LIQUIDITY AND FINANCIAL PERFORMANCE OF INSURANCE FIRMS IN KENYA: MODERATING ROLE OF FIRM SIZE

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Abstract

The purpose of this study was to investigate the influence of firm liquidity on the financial performance of insurance firms in Kenya. The study was anchored liquidity preference theory. The research philosophy adopted was positivism while the correlation research design was adopted. The study used secondary data which was collected using data collection sheet from Insurance Regulatory Authority (IRA), Association of Kenya Insurers (AKI) and individual firms' websites. The target population of the study was 54 insurers that operated in Kenya for the ten years (2010-2018). The unbalanced panel data was analyzed using Random and Fixed effect model where Hausman test select model for testing the hypotheses. The study found that liquidity had a significant negative effect on financial performance. firm size negatively moderated the relationship between liquidity and financial performance. The study recommends that insurance firms need to conduct effective liquidity management to maximize the value of the company and its financial performance. Additionally, it is essential for insurance firms to consider the implications of firm size on financial performance, as larger firms may benefit from economies of scale but could also experience inefficiencies if not managed properly. Therefore, insurance companies should assess their operational structures and leverage their size to improve resource allocation and streamline processes.

Keywords: Liquidity, Firm Size, Financial Performance, Insurance, Firms, Kenya, Preference Theory, Portfolio theory, Returns on Asset

INTRODUCTION

Insurance industry helps to promote financial stability by transferring individual and entities' financial risks to itself. Individuals and firms are therefore able to specialize in wealth creation and to undertake projects that they would have avoided in absence of insurance (Mehari & Aemiro, 2013). Insurance helps to mobilize savings from the household level and channel them for investment by financial entities. A robust insurance sector reduces pressure on the government budget to the extent that they reduce pressure on demand for government social security programs as they are considered as the alternative choice to personal retirement programs (Barakat, et al., 2022). The general economy is heavily reliant on insurance services. Insurance further reduces the total risk faced by an economy in the sense that, they are better able to measure, manage the risk which they are exposed and faced with as well as initiate risk mitigation activities (Regasa, 2014).

Thus, the financial performance of insurance firms is a critical indicator of their operational health and sustainability, with leverage serving as a key determinant in this context. Leverage, defined as the use of borrowed funds to amplify potential returns on investment, can significantly influence an insurance company's ability to generate profit. While a judicious level of leverage can enhance returns and facilitate growth, excessive debt poses substantial risks, especially in the face of unexpected losses or market downturns (Kisenge, 2012). High leverage can lead to heightened interest obligations that strain a firm's cash flow, potentially resulting in financial distress. Therefore, effective management of leverage is essential for insurance firms to maintain profitability and ensure long-term viability, particularly in an industry characterized by stringent regulatory requirements and intense competition. Studies indicate that understanding the balance between debt and equity financing is paramount for driving financial performance in the insurance sector (Babalola, 2013; Waweru & Riro, 2013).

Scholarly research has extensively examined the relationship between liquidity and financial performance, emphasizing that liquidity levels are fundamental to a firm's financial stability and operational efficiency. Adequate liquidity enables firms to meet short-term obligations without compromising their financial position, thus avoiding potential insolvency issues resulting from cash flow constraints (Mu et al., 2023). Additionally, liquidity is often interconnected with leverage, as a firm with excess debt may struggle with liquidity if it faces cash flow shortfalls. For instance, Ngwili (2014) highlights how maintaining a sound liquidity position allows firms to manage debt effectively, ultimately enhancing financial performance. Conversely, low liquidity can exacerbate leverage issues, placing the firm at greater risk of failing to service its debt obligations. Moreover, in environments where liquidity is scarce, firms

may be forced to rely heavily on external financing, thereby increasing their leverage and financial vulnerability (Charumathi, 2012).

