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From Solvency to Success: How Liquidity Risk Shapes Profitability in Kenyan Insurers

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Abstract

Despite the Kenya insurance industry recording consistent growth in premium income, over the period 2014 to 2022, performance data documented by the Insurance Regulatory Authority and the Association of Kenya Insurers indicates that profitability, quantified by Return on Assets and Return on Equity, has been on the decline over the period, though experiencing a spike in 2019. In June 2013 the Insurance Regulatory Authority established a comprehensive set of prudential risk management guidelines for the insurance industry in response to the failure and eventual liquidation of at least 9 insurance firms prior to 2013, primarily due to poor profitability. Nevertheless, despite insurance organizations adopting these regulatory measures, profitability continues demonstrating a downward trajectory throughout the specified period. Consequently, the empirical relationship between Liquidity risk exposure and insurance firm profitability remains theoretically un-established. This investigation aimed to ascertain the effect of liquidity risk on the profitability of insurance companies operating in Kenya. The theoretical framework incorporated modern portfolio theory, extreme value theory, agency theory, institutional theory and stakeholder theory. The study employed positivist philosophical approach and explanatory research methodology. The research encompassed a comprehensive examination of all 55 insurance entities registered with the Insurance Regulatory Authority in Kenya through 31st December 2022. Audited financial reports accessible through the Insurance Regulatory Authority and Association of Kenya Insurers digital platforms provided secondary data spanning 2014 through 2022. The Central Bank of Kenya and Kenya National Bureau of Standards supplied supplementary information. Analytical procedures encompassed descriptive statistics, panel regression methodology and Pearson's Product-Moment Correlation technique. The study found that liquidity risk exhibits positive and statistically significant effect on profitability. Consequently, the study recommends that since higher liquidity risk is associated with higher profitability, insurance firms can explore more aggressive investment strategies, such as investing in long-term, higher-return assets so as to leverage liquidity risk enhancing returns, while ensuring adequate risk buffers. Insurance Regulatory bodies in Kenya should also create policies that allow insurance firms to optimize their liquidity management strategies while ensuring financial stability.

Key words: *Liquidity Risk, Profitability, Return on Equity, Return on Assets, Kenya*

1. Introduction

The insurance sector occupies a central position within a country's financial system and plays a distinctive role in both advanced and emerging economies. Scholars such as Ayyubi and Widyastutik (2019), Charumathi (2012), Ahmed *et al.*, (2010) and Brainard (2008) highlight that insurance institutions form a key segment of non-bank financial markets, supporting economic performance in several ways. They help stimulate economic expansion by lowering transaction costs, enhancing resource allocation, creating liquidity, and distributing financial losses across wider pools. The industry also mobilizes substantial financial resources and undertakes risk underwriting, thereby strengthening financial stability. Tasdemir and Alsu (2024) further emphasize that insurance companies contribute to national development by offering products and services that cushion households and businesses from risk, safeguard assets, and support overall financial resilience.

According to the Association of Kenya Insurers (2021), emerging markets have become the main drivers of global insurance growth, accounting for approximately 80% of the sector's expansion. Despite this momentum, Africa continues to record some of the lowest insurance penetration levels worldwide, signaling a significant untapped opportunity. Within the Kenyan context, the Insurance Regulatory Authority (IRA) identifies industry development and the enhancement of insurers' financial soundness as major regulatory priorities. The IRA's 2018–2022 Strategic Plan is closely aligned with broader national and global policy frameworks, including Kenya Vision 2030, the Big Four Agenda, the Third Medium-Term Plan (MTP III), the Financial Services Sector Plan for 2018–2022, the Sustainable Development Goals, and international standards for insurance sector oversight (Insurance Regulatory Authority, 2018).

1.1 Liquidity Risk

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According to the Insurance Regulatory Authority (2017), Liquidity risk entails the likelihood of a firm failing to fulfill its contractually obligated financial commitments upon their maturity. Geneva Association (2023) documents that Liquidity risk refer to the inability of an entity to meet its short-term financial obligations due to a lack of readily available funds. It points to the threat of a firm's inability to meet payouts emanating from policies (maturities, expenses, surrender, etc.) from its liquid assets, resulting in losses due to forced sale of assets at below fair value, in spite of the firm showing adequate solvency (Kamau & Njeru, 2016). Brand (2018) and Sonjai (2008) indicate that the loss incurred from inadequate liquidity emanates from fire sale, paying contractual penalties or borrowing at high interest rates to honour payouts. Liquidity risk emerges from two primary factors, from the side of the assets and from the side of the liabilities. Gasper and Sousa (2010) assert that Liquidity risk remains a key factor influencing the solvency of insurance companies.

According to Fatimah and Purbaningsih (2018), Chen *et al.*, (2017) and Wani and Dar (2015), liquidity risk may be quantified by the liquidity ratio, which depicts the current assets in proportion to the current liabilities. However, as proposed by the Insurance Regulatory Authority (2017), this study adopted the measure of the proportion of liquid assets, current assets, in excess of current liabilities to the total assets that the firm holds i.e., the proportion of 'excess liquid assets' that the company will be left with after settling the current liabilities. In this regard, over the study period, (2014 – 2022), we observed a compound annual growth rate (CAGR) of Liquidity risk of 4.63% and an overall growth rate of 31.58%.

1.2 Profitability

According to Tiplady (2024) and Walters and Helman (2023), profitability assesses the trading or operating performance of the company, i.e., levels of trading profits generated and the effectiveness of the use of trading assets. Chipa and Wamiori (2017), Fali, Nyor and Mustapha (2020), EIOPA (2021) assert that profitability in the insurance industry is primarily quantified by return on assets (ROA) and the return on equity (ROE). OECD (2019) contends that an Insurer's profitability and capacity to generate income can be reliably quantified by use of Return on equity (ROE). Ehiogu and Nnamocha (2018) further indicated that Profitability is a key determinant of insurers' financial health. According to the Insurance Regulatory Authority (2021), Return on Assets is quantified by the Profit before Tax in proportion to Average Total Assets, while Return on Equity is quantified by use of the Profit after Tax to Average Shareholders' Funds.

