

LIQUIDITY EFFECT ON FINANCIAL PERFORMANCE OF CONVENTIONAL AND ISLAMIC BANKS IN KENYA: A COMPARATIVE STUDY

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Abstract: *This study explores the comparative performance of conventional and Islamic banks in Kenya, focusing on the impact of liquidity management on their financial outcomes. The banking industry, crucial for economic growth, includes conventional banks and Islamic banks, the latter operating under Sharia-compliant, interest-free principles emphasizing profit-sharing and ethical practices. Islamic banks have grown rapidly due to their unique financial systems and ethical focus, contrasting with profit-maximizing conventional banks. Despite the global success of Islamic banking, Kenyan Islamic banks have underperformed financially compared to their conventional counterparts over the past five years. A cross-section purposeful sample based on registration with the Nairobi Security Exchange and Sharia compliance yielded a sample of 14, of which 11 were conventional and 3 Sharia-compliant banks. The period of study was 2015 – 2021. Secondary data was collected from the banks' websites. The collected data was subjected to descriptive, diagnostic, and specification tests and treated of any abnormalities with time series/panel data. The panel least squares approach was utilized for analysing the data using the eviews software. The findings reveal that liquidity negatively impacts conventional banks' financial performance while positively affecting Islamic banks. These results underscore the distinct dynamics between the two banking systems and suggest that tailored liquidity management strategies are crucial for optimizing performance in each sector. The study concludes with recommendations for improving liquidity management practices to enhance financial performance in both conventional and Islamic banks in Kenya.*

Keywords: *Conventional banks, Islamic banks, Riba, Liquidity, Financial performance*

INTRODUCTION

A robust banking industry is crucial for a country's economic growth, serving as the backbone of a well-functioning economy. It facilitates financial development, fund circulation, job creation, business transactions, and global economic participation. Banks play a vital role in creating a secure society by enabling customers to engage effectively in economic activities. The distinction between conventional/commercial banks and Islamic banks has gained prominence in the literature. Islamic banks operate under the Islamic banking system, which is a partnership between customers and financial institutions. The system prohibits the charging of interest (riba) and involves a profit-sharing arrangement between the two parties. Established in the 1970s, this system contrasts with conventional banking by emphasizing ethical and Sharia-compliant practices. Islamic banks differ from conventional banks as they prioritize ethical principles over profit maximization. They avoid interest rates and focus on cash transactions, viewing money as a medium of exchange rather than a commodity.

This approach has led to their rapid growth globally, with increasing preference over traditional banking systems.

Various empirical studies have identified size, efficiency, credit risk, capital adequacy, operational costs, asset quality, and liquidity as some of the internal factors that affect bank performance. Results on the internal drivers that drive bank performance are mixed. The comparative performance of Islamic and conventional banks varies. Islamic banking's global benefit pool was projected to quadruple by 2019, reaching \$1.8 trillion in six key countries, including Qatar, Saudi Arabia, the United Arab Emirates (UAE), Indonesia, Malaysia, and Turkey. From 2009 to 2013, Islamic banking assets grew at a CAGR of around 17%. Total assets were expected to surpass \$778 billion in 2014 and hit \$1.8 trillion by 2019. The total projected gross deposits in Islamic banks across several countries, including Pakistan, was 15 billion PKR.

The Islamic banking system has experienced significant growth in the past few decades, especially in the last ten years. It has gained global acceptance, particularly in regions like the Middle East, Southeast Asia, East Africa, Europe, and North America. Islamic banks target clients who follow Islamic principles and those who avoid interest (riba). These banks were established to offer services without charging interest due to Islamic prohibitions. They introduced innovative systems like Profit and Loss Sharing (PLS) and various sales contracts to comply with Islamic values. Islamic finance involves various forms of equity financing, such as musharakah and mudharabah. These instruments focus on joint financing among partners and sole financing by the financier, respectively. They replace interest-based debt with profit-sharing systems, emphasizing equity and mutual sharing of gains and losses in Shariah-compliant banking. The Bank Negara of Malaysia highlighted the successful implementation of Islamic banking principles in African countries, contributing significantly to their economic progress. This integration has led to market expansion and regulatory advancements. Many African nations have established legal frameworks to support Islamic banking within their financial systems.

STATEMENT OF THE PROBLEM

Full-fledged Islamic banks in Kenya have had a dismal financial performance compared to conventional banks over the last five years (Kamotho, 2022; Njoka, 2022). This may be attributed to the fact that these banks strictly adhere to Sharia Law, which prohibits them from collecting interest in favor of profits instead (Kamotho, 2022; Njoka, 2022). For example, Dubai Islamic Bank's Return on Assets (ROA) was -32.15%, -16.6%, -8.8%, and -5.22% in 2017, 2018, 2019, and 2020, respectively (CBK, 2021). Return on assets for Gulf African Bank came in at 0.6% for the year 2019 and 0.9% for the previous year, respectively (CBK, 2021). According to Parashar and Venkatesh (2010), some writers believe that Islamic banks are safer than conventional banks because of the product structure of Islamic banks, which is essentially asset-backed finance. It has been seen that Islamic banks have outperformed conventional banks in terms of maintaining their existence and flourishing financially. According to Beck et al. (2010), Islamic banks, for instance, were able to keep their capitalization and liquidity reserves at higher levels while sustaining significant losses during the global financial crisis of 2008. Conventional banks, as compared to Islamic banks, had poor financial performance during the global financial crisis in terms of return on assets and liquidity (Parashar & Venkatesh, 2010).