Furthermore, firm size can play a significant moderating role in the relationship between liquidity, leverage, and financial performance. Larger firms often possess advantages such as greater access to financial resources, enhanced market power, and improved economies of scale. This financial prowess empowers them to manage liquidity and leverage more effectively compared to smaller firms. Waweru and Riro (2013) note that larger companies are generally more efficient and better equipped to absorb financial shocks, making them more resilient amid economic pressures. Increased resources also allow larger firms to conduct thorough market research and to develop more sophisticated risk management strategies, which can lead to improved financial outcomes. The buffering effect of firm size underscores the necessity of considering this variable when evaluating the dynamics between liquidity, leverage, and overall financial performance in the insurance sector.

In the context of Kenya, the insurance industry faces numerous challenges affecting its performance. Despite being a foundational component of the financial sector, insurance firms in Kenya have reported lower profitability and growth rates in comparison to other sectors such as banking and telecommunications. For example, recent statistics indicate a concerning trend whereby insurance companies struggle with low market penetration, with the insurance penetration rate standing at 2.7%, significantly below the global average of 6% (Insurance Regulatory Authority, 2017). Furthermore, insurers must contend with enhanced competition from both local and international players, ultimately impacting their ability to perform effectively (Muigai, 2018). Existing research often reveals gaps, particularly around the limited exploration of how liquidity affects performance metrics over extended periods. This study aims to address these gaps by investigating the influence of liquidity—on the financial performance of insurance firms in Kenya, while also examining the moderating role of firm size. By adopting a comprehensive approach that considers a larger sample size over an extended timeframe, the current research seeks to provide valuable insights into the intricate dynamics influencing financial performance in the insurance sector. Ultimately, identifying and analyzing these critical factors will contribute to a deeper understanding of how to optimize efficiency and profitability within the industry, providing actionable recommendations for policymakers, industry stakeholders, and investors aiming to enhance the overall performance of insurance firms in Kenya.

LITERATURE REVIEW

Theoretical Review

The study was echoed on Liquidity Preference Theory by Keynes, (1964) on the belief that an investor prefers short-term investments like treasury bills and other money markets products and not long-term investments like bonds and other equity capital market products due to the need to hold cash for transactional, precautionary and speculative purposes (Chen et al., 2020). The relevance of this theory to the in determining the effect of firm liquidity and financial performance of insurance firms is based on Marozva (2015) use of Liquidity Preference Theory in his argument that firm with high liquidity can easily take advantage of opportunities by making investments that can promote better returns. Ja'afar, et al., (2022) used Liquidity Preference Theory supporting the link between firm liquidity and performance of listed insurance firms. The greater the liquidity of an investment, the simpler it is to sell it quickly and at its full market value, when necessary, hence the high the firm profitability. However, critics of the theory ((Hazlitt, 1977; Parguez, 2008; Rothbard, 1962) argues that Investors and firms are encouraged to save their money so as to accumulate interests, however, according to Keynes (1964), what they get after saving is not interest but a reward to part with their money. wealthy individuals and organizations with numerous sources of income prefer long-term investments and zero-coupon bonds which do not offer periodical interests.

In addition, Modern portfolio theory by Harry Markowitz in 1952 was advanced by Elton and Gruber, (1997) proved the fundamental theorem of mean variance portfolio theory, namely holding constant variance, maximize expected return, and holding constant expected return minimize variance. Thus, the study is relevant in the study in discussing moderating effect of firm size (measured as natural logarithm of total assets) on relationship between underwriting risk, leverage, liquidity, equity capital and financial performance of insurance firms in Kenya based Sukharev, (2020) that The MPT mathematically formulates the concept of diversification in investing, with the aim of selecting a collection of investment assets that has collectively lower risk than any individual asset. This theory is relevant to the current study as it explains difference in firm size. Firms mainly issue an initial public offer and trade subsequently trades its shares in an exchange commission in order to obtain long term funding from the general public (Rutto, 2013). Some firms however, prefer to raise funds and to finance its operations from retained earnings, owners savings or debt as opposed to listing on securities exchange due to fear of diluting ownership (Waweru, 2014). Therefore, firms obtain their funding from different sources in accordance to the level of risk and return associated with the source of money under consideration. This is in unison with the modern portfolio theory which states that a firm will choose the option with the least risk among options faced with similar return. Equally a firm will

select the strategy with the highest return when faced with strategies with similar risks (Mutua, 2016). However, theory is not flawless, Critics and opponents of modern portfolio theory argue it cannot be relied upon since its judgment criteria only relies on the observations of a single period. However, most investments span over multi-period (Fama and French 1992; Hakansson, 1974; Merton, 1990).