1.3 Insurance Firms in Kenya

At the close of 2022, there were 55 Insurance firms registered by the IRA (Insurance Regulatory Authority, 2023). The Association of Kenya Insurers (2018) contends that over the years, the Kenya insurance industry has demonstrated great resilience.

Table 1: Key Profitability Ratios for Insurers (%)

	2014	2015	2016	2017	2018	2019	2020	2021	2022	2014-2022 Growth/Decline
Return on Assets (ROA)	5.5	3.8	3.6	3.2	1.8	2.9	1.2	1.6	2.4	-56.38%
Return on Equity (ROE)	16	11.4	9.9	9.7	4.9	9.7	3.4	6.2	8.4	-47.50%
Return on Capital Employed (ROCE)	18.0	11.4	14.2	10.4	4.0	15.0	4.7	9.8	13.3	-26.11%

Source: IRA (2023)

Table 1 show that the Insurance industry profitability measures of Return on Assets (ROA) and Return on Equity (ROE) have been on the decline over the period 2014 – 2022. Over the period, ROA declined steadily from 5.5%, in 2014, to 2.4%, in 2022, despite a slight recovery in 2019 before resuming the decline in 2020 and thereafter a slight recovery in 2021 and 2022. ROE depicts a similar decline, from 16%, in 2014, to 5.2%, in 2020 and a slight recovery in 2021 and 2022, with the steepest decline occurring between 2017 and 2018 as a result of a steeper decline in Operating profit.

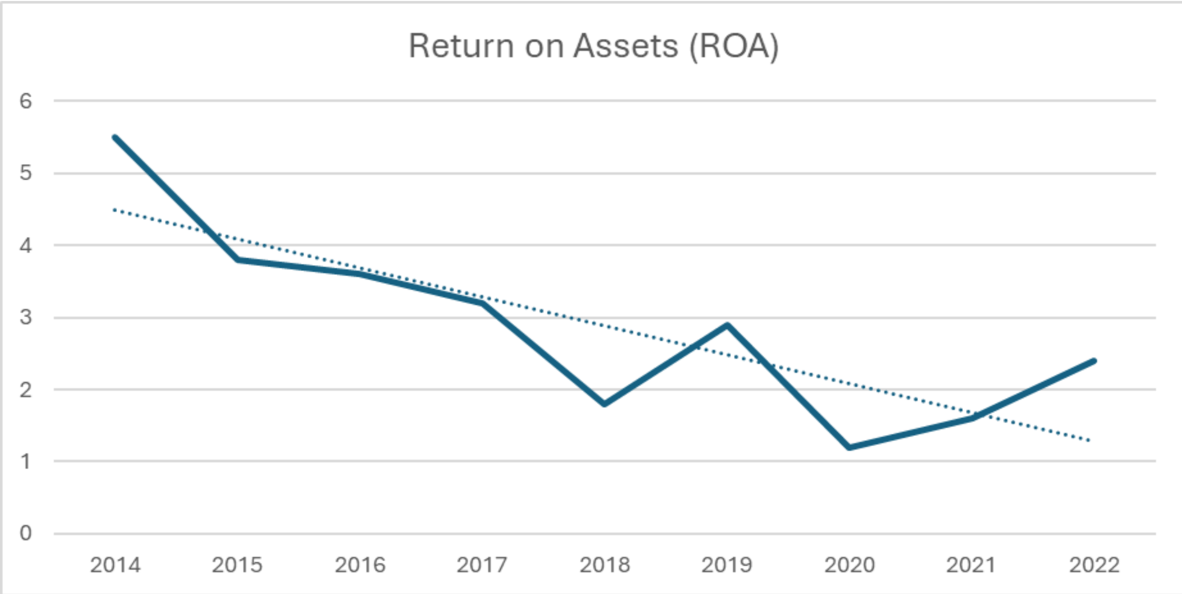

Figure 1: Insurance Industry Trend of Return on Assets (ROA)
Source: IRA (2023)

Figure 1 captures the decline in Return on Assets (ROA) of Kenya insurance industry (2014 – 2022).

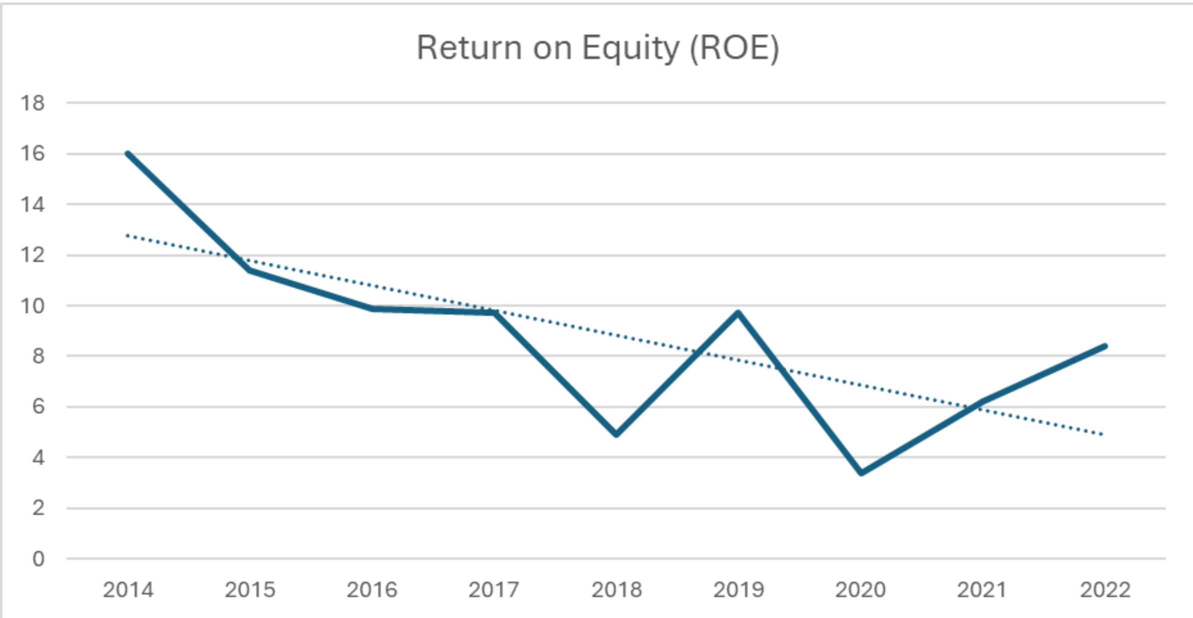

Figure 2: Insurance Industry Trend of Return on Equity (ROE)
Source: IRA (2023)

Figure 2 captures the decline in Return on Equity (ROE) of Kenya insurance industry (2014 – 2022).

