax} \times 100}{\text{Total Assets}}$	(Thonse Hawaldar et al., 2022)
Firm size	FSIZE	Natural Log of Total Assets	Kamau (2022) Hardwick & Adams (2002)

Source: Researcher compilation (2026)

3.2 Diagnostic Evaluation

The data underwent diagnostic tests to confirm that the data was fit and eligible for analysis and this includes pre-estimation and post estimation tests:

3.2.1 Normality Tests

Table 1: Statistical Test for univariate normality

Variable	Skewness	Kurtosis	Adj_chi2	Prob>chi2
ROA	0.077	0.259	4.480	0.106
ROE	0.095	0.289	4.678	0.178
LR	0.198	0.276	2.960	0.227
Firm size	0.075	0.108	5.530	0.063

Source: Results computed using Stata 17

The p-values of the variables under study exceeded 0.05 indicating that the model and variables under study are normally distributed.

3.2.2 Breusch–Pagan/Cook–Weisberg test for heteroskedasticity

Breusch-Pagan/Cook-Weisberg tests conducted indicated no evidence of heteroskedasticity in both models:

Table 2: Breusch–Pagan/Cook–Weisberg test

	chi2(1)	Prob > chi2
ROA	1.018	0.982
ROE	1.018	0.982

Source: Results computed using Stata 17

Breusch-Pagan/Cook-Weisberg test for heteroskedasticity conducted above revealed that the panel data was homoscedasticity in both the return on assets and return on equity models(Breusch & Pagan, 1980).

3.3.3 Regression diagnostic tests

The Multicollinearity test

Table 3: Variance Inflation Factor test

	VIF	1/VIF
LR	1.018	0.982
Firm Size	1.018	0.982
Mean VIF	1.018	.

Source: Results computed using Stata 17

The issue of multicollinearity was addressed by VIF test and based on the VIF results, none of the values exceed 10 or 5, indicating the absence of multicollinearity (Daoud, 2017).

3.3.4 Model Fit Test

Breusch and Pagan Lagrangian multiplier (LM) test

The Breusch-Pagan Lagrangian multiplier test for random effects failed to reject the null hypothesis of zero panel-level variance for both ROA and ROE models indicating no significant firm-specific random effects. Therefore, the results observed suggest the use of pooled OLS model as the appropriate estimation tool for both models.

$$ROA[ID,t] = Xb + u[ID] + e[ID, t]$$

$$ROE[ID,t] = Xb + u[ID] + e[ID,t]$$

Estimated results:

Table 4: LM-Test

ROA Model			ROE Model		
	Var	SD = sqrt (Var)		Var	SD = sqrt (Var)
ROA	.0006035	.024567	ROE	.0058962	.0767866
E	.0006256	.0250127	E	.0062193	.0788625
U	0	0	U	0	0

Source: Results computed using Stata 17

Test: Var(u) = 0

chibar2(01) = 0.00

Prob > chibar2 = 1.0000

4. Results And Discussions

4.1 Descriptive statistical analysis

The study was analysed using a balanced panel data sampled from 24 general insurance companies in Kenya. Profitability was proxied by return on assets (ROA) and return on equity (ROE). The liquidity risk was measured by the current ratio as a proxy and the firm size as a moderating variable. The mean current ratio observed was 5.376 with a standard deviation of 0.434. The current ratio ranges from a minimum of 4.151 to a maximum of 5.8. The Firm size showed an average value of 6.99 and a standard deviation of 1.51. The profitability indicated an average ROA of 0.51 with a standard deviation of 0.25. Additionally, the low value of ROA observed is 0.02 and

the high range at 0.12. The Return on equity mean value is 0.152, with the standard deviation of 0.077. Lastly, the minimum value of ROE 0.046 and the maximum value of 0.35 recorded.

4.2 Regression analysis

Table 5: Overview of ROA model and ROE model

Variables	ROA Model			ROE Model		
	Coef.	t-value	p-value	Coef.	t-value	p-value
LR	0.0856	3.70	0.005***	0.0697	2.91	0.017**
FSIZE	0.0928	3.85	0.001***	-0.122	-0.22	0.793
Constant	-2.384	-11.20	0.000***	-1.610	-6.326	0.000***
Observations	240			240		
R-Squared	0.215			0.207		