Empirical Review and Hypothesis Development

The empirical research on the relationship between liquidity and the financial performance of insurance firms revealed a lack of consensus regarding the direction and degree of this influence. Several studies, including the work of Wani and Dar (2013), suggest that liquidity positively impacts profitability, while Kaya (2015) found an inverse relationship between the current ratio and profitability. Kaya concluded that low-liquidity firms can be more profitable than their higher-liquidity counterparts, indicating that firms should aim for a balance between liquidity and profitability. This finding aligns with research by Boadi et al. (2013), which posits that high liquidity can lead to increased agency costs, as managers may misuse excess funds for self-serving purposes, thereby harming the firm's financial performance.

Conversely, other studies have established a negative correlation between liquidity and financial performance. For instance, Sambasivam and Ayele (2013) found a negative linkage between the two variables, while Gebremariyam (2014) concluded that there was no concrete relationship between liquidity and profitability among insurance firms in Ethiopia. Research by Muhammad et al. (2016) produced varying results, indicating a negative correlation between liquidity and both return on assets (ROA) and return on equity (ROE). However, their findings suggested that while ROA increases with higher liquidity, ROE decreases, indicating that investor concern may center more on income generation rather than on liquidity levels alone. Adding to the discourse, studies like those conducted by Muriithi (2016) and Alomari and Azzam (2017) further explored liquidity's effects on performance, showing negative associations with financial performance in some contexts. Kinyua (2018) also found that liquidity had no significant effect on the profitability of insurance firms in Kenya, highlighting that firm size negatively impacts profitability. These inconsistencies call for a deeper exploration of the contextual factors that influence liquidity and performance relationships.

Moreover, in the Kenyan insurance sector, recent studies indicate a growing need for firms to reassess their strategies related to working capital management, market penetration, and asset accumulation. The findings suggest that liquidity plays a significant role in financial performance, yet the exact nature of this relationship remains complex and variable across different studies and contexts. Research by Ngunguni, Misango, and Onsiro (2020) illustrates

that while liquidity can positively influence profitability in Kenyan general insurance firms, it may not do so universally across all firms or contexts. In light of these findings, the current study proposed the following hypothesis.

H1: Firm liquidity has significant influence on the financial performance of the insurance companies in Kenya.

Previous research has yielded mixed results regarding the relationship between firm size and performance, with some studies indicating a positive correlation (Dang, Li, Yang, 2018) while others report a negative relationship (Hashmi, Gulzar, Khan & Akhtar, 2018). Despite these contradictions, the prevailing view in the literature supports the former perspective. Furthermore, as noted by Ebel Ezeoha (2018), these mixed results do not imply that size is simultaneously positively and negatively related to leverage; rather, they indicate the complexity of these relationships and the contextual factors that may influence them. Empirical evidence consistently suggests a connection between firm size and profitability (Kurshev & Strebulaev, 2015).

For instance, a study conducted in Indonesia by Kartika, Handayani, and Dwiputra (2016) examined the effects of firm size, current ratio, operating cash flow, and financial ratios on earnings per share (EPS) among 19 listed companies from 2010 to 2014. Their findings revealed that net profit ratio, debt ratio, turnover ratio, and firm size positively influence EPS, while the operating cash margin ratio negatively affected EPS, indicating the importance of size in operational success. In a contrasting finding, Oskouei and Zadeh (2015) identified a negative effect of firm size on future stock returns, although changes in EPS had a positive influence on expected stock returns, highlighting complexities in the size-performance relationship.