2. Statement of the Problem

The Kenya insurance industry plays a primary role by virtue of its input towards the GDP of the country and forms an essential part of the financial services sector. Over the study period, 2014 – 2022, we observed a decline in the compound annual growth rate (CAGR) in ROE of -7.74% and an overall decrease of -47.5%, while ROA recorded a decline in the CAGR of -9.85% and an overall decrease of -56.36% over the period. Boosting profitability is a core function of a firm as it forms a sound basis through which business performance may be evaluated and future prospects may be analyzed (Nguyen and Nguyen, 2020). In this regard, the decline in profitability depicted threatens the Kenya insurance industry in entirety, besides its fundamental role within the financial services industry and its input towards the country's economic growth.

Empirical literature on the relationship between liquidity risk and profitability reveals multiple methodological, contextual, and conceptual limitations that this study sought to address. For instance, Tsvetkova *et al*, (2021), Hussainie and Joo (2019),

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Kamau and Njeru (2016), and Kaya (2015) employed varied analytical techniques and model specifications, creating inconsistencies in the comparability of their findings. The absence of uniform statistical procedures, such as comparable regression models or robust diagnostic tests, limits the generalizability and reliability of their conclusions across different financial settings. Contextual gaps are also evident in the reviewed literature, as many studies have been conducted in sectors and countries with significantly different regulatory and economic conditions. For example, Ishmail (2024), Tsvetkova *et al.*, (2021), Pradhan and Dahal (2021), Fali, Nyor and Mustapha (2020), Tassew and Hailu (2019), Olalekan (2018), Muthumoni and Raj (2017), Berhe and Kaur (2017), and Charumathi (2012) conducted their research in banking, manufacturing, and non-African economies.

Conceptual gaps further compound the inconsistencies in prior research, as different studies have used varying indicators to define both liquidity risk and profitability. Authors such as Ishmail (2024), Kiptoo, Kariuki and Ocharo (2021), Pradhan and Dahal (2021), Hussainie and Joo (2019), and Muthumoni and Raj (2017) employed measures like current ratio, quick ratio, or total liquid assets to represent liquidity risk. Similarly, their profitability metrics ranged from net interest margin and earnings per share to operating margin, instead of the more standardized Return on Assets (ROA) and Return on Equity (ROE). This lack of conceptual alignment has hindered the synthesis of findings across studies and created ambiguity in identifying clear patterns or policy implications.

Contrasting empirical positions regarding the association between liquidity risk and profitability, highlights the complexity of this relationship across different contexts. Some studies, such as those by Kiptoo, Kariuki and Ocharo (2021), Tsvetkova *et al.*, (2021), Muthumoni and Raj (2017), Wani and Dar (2015) and Charumathi (2012) established a positive and significant relationship between liquidity risk and profitability. However, other empirical inquiries including Mutua, Wamugo and Theuri (2023), Pradhan and Dahal (2021), Onsongo, Muathe and Mwangi (2020), Tassew and Hailu (2019), Hussainie and Joo (2019), Olalekan (2018), Berhe and Kaur (2017), Muriithi (2016), Kamau and Njeru (2016), Petria, Caprarub and Ihnatov (2016) and Kaya (2015) found a negative and significant relationship on the same, arguing that excess liquidity may reflect inefficiencies or idle resources that could otherwise be deployed for profit-generating activities. Notably, studies such as those by Von Tamakloe *et al.*, (2023) found a positive and insignificant relationship while Ishmail (2024) and Fali, Nyor & Mustapha (2020) found a negative and insignificant relationship on the same, further complicating the consensus. These contradictory findings point to unresolved empirical gaps that vary by geography, measurement approaches, and institutional contexts, thereby justifying the relevance and necessity of the current study, which anchors its analysis within the Kenyan insurance sector using refined metrics and contextual understanding.

3. Objective of the Study

The main objective of the study was to determine the effects of liquidity risk on profitability of insurance firms in Kenya.

4. Literature Review

4.1 Theoretical Review

4.1.1 Agency Theory

Agency Theory was formally introduced by Jensen and Meckling in 1976, although foundational contributions were independently developed earlier by Stephen Ross and Barry Mitnick in the early 1970s. The theory focuses on the principal-agent relationship, where one party (the agent) is authorized to make decisions on behalf of another party (the principal). In corporate finance and organizational structures, this theory is often applied to explain the interaction between shareholders and managers. A fundamental assumption of the theory is that agents may not always act in the best interest of principals, due to divergent goals, access to asymmetric information, and differing risk preferences. This divergence creates what is known as the agency problem, wherein agents pursue actions that maximize their utility at the potential expense of the principal.

In the context of liquidity risk, agency theory is relevant in explaining the decision-making behaviour of managers concerning risk exposure and return expectations. Managers, acting as agents, may prefer conservative strategies to preserve their positions and compensation, while shareholders, as principals, may favour strategies that enhance returns even if associated with higher risk. This misalignment becomes particularly evident in insurance firms, where risk management decisions can significantly affect profitability, capital adequacy, and shareholder value. For this study, the theory serves to explain the internal institutional factors that moderate the relationship between liquidity risk and profitability. Therefore, Agency Theory is a critical lens for examining how managerial conduct and governance systems shape financial outcomes in the insurance sector.

4.1.2 Institutional Theory

Institutional theory emerged through foundational contributions from Philip Selznick (1957), John Meyer and Brian Rowan (1977), and later refined by scholars such as Scott (2001, 2007). The theory focuses on how organizational behavior is shaped not only by internal efficiency goals but also by external expectations, social norms, legal frameworks, and cultural forces. Institutions, as defined within this theory, consist of established rules, practices, routines, and shared beliefs that influence how

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organizations operate and interact with their environments. In the insurance sector, institutional theory offers insights into how external regulatory and social environments influence the way firms manage liquidity risk. Insurance firms do not operate in isolation; they are embedded within broader institutional frameworks that include regulatory mandates, professional bodies, and societal expectations. These institutions influence what is considered acceptable or legitimate behaviour in areas such as financial reporting, underwriting practices, and capital management.