Empirically, Onyekwelu et al., (2018) found a positive significant effect between liquidity and performance of conventional banks in Nigeria. Sathyamoorthi, Mapharing and Dzimiri (2020) found a statistically significant

positive correlation between liquidity and financial performance of Banks in Botswana. In Nepal Radhe and Shrestha (2017) found a negative relationship between liquidity and financial performance, indicating that a higher liquidity in the Islamic bank leads to lower return on equity. In Kenya, Lukorito et al (2014) found a statistically significant positive effect of liquidity on bank financial performance. Majakusi (2016) also found a positive association between proper management of liquidity and a high return on assets (financial performance). Ongore and Kusa (2013) studying the effect of several variables on bank financial performance found that all except liquidity had a significant effect on financial performance. Osoro and Kiplangat (2022) show that there is a strong trade-off between liquidity and bank's financial performance, and that this trade-off is amplified during shocks and sensitive to bank size.

Existing literature on the effect of liquidity on financial performance in banks, particularly in the Kenyan context, reveals several key gaps. Conceptually; previous studies have largely focused on external macroeconomic factors, while the impact of internal factors such as liquidity remains under-explored, suggesting a need for more research in this area (Al-Tamimi, 2020). Contextually, a comprehensive comparative analysis of the effect of liquidity on conventional and Islamic banks, is missing (Naceur & Kandil, 2019). Methodologically, there's a deficiency in the application of robust comparative methods that can disentangle the complex dynamics between liquidity and financial performance in these two types of banks (Pervan et al., 2019). The researcher got interested in examining liquidity as one of the basic elements that led to the financial performance gaps between conventional banking and Islamic banking. In addition, Halkano (2012), who asserts that Kenyan Islamic banks are more liquid and less risky than their Conventional counterparts, further underscores the significance of this comparative study by filling the gap as to why Islamic banks perform better than conventional not only in Kenya but elsewhere. To fill some of these gaps in literature the current study empirically tests the differences in the financial performance of conventional and Islamic banks in relation to liquidity.

LITERATURE REVIEW

The two basic theories of liquidity management that are relevant to this study are the commercial loan theory (attributed to George S. Dreyer, 1920s) and the shift-ability theory (developed by Thomas S. Schelling in 1978). The commercial loan theory was established as a result of term loans that commercial banks in the United States granted to borrowers (Taiwo, Ucheaga, Achugamonu, Adetiloye, and Okoye, 2017). According to the commercial loan theory, banks should only issue short-term loans on self-liquidating commercial paper in order to effectively impact both the lending institution and general economic activity (Hosna and Masra as cited in Taiwo et al., 2017). On the other hand according to Moulton's shift-ability theory of liquidity from 1915, assets should not only be retained in self-liquidating bills but also in other shift-able open-market assets such as treasury bills and bills of exchange (Moti et al., 2012). According to Taiwo et al., (2017), these ideas are relevant to our investigation because they show how the liquidity of a bank is dependent on the bank's ability to transfer its assets to a third party at a price that is predictable.

Empirical literature on the effect of liquidity on the performance of both conventional and Islamic banks has mixed results. Most studies have paid attention on the Conventional banks offering Islamic banking products in Kenya. More recent studies such as Zahid and Basit (2018) and Nomran and Haron (2020) have been carried out in other countries such as Pakistan, Malaysia; among other countries internationally. Locally, recent studies by Chepchirchir et al., (2019) and Odongo and Muchelule (2019) focused on Islamic banking and financial

performance of Commercial banks. These findings may not necessarily capture the situation that exists in the banks that fully comply with Islamic laws. This is because Conventional banks integrate other principles of banking and hence other factors other than Islamic products influence their financial performance. As a result, there is a need to do a comparative study on the effects of the Conventional and Shariah compliant banks (Islamic Banks) on financial performance.

Sathyamoorthi, Mapharing, and Dzimiri (2020) conducted a study in which they evaluated the impact of liquidity management on the financial performance of commercial banks in Botswana by the use of regression analysis. According to their results, a statistically significant positive correlation exists between the ratios of loans to total assets and liquid assets to total assets with return on assets and return on equity. This association holds true for both ratios. In addition, there were statistically significant negative linkages between Return on Assets and Return on Equity and the Loans to Deposits Ratio and the Liquid Assets to Deposits Ratio. These links existed between the ratios of loans to deposits and liquid assets to deposits. The ratio of cash and cash equivalents to total assets exhibited a statistically insignificant positive relationship with both return on equity and return on assets, whilst the ratio of cash to deposits showed a statistically insignificant negative correlation with return on equity and return on assets.