In Jordan, research by Taani and Banykhaled (2011) found a positive yet inconsequential correlation between company size and returns, while Martani, Malone, and Khairurizka (2009) concluded that profitability and market ratios positively impact stock returns, with no correlation found between debt ratios and firm size. In Iran, Vahid, Mohsen, and Mohammadreza (2012) reported that firm size positively affected profitability and organizational value, although firm leverage had a negative impact. This underscores the vital role of cash flow management and firm size in influencing organizational success, as they correlate with profitability, productivity, and liquidity.

Firm size is considered a primary factor affecting profitability, particularly through the lens of economies of scale as noted in the neoclassical view of the firm (Niresh & Velnampy, 2014). Larger manufacturing entities can achieve cost leadership compared to smaller firms, making size a crucial resource for competitive advantage regarding profits and market share. Meanwhile, Wainaina (2014) found positive and significant correlations between firm leverage,

size, and performance. However, the findings from Mwangi and Murigu (2015) indicated a negative correlation between size and profitability within insurance firms, and the study revealed no relationship between financial performance and variables such as age, retention ratio, and liquidity ratio. Given this backdrop, the hypothesis H2 posits

H2 firm size has a significant moderating influence on the relationship between firm liquidity and the financial performance of insurance firms in Kenya.

METHODOLOGY

Research Design

The study sought to quantitatively measure and explore the perceived relationship between firm liquidity and financial performance in the insurance sector. Employing a positivist research philosophy, the research was highly structured and utilized large samples, including a census of insurance firms. The study adopted a correlation research design, which facilitated an analysis of the independent variable (insurance firm liquidity) and its impact on the dependent variable (financial performance).

Target Population and Sampling Procedures

The target population for this study comprised all insurance firms operating in Kenya from 2010 to 2018. The list of firms was obtained from the websites of the Insurance Regulatory Authority and the Association of Kenya Insurers, as well as from their annual reports. As of December 31, 2018, a total of 54 insurance firms were identified, forming the complete target population for the study. Given the manageable size of this population, a census method was employed, which involves surveying the entire population rather than using sampling techniques. This approach ensured that comprehensive data were collected from all 54 firms, allowing for a thorough analysis of the relationship between liquidity and financial performance within the Kenyan insurance sector.

Data Collection Procedure

The data collection procedure involved systematically gathering secondary data over a ten-year period (2010-2018) from the Insurance Regulatory Authority, the Association of Kenya Insurers, and individual insurance firms using a data collection sheet. The collected data was organized into ten distinct yearly datasets to maintain a sufficient degree of freedom for analysis. A formal request was submitted to the IRA for additional information not available on their website. The researcher entered the data into an Excel spreadsheet and chose not to

engage a research assistant to ensure maximum accuracy and precision during this critical phase, thereby enhancing the reliability of the study's findings.

Variable Measurement

The study utilized Returns on Assets (ROA) as a measure of financial performance, indicating how effectively a firm's assets generate income, while also acknowledging Returns on Equity (ROE) for assessing the productivity of income within firm operations. ROA in this research was calculated as Earnings Before Interest and Tax (EBIT) divided by Total Assets. Firm liquidity was defined as an insurer's ability to meet financial obligations without selling assets below market value, and it was measured using the current ratio, calculated as current assets over current liabilities, following the methodology of Mwangi and Murigu (2015). Additionally, firm size was employed as a moderator, measured as the natural logarithm of total assets. Literature suggests that profitability is generally positively correlated with firm size, as larger firms tend to reduce costs and enhance asset profitability, although some studies indicate potential inefficiencies in asset utilization leading to a negative relationship between size and profitability (Baguley, 2012).