Where *, **, *** is P-value at 1%, 5% & 10%, respectively

Source: Researchers Computations, 2026

Ha1: Liquidity risk has a negative significant effect on the financial performance of general insurance companies in Kenya. The researcher accepts the alternate hypothesis. The overview table 5 above shows a summary of regression both the ROA and ROE model with firm size as an explanatory variable. This means that a unit increase in liquidity risk leads to 8.5 percent and 6.9 percent and increase in return on assets and return on equity, respectively. The liquidity ratio (LR) exhibited as a significant positive predictor for both return on assets and return on equity. The ROA Model demonstrated that both liquidity ratio and firm size are statistically significant positive predictors with coefficients of $\beta = 0.086$ ($p = .005$) and $\beta = 0.093$ ($p = .003$) respectively. However, ROE Model the liquidity risk is a significant predictor ($\beta = 0.070$, $p = .017$), while firm size is statistically negative insignificant with a beta coefficient of ($\beta = -0.122$, $p = .793$). The study findings conform with (Abebe & Abera, 2019; D. W. K. Kariuki et al., 2021; Kipngetich, 2019) liquidity risk positively impacts financial performance. However, other studies by previous scholars contradict with the study findings (Kiptoo et al., 2021; Negese et al., 2024) found negative relationship between liquidity risk and financial performance.

4.3. The Moderating effect of Firm Size on the effect of Liquidity Risk on Financial Performance.

Table 6. Pooled OLS Estimation for ROA Model

ROA	Coef.	Std Err.	t-value	p-value	[95% Conf	Interval]	Sig
LR	0.012	0.011	1.10	0.273	-0.01	0.034	***
FSIZE	0.778	0.132	5.88	0.000	0.518	1.039	
LR*FSIZE	-0.268	0.425	-0.63	0.529	-1.105	0.569	
R-squared			0.284	Number of obs.			240
F-test			14.025	Prob > F			0.000

Where *, **, *** is P-value at 1%, 5% & 10%, respectively.

Source: Researchers Computations, 2026

Ha2: Firm size has a significant moderating effect on the relationship between liquidity risk and financial performance of general insurance companies in Kenya. The researcher rejects the alternate hypothesis. The analysis above revealed that firm size was strong positive and statistically significant with return on assets. The interaction term for liquidity and firm size is found to be statistically not significant at ($p = 0.529$), indicating that firm size does not moderate the relationship between liquidity risk and Return on Assets (ROA). Therefore, the impact of liquidity risk on return on assets of Kenya insurers remains consistent regardless of the changes in firm size.

Table 7 Pooled OLS Estimation for ROE Model

ROE	Coef.	Std Err.	t-value	p-value	[95% Conf	Interval]	Sig
LR	0.033	0.035	0.94	0.348	-0.036	0.101	
FSIZE	2.306	0.402	5.74	0.00	1.514	3.097	***
LR*FSIZE	-0.91	1.289	-0.71	0.481	-3.45	1.63	
R-squared		0.271	Number of obs.			240	
F-test		12.900	Prob > F			0.000	

Where *, **, *** is P-value at 1%, 5% & 10%, respectively

Source: Researchers Computations, 2026

Table 7 above reveals that the model demonstrates R square accounts for 27.1% of the liquidity risk and firm size on variance of return on equity (ROE) proxy of financial performance. The analysis shows that coefficients of firm size have a strong positive effect on return on equity. Moreover, the interaction between liquidity risk and insurance firm size reveals that firm size does not moderate the relationship between liquidity risk and return on equity of Kenya insurers.

5. Conclusions

The study sought to establish the effect of liquidity risk on financial performance of Kenya general insurance companies. The study used balanced panel data spanning from 2014 to 2023. The data was analysed using pooled OLS model. Based on the regression analysis liquidity risk revealed a statistically positive significant relationship with financial performance proxied by return on assets and return on equity. This means that the availability of liquidity will enable insurers to invest in available profitable investments thus promoting profitability. Notwithstanding, the incorporation of firm size on the relationship between liquidity risk and financial performance indicated a negative and insignificant relationship. Therefore, firm size does not moderate the relationship between liquidity risk and financial performance of Kenya general insurance companies.

5.1 Theoretical Contributions

Liquidity preference theory has evolved from the primary defensive strategy to an offensive strategy. Insurers with high liquidity ratio will settle claims easily and underwrite due to availability of the liquid assets. Additionally, size serves as a crucial boundary condition for liquidity preference theory and it is contextualized to fit to the dynamics of emerging markets. The findings enhance operational efficiency from the return on assets and shareholder returns from the return on equity in the insurance sector. Therefore, extend liquidity preference theory from a theory of survival to a theory of competitive advantage.

5.2 Recommendations

Based on the study findings the study recommends on the importance of liquidity risk for industry regulators to emphasize on the importance of stringent, robust and consistent solvency monitoring for all insurance companies irrespective of their asset base. The results however, suggests the need for a balanced growth approach for managers and suggest that asset growth should be sought only when it results in better internal operational efficiency and not as a goal of expansion strategy. Managers should prioritise on the importance of liquidity management to meet the obligation of claims due to the unpredictable and uncertainty in claims payout.

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