The theory provides a comprehensive framework for analyzing how external rules, norms, and expectations shape liquidity risk management practices within insurance firms. The theory explains that organizational behaviour is influenced not only by efficiency considerations but also by the pursuit of legitimacy and conformity to institutionalized expectations. For the present study, it contributes to explaining the broader institutional environment in which liquidity risk is managed and profitability is pursued. Therefore, it serves as a vital theoretical pillar in assessing the intersection between liquidity risk exposure and organizational performance.

4.1.3 Stakeholder Theory

Stakeholder Theory was formally introduced by Edward Freeman in 1984, although the philosophical underpinnings of the theory trace back to earlier organizational ethics discourses. The theory challenges the traditional shareholder-centric view of the firm by asserting that organizations exist to serve a wide range of stakeholders, not just owners or investors. Stakeholders are defined as individuals or groups who can affect or are affected by the organization’s objectives, including employees, customers, suppliers, regulators, communities, and creditors. In the insurance industry, stakeholder demands are particularly influential due to the sector’s regulatory sensitivity and public accountability. Policyholders expect timely service, fair treatment, and financial protection; regulators require solvency and compliance; employees seek job security and ethical governance. Each of these stakeholder groups has the capacity to influence organizational stability and profitability. Stakeholder Theory encourages firms to consider these constituencies not as obstacles, but as contributors to value creation and risk management.

The theory offers a comprehensive framework for understanding how organizational performance, liquidity risk, and profitability are influenced by multiple constituencies. For this study, Stakeholder Theory serves as a key theoretical lens in analyzing how insurance firms in Kenya manage liquidity risk while maintaining profitability. It underscores the importance of relational governance and multi-stakeholder accountability in enhancing organizational sustainability.

4.2 Empirical Literature

4.2.1 Liquidity Risk and Profitability

In an effort to analyze these variations more specifically, Tsvetkova *et al.*, (2021) conducted a study on Russian insurance companies using descriptive research design and a panel of 45 firms from 2012 to 2018. Their results indicated a positive association between liquidity ratios and Return on Assets (ROA). However, this study was limited by its descriptive nature, which restricts causal interpretation, and the contextual specificity of the Russian market, which operates under macroeconomic conditions vastly different from those in Kenya. Similarly, Pradhan and Dahal (2021) investigated the performance of Nepalese insurance firms, applying multiple panel regression on a sample of 21 insurers. Their findings revealed a negative and significant relationship between liquidity risk (proxied by current ratio) and profitability (proxied by ROA and EPS). Nonetheless, the study’s reliance on different liquidity measures, along with its Nepalese setting, introduces a contextual disparity. These methodological and contextual limitations reduce the generalizability of the findings and emphasize the need for a Kenyan-based study that not only adopts a stronger explanatory design but also incorporates broader risk dimensions and a robust moderating variable such as firm size.

Additional evidence was provided by Hussainie and Joo (2019), who examined Indian life insurers over a ten-year span using panel regression. They found a negative and significant association between liquidity ratio and ROA, asserting that excessive liquidity could deter profitability due to underutilization of available funds. However, their use of descriptive design, as well as the Indian economic environment, limits the applicability of their findings to Kenya.

Olalekan (2018), working with listed Nigerian insurers, used correlational design and discovered a similar negative relationship. However, the focus on listed firms excludes smaller or non-listed players, reducing the representativeness of the sample. The current study bridges these gaps by introducing firm size as a moderating variable and employing a broader sample reflective of the Kenyan insurance sector. Additionally, a more nuanced classification of liquidity risk was adopted to ensure alignment with the operational realities of the local context, thereby enhancing both conceptual and methodological robustness.

Other studies, such as Kaya (2015) in Turkey and Charumathi (2012) in India, also explored the liquidity-profitability nexus using the current ratio as a proxy for liquidity risk. Both researchers identified a negative and positive significant relationship, respectively. However, these studies shared common limitations—use of descriptive research designs and short observation periods. Additionally, by employing explanatory research design the present study endeavors to uncover causal relationships specific to the Kenyan financial landscape. This methodological advancement positions the study to contribute uniquely and credibly to the broader discourse on liquidity management and financial sustainability in the insurance industry.

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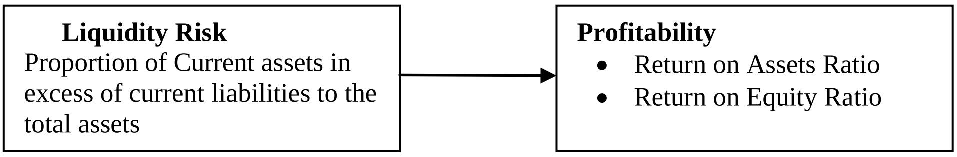
4.3 Conceptual Framework

The conceptual below framework depicts the relationships between the study variables liquidity risk and profitability.



Independent Variable **Dependent Variable**

Figure 3: Conceptual Framework

5. Research Methodology

The study adopted a positivism paradigm since the relevant events and environment are independent and external to the researcher and objective. Additionally, with regard to the type of investigation, data analysis, study objectives in addition to the period considered, the positivism paradigm was used as a guide.

According to Cazeaux (2017) and Zukauskas, Vveinhardt and Andriukaitiene (2018), Positivism makes an assumption that the relevant events and environment are independent and external to the researcher and objective. For this study Explanatory research design was adopted. Saunders *et al.,* (2009) documents that Explanatory research encompasses studies that seek to determine causal relationships between the study variables. This focuses on analyzing a problem or situation so as to explain the relationships between the study variables.

All the Insurance firms in Kenya registered by the Insurance Regulatory Authority formed the target population of this study. The Insurance Regulatory Authority (2023) indicates that at the end of 2022, there were 55 registered Insurance firms, which formed the target population. Additionally, all Insurance firms in Kenya are incorporated in the profitability statistics, ROA and ROE, depicted by industry averages. In view of this, all the insurance companies registered as of 31st December 2022 formed the Unit of analysis for the study. The study adopted a census approach.