Data Analysis and Model specification

Data collected for purposes of this study was first cleaned, edited and coded using excel datasheet before being input to Stata statistical software. The study used panel data to establish the relationship among the study variables. STATA statistical software was used to sort, categorize and analyze the data. There are three panel data analysis techniques at the disposal of the researcher depending with the type of the panel data to be analyzed. The researcher chooses which model to use between FE and RE based on the nature of data to be analyzed. The recommended procedure is the use of the Hausman test, which involves running regression analysis on the data to determine whether the error term is correlated with the independent variables or otherwise. The researcher used the following equation for the purposes of the study at hand.

$$\ln(ROA_{it}) = \beta_{0it} + \beta_{1it} \ln LIO_{it} + \varepsilon_1 \dots\dots\dots 1$$

$$\ln(y_{it}) = \beta_{0it} + \beta_{1it} \ln LIO_{it} + \beta_5 FS_{it} + \beta_{2it} \ln LIO_{it} * FS + \varepsilon_2 \dots\dots\dots\dots 2$$

Where; ROA$_{it}$ = Returns on Asset of insurance i at time t, LIQ$_{it}$ = Liquidity of insurance i at time Ln= the natural log, α$_o$ = Constant return, $_{µit =}$ Composite error term β's = Coefficient of the Fs = firm size

FINDINGS AND DISCUSSION

The summary statistics for key financial metrics reveal important insights into the performance dynamics of insurance firms. The mean Return on Assets (ROA) stands at 0.05, indicating a relatively low level of profitability in relation to the assets utilized by the firms. This suggests that while firms are generating income, their efficiency in utilizing assets to create earnings may be limited. The overall mean liquidity level is 7.25, which suggests that firms possess a reasonable amount of liquid assets to cover short-term obligations; however, the high variability indicated by the standard deviation of 44.88 points to significant differences in liquidity across the sample firms. The mean leverage ratio of 0.66 indicates that, on average, firms are moderately leveraged, balancing between debt and equity financing. However, noteworthy is the negative correlation between liquidity and financial performance ($\rho = -0.244$, $p < 0.01$), which signifies that higher liquidity levels may correspond with lower financial performance in the context of this study. This could suggest that firms with excessive liquidity may not be utilizing their assets optimally, potentially tying up funds that could be invested elsewhere for greater returns. Moreover, the relationship between firm size and financial performance also demonstrates a negative correlation ($\rho = -0.292$, $p < 0.01$). This finding implies that larger firms may be experiencing diminishing returns or inefficiencies that negatively impact overall profitability. The skewness and kurtosis statistics further reveal a distribution that is highly peaked and skewed, indicating the presence of outliers and suggesting that extreme values may influence the average financial performance metrics reported.

Table 1 Descriptive Statistics

	Mean	Sd	Skewness	Kurtosis	Financial performance	Liquidity	Firm size
Financial performance	0.05	0.17	11.2	192.53	1		
Liquidity	7.25	44.88	20.09	418.06	-.244**	1	
Firm size	9.57	0.49	0.23	2.79	-.292**	0.055	1

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

Diagnostic Tests of the Data

The findings from the diagnostic tests confirm that the assumptions of the regression model used in this study are not violated. The inclusion of a constant term in the regression equation ensures that this assumption is consistently satisfied. Additionally, the model demonstrates no issues with heteroscedasticity, as indicated by a p-value of 0.157, which is greater than the significance threshold of 0.05. This implies that the error variance remains constant, leading to the conclusion that the null hypothesis regarding heteroscedasticity is not

rejected. The Jarque-Bera test for normality further supports this conclusion by showing that the residuals are normally distributed. With a chi-squared value of 0.6592 that exceeds the threshold value of 0.05, the null hypothesis regarding normality is upheld. Regarding multicollinearity, the correlation coefficients and Variance Inflation Factor (VIF) tests indicate that there is no significant concern in this regard. The VIF results range from 1.31 to 3.49, well below the threshold of 10 that would indicate potential multicollinearity issues. As reported by Dielman (2001) and Gujarati (2003), these findings suggest that the model is free from multicollinearity problems. Finally, the p-value for the Wooldridge test for autocorrelation in panel data is 0.4531, which is greater than the 5% significance level, suggesting the absence of autocorrelation in the errors. Previous research by Drukker (2003) and Maladjian and Khoury (2014) supports the reliability of this test, indicating that it performs well in reasonably sized samples. Overall, the diagnostic tests affirm the robustness of the regression model, providing a solid foundation for interpreting the results of the study..