This study adopted a panel regression model, going by the fact that both cross-sectional and time series dimensions are captured in the data (Greene, 2008). Consequently, the effect of liquidity risk on profitability was investigated using panel data analysis. The study adopted the following models:

$$\mathbf{ROA}_{it} = \alpha + \beta_1 \mathbf{LR}_{it} + \varepsilon_{it} \text{ .... } \textbf{Model 1}$$

$$\mathbf{ROE}_{it} = \alpha + \beta_1 \mathbf{LR}_{it} + \varepsilon_{it} \text{ .... } \textbf{Model 2}$$

Where:

$\mathbf{ROA}_{it}$ = Return on Assets of Insurance firm i at time t.
$\mathbf{ROE}_{it}$ = Return on Equity of Insurance firm i at time t.
α = The intercept
β_1 = Regression coefficient
$\mathbf{LR}_{it}$ = Liquidity Risk for Insurance firm i at time t.
ε_{it} = the error term

6. Research Findings and Discussion

6.1 Descriptive Statistics

Descriptive statistics help in exhibiting the basic features of the data used in the study (Saunders, *et al.*, 2009). To attain annual results that are representative of the entire study population, yearly average values of the study variables are used. Subsequently, the descriptive analysis presents statistical data for the period of 2014–2022. Trend analysis results of the variables are provided herein.

Table 1: Descriptive statistics

Variable	Obs.	Mean	Std. Dev.	Min	Max
Return on equity	495	0.0184	0.5976	-6.4189	7.4342
Return on assets	495	0.0185	0.0807	-0.7993	0.3628
Liquidity risk	495	0.0772	0.1247	-0.2348	0.9048

Source: Research findings (2025)

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As depicted in Table 1 the study found that the average profitability of insurance firms in Kenya, as measured by Return on Equity (ROE), stood at 1.84% with a standard deviation of 0.5976, ranging from a minimum of -6.4189 to a maximum of 7.4342. Return on Assets (ROA) recorded a mean of 1.85%, a relatively modest figure, with values spanning from -0.7993 to 0.3628 and a standard deviation of 0.0807. These results suggest a mixed performance across firms, with significant disparities in their capacity to generate returns either from shareholder equity or total asset investment. The mean liquidity risk was 7.72%, with a low standard deviation of 0.1247, showing minor deviations among firms, although the range extended from -0.2348 to 0.9048.

6.2 Trend Analysis

6.2.1 Return on Equity

The study sought to show the variation in Return on Equity (ROE) in insurance firms in Kenya for the period of the study. The means for the data was computed and used in the computation of the trend analysis, which is presented in Figure 4.

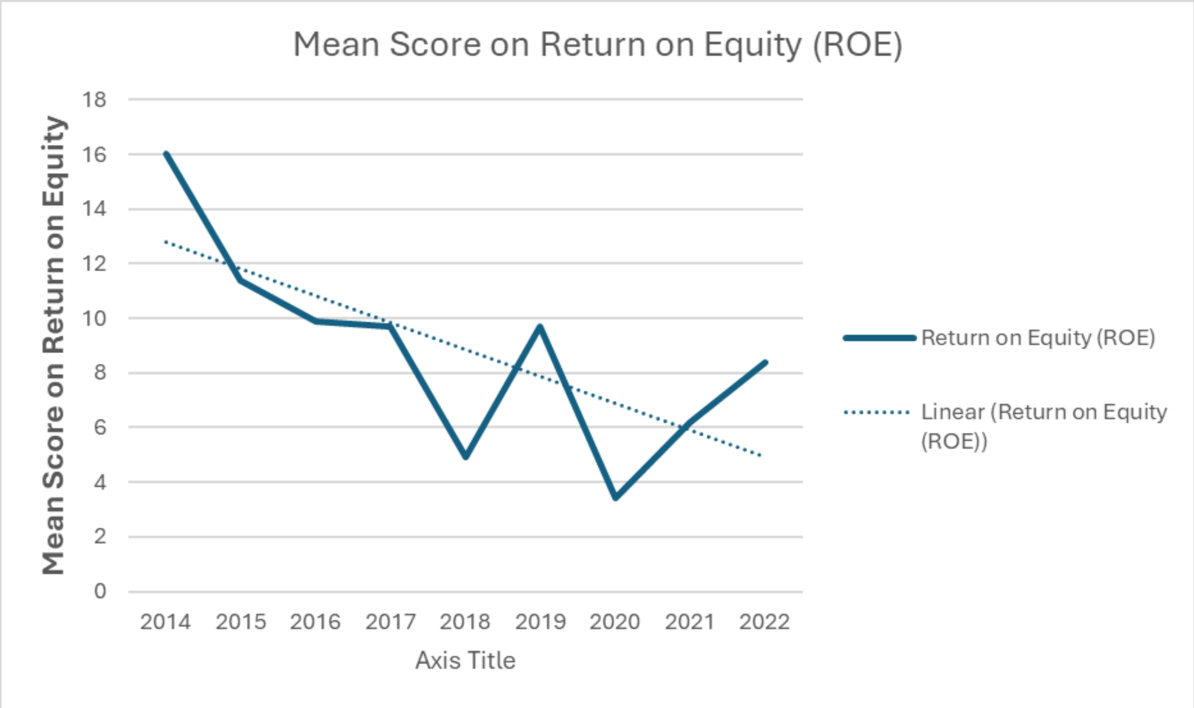

Figure 4: Insurance Industry Trend of Return on Equity (ROE)
Source: IRA (2023)

Over the study period we observed a decline in the compound annual growth rate (CAGR) in ROE of -7.74% and an overall decrease of -47.5% over the period, despite slight recovery in 2019 and 2022, with the highest rates of decline occurring between the years of 2014 – 2015, 2017 – 2018 and 2019 – 2020 as shown by the findings in Figure 4. This may be explained by an overall decline in Profit before tax of -33.19%, while Shareholders funds saw an increase of 76.5% over the period.

6.2.2 Return on Assets

The study sought to show the variation in Return on Assets (ROA) in insurance firms in Kenya for the period of the study. The means for the data was computed and used in the computation of the trend analysis, which is presented in Figure 5.