Table 2 Diagnostic Tests

White's test for homoscedasticity	
chi2(1)	3.43
Prob > chi2	0.0639
Jarque-Bera normality test	
chi2(1)	0.8425
Prob > chi2	0.6562
Wooldridge test for autocorrelation in panel data	
F (1, 45)	4.242
Prob > F	0.4531
VIF test for Multicollinearity	
Mean VIF	2.34

Unit Root Test

A time- series is said to be stationary if its mean and variance are constant over time (Gujarati, 2004). Thus, the series tend to drift around its mean due to the limited variance. The series can be of a stochastic nature (randomly determined) or a deterministic nature (displaying a trend). In contrast a nonstationary time–series or a random walk model is one where the mean and variance continually change over time and has a simple correlation coefficient between the X variable and its lagged variable which is influenced by factors other than solely the length of the lag between the two (Studenmund, 2011). In the field of economics and finance, time related or seasonal shocks in one-time period may strongly influence subsequent periods. This study

applies Levin-Lin-Chu unit-root test, Harris-Tzavalis unit-root test and Im-Pesaran-Shin unit-root. The following hypothesis was considered for this test.

Levin-Lin-Chu unit-root test

Ho: Panels contain unit roots

Ha: Panels are stationary

Harris-Tzavalis unit-root test

Ho: Panels contain unit roots

Ha: Panels are stationary

Im-Pesaran-Shin unit-root test --

Ho: All panels contain unit roots

Ha: Some panels are stationary

The *p*-values in table 3 shows that the null hypothesis can be rejected at all conventional significance levels for all the variables of the study, meaning that there is no unit root in the data. This implies that the means and variances in the data do not depend on time, hence the application of OLS can produce meaningful results (Gujarati, 2012).

Table 3 Unit Root Test

	Levin-Lin-Chu unit-root test		Harris-Tzavalis unit-root test		Im-Pesaran-Shin unit-root	
	Statistic	**p-value**	**Rho**	**p-value**	**Z-t-tilde-bar**	**p-value**
ROA	-5.556	0.000	-0.308	0.000	-4.088	0.000
LIQ	5.134	0.000	-0.146	0.000	-5.428	0.000
FS	-3.046	0.001	0.454	0.000	-2.690	0.004

Random-Effects GLS Regression

Hausman test was used to select either the fixed or random effects, regression model, to test for the hypotheses (Green, 2008). From the Hausman test table 4, which shows a summary of the results, the conclusion is that the null hypothesis of "difference in coefficients not systematic" to determinants of financial performance is accepted. This is because the chi-square value of 1.22 was insignificant, p-value = 0.8754. Therefore, this implies that the effect of the hypothesis is tested using the random effects model.

The random effect model estimates the coefficients based on the assumption that the individual or group effects are uncorrelated with other independent variables. The regression results for the random model are as illustrated in Table 4. The random model showed that liquidity explained 61.86% variation of financial performance.

Hypothesis 1 stated that liquidity has significant effect on financial performance. The regression results indicated that liquidity had a negative and significant influence on financial performance (β_2= -0.09, ρ<.05). The null hypothesis was therefore was accepted, and it was concluded that an increase in liquidity by 0.086 units leads to a decline in financial performance by the same unit. In conformity with the findings, Kaya (2015) proved that low liquid firms are more profitable than highly liquid firms. Similarly, Boadi et al., (2013) concluded that high liquidity can be detrimental to the financial performance of an insurance firm since it exposes it to reinvestment risk. In the same way, Mwangi and Murigu (2015) elucidated that there is a negative linkage between the liquidity and insurance firms financial performance. In a similar vein, Muhammad et al. (2016) affirmed that liquidity negatively impacted on the profitability of insurance firms. Moreover, Muriithi (2016) suggested that liquidity negatively impacted on the firm financial performance. However, the findings are in contrary to authors who argued that liquidity has a positive and significant influence on profitability (Wani and Dar, 2013; Charumathi, 2012; Abebe & Abera, 2019; Kipngetich, 2019; Maina, 2016; Mazviona, Dube & Sakahuhwa, 2017; Bawa & Chattha (2013). In addition, Gebremariyam (2014), inferred there was no concrete relationship between liquidity and profitability of the 10 insurance firms that operated in the Ethiopian market between 2008 and 2013. The same notion is shared by Alomari and Azzam (2017) who found out that liquidity had no significant effect on the profitability of the targeted insurance firms.