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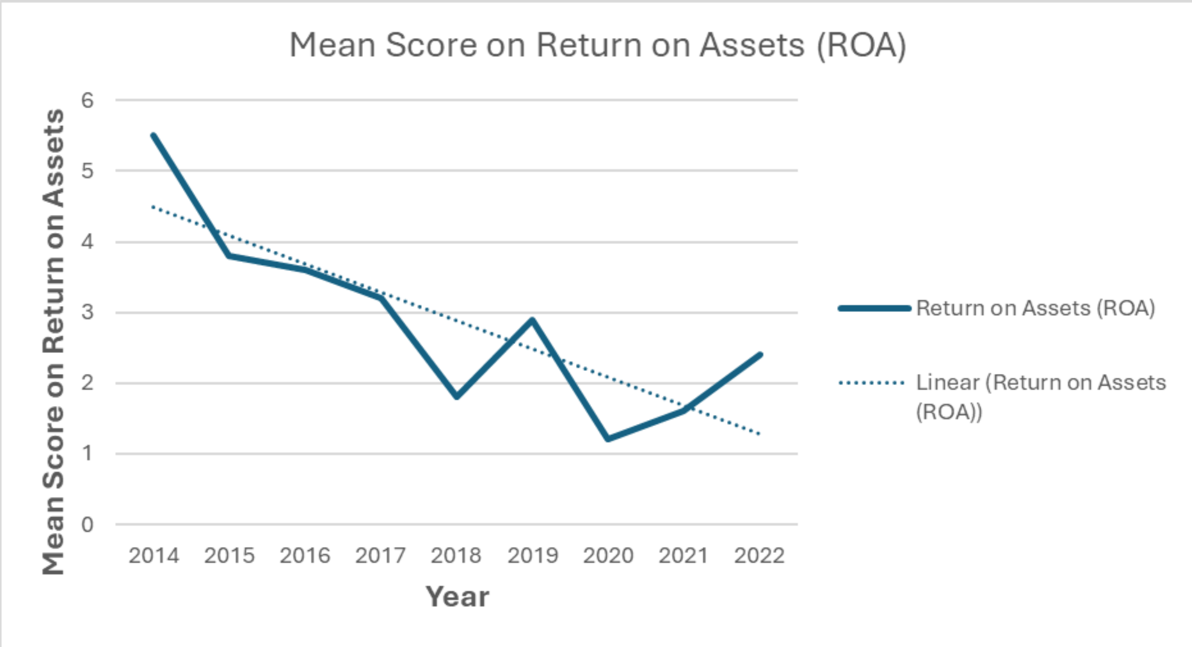

Figure 5: Insurance Industry Trend of Return on Assets (ROA)
Source: IRA (2023)

Over the study period we observed a decline in the compound annual growth rate (CAGR) in ROA of -9.85% and an overall decrease of -56.36% over the period, despite slight recovery in 2019 and 2022, with the highest rates of decline occurring between the years of 204 – 2015, 2017 – 2018 and 2019 – 2020 as shown by the findings in Figure 5. This may be explained by an overall decline in Profit before tax of -22.61%, while Total assets saw an increase of 76.5% over the period.

6.2.3 Liquidity Risk

The study sought to show the variation in liquidity risk in insurance firms in Kenya for the period of the study. The means for the data was computed and used in the computation of the trend analysis, which is presented in Figure 6.

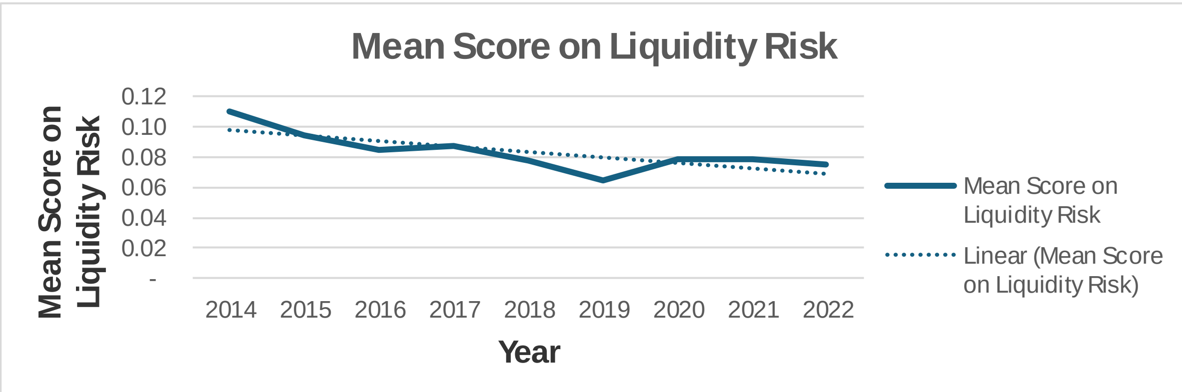

Figure 6: Insurance Industry Trend of Liquidity risk
Source: IRA (2023)

Over the study period we observed a compound annual growth rate (CAGR) of Liquidity risk of 4.63% and an overall growth rate over the period of 31.58% as shown by the findings in Figure 6. This may be explained by the marked increase in current liabilities as compared to current assets during the period. While total assets saw an increase of 76.5%, current assets increased by 40.0% as compared to current liabilities which increased by 96.8% over the period, with 2019 seeing the highest increase in current liabilities before reverting back to the mean trend.

6.3 Correlation Analysis

The study conducted a correlation analysis as shown in Table 2.

6.3.1 Liquidity Risk and Return on Equity

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Table 2: Correlation Analysis of liquidity Risk and Return on Equity

	Return on Equity	Liquidity risk
Return on equity	1.0000	
Liquidity risk	0.7465	1.0000

Source: Research findings (2025)

Table 2 depicts the correlation between the study variables (liquidity risk, return on Equity). The findings reveal a strong positive and statistically significant relationship between liquidity risk and Return on Equity (ROE), with a coefficient of 0.7465 and a p-value of 0.0000, indicating that firms facing higher liquidity risk tend to report higher ROE due to more aggressive allocation of capital toward revenue-generating activities.

6.3.2 Liquidity Risk and Return on Assets

Table 3: Correlation analysis of Liquidity Risk and Return on Assets

	Return on Assets	Liquidity Risk
Return on assets	1.0000	
Liquidity risk	0.6902	1.0000

Source: Research findings (2025)

The findings in Table 3 indicate a strong positive and statistically significant relationship between liquidity risk and Return on Assets (ROA), with a coefficient of 0.6902 and a p-value of 0.0000, suggesting that firms with higher liquidity risk tend to utilize their assets more efficiently by prioritizing productive investments over maintaining excess liquid reserves.

6.4 Panel Regression Analysis and Hypothesis Testing

6.4.1 Liquidity Risk and Return on Equity

Table 4 includes regression analysis of Liquidity risk and ROE. Random effects regression model was used.

Table 4: Regression Analysis of Liquidity Risk and Return on Equity

ROE	Coef.	Std. Err.	z	P>z
Liquidity risk	0.4317	0.0716	6.0300	0.0000
_cons	0.0346	0.0195	1.7800	0.0760

Source: Researcher (2025)

From the findings in Table 4, the following optimal model was developed:

$$\mathbf{ROE_{it} = 0.0346 + 0.43171LR_{\mathit{it}}} + \varepsilon_{it}$$

Where:

$\mathbf{ROE}_{it}$ = Return on Equity of Insurance firm i at time t.
$\mathbf{LR}_{it}$ = Liquidity Risk for Insurance firm i at time t.
ε_{it} = the error term

The study established a positive and statistically significant association between liquidity risk and Return on Equity, with a regression coefficient of 0.4317 and a p-value of 0.0000. This outcome necessitated the rejection of the null hypothesis (H_{01}), confirming that liquidity risk significantly influences profitability among Kenyan insurance firms.

6.4.2 Liquidity Risk and Return on Assets

Table 5 presents the regression analysis of Liquidity risks and Return on Assets. Random effects regression model was used.

Table 5: Regression Analysis of Liquidity Risk and Return on Assets

ROA	Coef.	Std. Err.	z	P>z
Liquidity risk	0.4236	0.0873	4.8500	0.0000
_cons	0.0367	0.0238	1.5400	0.1230

Source: Researcher (2025)

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From the findings in Table 5, the following optimal model was developed:

$$\mathbf{ROA_{it} = 0.0367 + 0.4236LRit} + \varepsilon_{it}$$

Where:

ROA_{it} = Return on Assets of Insurance firm i at time t.
LR_{it} = Liquidity Risk for Insurance firm i at time t.
ε_{it} = the error term

The study found a positive and statistically significant relationship between liquidity risk and Return on Assets, with a coefficient of 0.4236 and a p-value of 0.0000, thereby supporting the rejection of the null hypothesis *(H_{01})*.

7. Conclusions and Recommendations

The conclusions of this study are drawn from detailed regression analysis and are aligned with the objective outlined at the beginning of the research which examined the influence of liquidity risk on profitability, the results demonstrated a positive and statistically significant relationship between liquidity risk and both Return on Equity (ROE) and Return on Assets (ROA). The study concludes that firms assuming higher liquidity risk, by holding lower levels of liquid assets, tend to achieve better financial outcomes. This suggests that efficient allocation of liquid resources into revenue-generating investments may enhance both equity returns and asset utilization. Hence, the findings imply that rather than maintaining excess liquidity buffers, insurance firms may benefit from strategies that balance liquidity with productive investment. Such an approach enables them to capitalize on market opportunities while sustaining solvency.

Based on the findings, Insurance Regulatory bodies in Kenya should create policies that allow insurance firms to optimize their liquidity management strategies while ensuring financial stability. Additionally, policymakers should assess current minimum liquidity ratios to ensure they are not overly restrictive, enabling firms to take calculated liquidity risks that enhance profitability.

References

1. Ahmed, N., Ahmed, Z., & Ahmed, I. (2010). Determinants of Capital Structure: A Case of Life Insurance Sector of Pakistan. European Journal of Economics, Finance and Administrative Sciences, 6(24), 1450-75.
2. Association of Kenya Insurers (2018). Insurance Industry Annual Report. Kenya: AKI.
3. Association of Kenya Insurers (2021). Insurance Industry Annual Report. Kenya: AKI.
4. Ayyubi, S., & Widyastutik, A. (2019). The Impact of Macroeconomic Indicators on Islamic Insurance Demand in Indonesia. Jurnal Ilmu Ekonomi Syariah (Journal of Islamic Economics), 11(2), 180-200.
5. Berhe, T. A., & Kaur, J. (2017). Determinants of insurance companies' profitability Analysis of insurance sector in Ethiopia. International journal of research in finance and marketing, 7(4), 124-137.
6. Brainard, L. (2008) "What is the Role of Insurance in Economic Development? Zurich Government and Industry Thought Leadership Series, 2.
7. Brand, A. (2018). Risk in Financial Services. London: Chartered Institute for Securities & Investment.
8. Cazeaux, C. (2017). Art, Research, Philosophy. London: Taylor & Francis.
9. Charumathi, B (2012). On the Determinants of Profitability of Indian Life Insurers – An Empirical Study. Proceedings of the World Congress on Engineering, 1, 978-988.
10. Chen, Y.-K., Shen, C.-H., Kao, L., & Yeh, C.-Y. (2018). Bank Liquidity Risk and Performance. Review of Pacific Basin Financial Markets and Policies, 21(01), 1850007. doi:10.1142/s0219091518500078
11. Chipa, E, M., & Wamiori, G. (2017). Effects of Risk Management on Financial Performance of Insurance Companies in Mombasa County Kenya. Imperial Journal of Interdisciplinary Research, 3(5), 259-282.
12. Ehiogu, C. P. & Nnamocha, P. N. (2018). Effect of Interest Rate on Profit of Insurance Companies in Nigeria. International Journal in Management and Social Science, 6(7), 233-246.
13. European Insurance and Occupational Pensions Authority (2021). Financial Stability Report 2021. EIOPA; Luxembourg
14. Fali, I. M., Nyor, T., & Mustapha, L. O. (2020). Insurance specific risk and profitability: evidence from Nigerian insurance firms. International Journal of Accounting, Finance and Risk Management, 5(3), 141-148.
15. Freeman. R. E. (1984). Strategic management: A stakeholder approach. Boston: Pitman.
16. Geneva Association. (2023). Liquidity risk in insurance: A topical perspective. Retrieved from https://www.genevaassociation.org/publication/public-policy-and-regulation/liquidity-risk-insurance-topical-perspective.
17. Greene, W.H. (2008). Econometric Analysis (6th ed.). Upper Saddle River, N.J.: Prentice Hall
18. Hussanie, I & Joo, B. A. (2019). Determinants of Profitability of Life Insurers in India- Panel Evidence. International Journal of Management Studies, 1(7), 58. https://doi.org/10.18843 /ijms/v6i1 (7)/07.