Hypothesis H_2 stated that firm size has significant moderating influence on the relationship between liquidity and financial performance of insurance firms. Findings on LIQ*FS had negative significant estimates of -.1.20, p<0.05 and there was change of R-sqΔ =.01, thus, the hypothesis was accepted. Firm size has a negative and significant moderating effect on the relationship between liquidity and financial performance (β= -1.23; ρ<0.05). The implication is that firm size weakens the relationship between liquidity and financial performance. It could mean the insurance firms are still not in a position to enjoy sustained liquidity levels to enhance the financial performance.

Table 4 Random-Effects GLS Regression

ROA	Model 1 Coef (S. Err.)	Model 2 Coef (S. Err.)	Model 6 Coef (Std. Err.)
LIQ	-0.09(.04) **	-0.06(,04)	2.65(1.37) *
FS		-6.74(2.09) **	15.71(18.74)
LIQ*FS			-1.20(.60) *
_cons	-2.16(1.32)	11.68(3.55) **	-43.75(.42.31)
R-sq:			
within	0.60	0.62	0.63

between	0.63	0.64	0.65	Table 4…
overall	0.62	0.63	0.65	
R-sqΔ		0.01	0.02	
Wald chi2(10)	614.58	666.32	675.16	
Prob> chi2	0.000	0.000	0.000	
sigma_u	0.66	0.65	0.67	
sigma_e	0.81	0.79	0.79	
Rho	0.40	0.40	0.42	
Hausman test				
chi2(4)	1.45	1.22	1.08	
Prob>chi2	0.6208	0.8754	0.7441	

**significant at 0.01 level; *significant at 0.05 level*

Key:, LIQ = liquidity, FS=firm size,

In order to better understand the nature of the interactions between firm size and liquidity, the moderated results are presented on a moderation graph as suggested by Aiken and West (1991) The findings are shown in Figure 1.
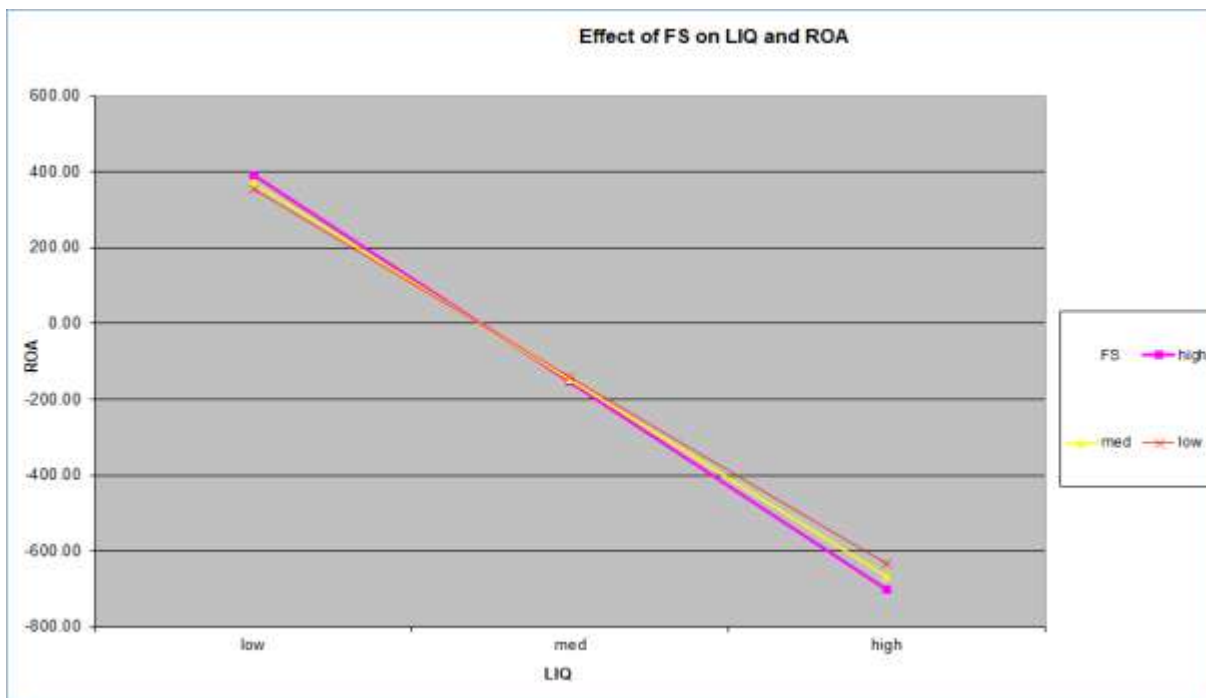

Figure 1 Modgraphs for Moderating Effect of Firm Size on the Relationship between liquidity and Financial Performance

Figure 1 demonstrated that an increase in firm size brought about a negative slope between liquidity and financial performance. This implied that firm size negatively and significantly moderates the relationship between liquidity and financial performance.

CONCLUSION

In conclusion, liquidity negatively and significantly influenced the financial performance of insurance firms. As such, an increase in liquidity would bring about a decline in financial performance. It could be that there is limited utilization of asset and liability strategies to improve on the financial performance. Consequently, the insurance firms are not in a position to take advantage of profitable investment opportunities. Further, when moderated with firm size, liquidity has a negative influence on financial performance. This concludes the large the insurance firms, the more liquidity reduces financial performance. This implies that the large the insurance firm, the high the obligations, hence the in ability of the firm to effective management its day-to-day operations resulting in decline of firm's profitability.

RECOMMENDATIONS

The study has brought to fore the negative relationship between liquidity and financial performance of insurance companies. Therefore, it is crucial for insurance firms to conduct effective liquidity management to maximize the value of the company and its financial performance. Emphasis needs to be on ensuring there is an appropriate asset-liability mix in that the total liabilities must not exceed the total assets of a firm. Besides, the firms need policy guidelines for cash flow to maximize the profit potential, while minimizing the liquidity risk in the financial statement.

Finally, large insurance firms, have liquidity which negatively affect financial performance. Despite increase in firm size being reported as key determinants for financial performance due to increase in economic scale, it can also results diseconomies of scale and reduce the firm's profitability. Further, it also concludes that the financial performance decreases moderately with the increase in liquidity in Kenya insurance companies. Thus, Thus, in order to optimize profit, the companies should focus on the management of their total asset, long-term investment, current assets and current liabilities. The study sheds light upon the fact that insurance companies that operate in Kenya benefit more when they maintain liquid assets. The increase in observations in secondary data or the inferences drawn from the respondents might have brought the conclusive effect of liquidity on financial. Insurers should maintain an ideal level of asset, which will result in increased profitability. Insurers should think about investing in high-return projects.

FURTHER STUDIES

This study dwelt on influence of liquidity on the financial performance of insurance firms in Kenya. The study relied heavily on the secondary data collected from the Insurance

Regulatory Authority and the credibility and integrity of these data cannot be guaranteed to be flawless. A similar study may be done in future and primary data to be used as opposed to secondary data.. The study covered only liquidity. In future a similar study would be appropriate using other firm characteristics like solvency, firm size and firm age as well as the tangibility of assets. A similar study can be done on industry specific factors of insurance sector, and incorporate macroeconomic factors such inflation, fiscal and monetary policies effected by the government as well as the level of unemployment and the exchange rate.

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