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www.ijarke.com

19. Insurance Regulatory Authority (2017). Supervisory Analysis for the Assessment of Risk Impact; Understanding the 25 Ratios: IRA.
20. Insurance Regulatory Authority (2018). Strategic Plan, 2018 – 2022: IRA.
21. Insurance Regulatory Authority (2023). Insurance Industry Annual Report, Kenya: IRA.
22. Ishmail, D. M. (2024). Financial Risk, Firm Size and Financial Performance of Microfinance Banks in Kenya. Unpublished PhD Thesis. Jomo Kenyatta University of Agriculture and Technology.
23. Jensen, M. C., & Meckling, W. H. (1976). Theory of the firm: Managerial behavior, agency costs and ownership structure, Journal Financial Economics, 3, 305-360.
24. Kamau, F., & Njeru, A. (2016). Effect of Liquidity Risk on Financial Performance of Insurance Companies Listed at the Nairobi Securities Exchange. International Journal of Science and Research, 5(10), 867–872. doi: 10.21275/ART20162288.
25. Kaya, E. O. (2015). The Effects of Firm-Specific Factors on the Profitability of Non-Life Insurance Companies in Turkey. International Journal of Financial Studies, 3, 510-529; doi:103390/ijfs3040510
26. Kiptoo, I. K., Kariuki, S. N., & Ocharo, K. N. (2021). Risk management and financial performance of insurance firms in Kenya. Cogent Business & Management, 8(1). https://doi.org/10.1080/23311975.2021.1997246.
27. Meyer, J.W. & Rowan, B. (1977). Institutionalized organizations: formal structure as myth and ceremony. American Journal of Sociology, 83(2), 340-363.
28. Muriithi, J. G. (2016). Effect of Financial Risk on Financial Performance of Commercial Banks in Kenya. Unpublished PhD Thesis. Jomo Kenyatta University of Agriculture and Technology.
29. Muthumoni, A. & Raj, R. (2017). Impact of Liquidity Risk on Profitability – A Case Study of Bank of Baroda. International Journal of Research in Economics and Social Sciences, 7(9), 117-126.
30. Mutua, B.M., Wamugo, L., & Theuri, J. (2023). Insurance Risks and Financial Performance of Insurance Companies in Kenya. Journal of Finance and Accounting, 7(2), 43-68.
31. Nguyen, T. N. L., & Nguyen, V. C. (2020). The determinants of profitability in listed enterprises: A study from Vietnamese stock exchange. Journal of Asian Finance, Economics and Business, 7(1), 47-58. https://doi.org/10.13106/jafeb.2020.vol7.no1.47.
32. OECD (2021). Insurance Markets in Figures. OECD.
33. OECD (2024). Global Insurance Market Trends 2023. OECD.
34. Olalekan, L, I., (2018). Effect of Liquidity Risk, Premium Growth on the Performance of Quoted Insurance Firms in Nigeria: A Panel Data Analysis. American Finance & Banking Review; 2(1), 42–51. https://doi.org/10.46281/amfbr.v2i1.128.
35. Onsongo, S. K., Muathe, S. M. A., & Mwangi, L. W. (2020). Financial Risk and Financial Performance: Evidence and Insights from Commercial and Services Listed Companies in Nairobi Securities Exchange, Kenya. International Journal of Financial Studies, 8(3), 51. doi:10.3390/ijfs8030051
36. Petria, N., Capraru, B., & Ihnatov, I. (2015). Determinants of Banks' Profitability: Evidence from EU 27 Banking Systems. Procedia Economics and Finance, 20, 518–524. doi:10.1016/ s2212-5671(15)00104-5
37. Pradhan, S., & Dahal, P. (2021). Financial performance of Nepalese insurance companies. Nepalese Journal of Insurance and Social Security, 4(1), 100-111.
38. Saunders M., Lewis P., & Thornhill, A. (2009). Research methods for business studies Fifth Ed Pearson educational centre Edinburgh Gate, Harlow, and Essex CM 202 J. England.
39. Scott, W.R. (2007). Institutions and organizations: Ideas and interests. Thousand Oaks, CA: Sage Publications.
40. Selznick, P. (1957). Leadership in administration: A sociological interpretation. Harper & Row.
41. Tasdemir, A., & Alsu, E. (2024). The Relationship between Activities of the Insurance Industry and Economic Growth: The Case of G-20 Economies. Sustainability, 16(17), 7634.
42. Tassew, A. W., & Hailu, A. A. (2016). The effect of risk management on financial performance of commercial banks in Ethiopia. Centre for Financial and Monetary Research, Bucharest, 23(1), 25–38.
43. Tiplady, V. (2024). Financial Reporting and Financial Statements Analysis. London: Chartered Institute for Securities & Investment.
44. Tsvetkova, L., Bugaev, Y., Belousova, T., Zhukova, O. (2021). Factors Affecting the Performance of Insurance Companies in Russian Federation, Montenegrin Journal of Economics, 17(1), 209-218.
45. Von Tamakloe, B., Boateng, A., Mensah, E. T., & Maposa, D. (2023). Impact of risk management on the performance of commercial banks in Ghana: A panel regression approach. Journal of Risk and Financial Management, 16(7), 322.
46. Walters, D.W., Helman, D.A. (2023). Profitability and Productivity. In: The Value Chain Network. Future of Business and Finance. Springer, Cham. https://doi.org/10.1007/978-3-031-38000-6_7.
47. Wani, A, A., & Dar, S, A., (2015). Relationship between Financial Risk and Financial Performance: An Insight of Indian Insurance Industry. International Journal of Science and Research, 4(11), 1424 – 1433.
48. Zukauskas, P., Vveinhardt, J. & Andriukaitiene, R. (2018). Philosophy and paradigm of scientific research. Management Culture and Corporate Social Responsibility. doi: 10.5772/intechopen.70628.