Salim and Mohamed (2016) conducted research to determine how liquidity management affects the financial performance of the Omani banking system. In this research, a sample of four local commercial banks was used to investigate the connection between liquidity and financial performance over the course of five years, beginning in 2010 and ending in 2014. The information was gleaned from the yearly reports of the bank via the use of multiple regression analysis. According to the findings of the study, there is a significant connection between the ratio of loans to total assets held by the bank, the ratio of illiquid assets to liquid liabilities, and the bank's return on assets (ROA), the ratio of liquid assets to deposits, the ratio of liquid assets to short-term liabilities, and the bank's return on equity (ROE), and the correlation between the bank's loans to total assets, loans to customer deposits, and total assets and ROAA. The study, on the other hand, did not find any link between the amounts of liquidity maintained by Omani banks.

Researchers from Majakusi (2016) looked at the effect that liquidity management has on the financial performance of commercial banks in Kenya. The study used a descriptive research approach for its investigation. The range of years covered by the sample was from 2010 to 2014. This analysis made use of secondary data obtained from the website of the Central Bank of Kenya (CBK). According to the findings of the study, there is a considerable association between proper management of liquidity and a high return on assets.

RESEARCH METHODOLOGY

The study employed a longitudinal descriptive research design with a target population comprising 38 banks registered in Kenya as of December 31, 2021 (CBK, 2022). This approach was ideal because the study intended to gather comprehensive information through descriptions that are helpful for establishing how the highlighted variables impact the financial performance of conventional and Islamic banks in Kenya between the years of 2015 and 2020. A sample of 14 banks, consisting of 11 conventional banks and 3 Islamic banks, was selected based on the criteria that they needed to be registered on the Nairobi Stock Exchange and have data available for the research period of 2015–2021. Secondary data were collected from the banks' annual reports using a standardized data collection sheet. Quantitative analysis was performed on the data that was obtained by using

the eviews program. In order to properly analyze the data, both descriptive and inferential analysis were necessary.

The following analytical models were utilized in analyzing the data:

$$ROA_{cit} = \beta_{c0} + \beta_c LQ_{cit} + \varepsilon_{cit} \dots\dots\dots(1)$$

$$SCnP_{iit} = \beta_{i0} + \beta_i LQ_{iit} + \varepsilon_{iit} \dots\dots\dots(2)$$

Where; ROA_{cit} = Return on assets for conventional bank i at time t;

$SCnP$ = Sharia compliant profit sharing for islamic bank i at time t;

LQ_{cit} = Liquidity of conventional bank i at time t;

LQ_{iit} = Liquidity of Islamic bank i at time t ;

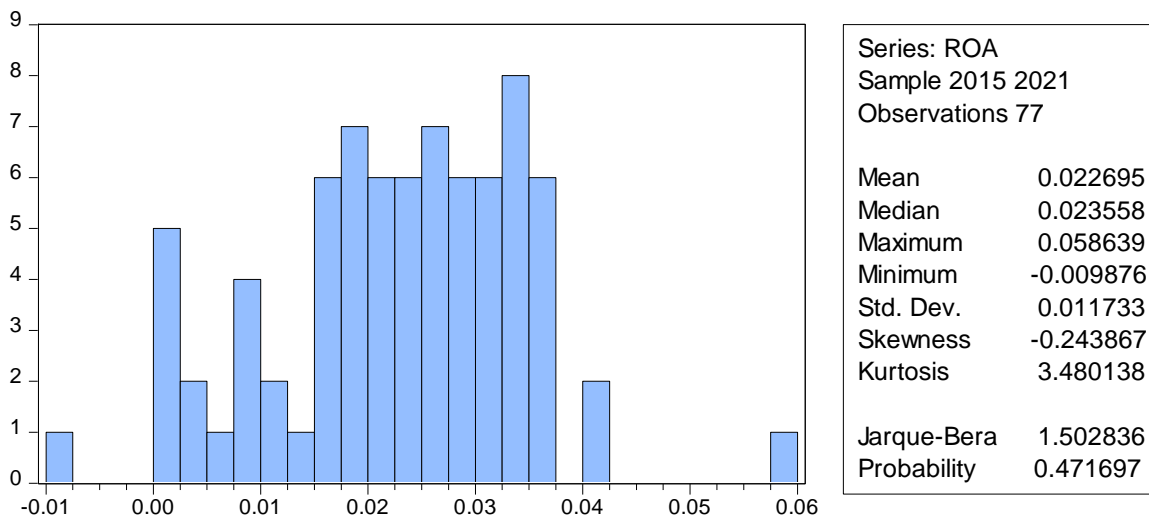
$\beta_{c0}, \beta_{i0}, \beta_c, \beta_i$ = Regression coefficients

RESULTS AND DISCUSSIONS

Descriptive Statistics

Data was checked and adjusted for any missing values. Jarque – Bera test statistics was used to test the normality of the variables. ROA was found to have a Jarque – Bera test –statistic of 1.502836 with a p-value of 0.471697 leading to failure of rejection of null hypothesis of normality in the data and a conclusion that the ROA data was normally distributed and therefore suitable for parametric testing.

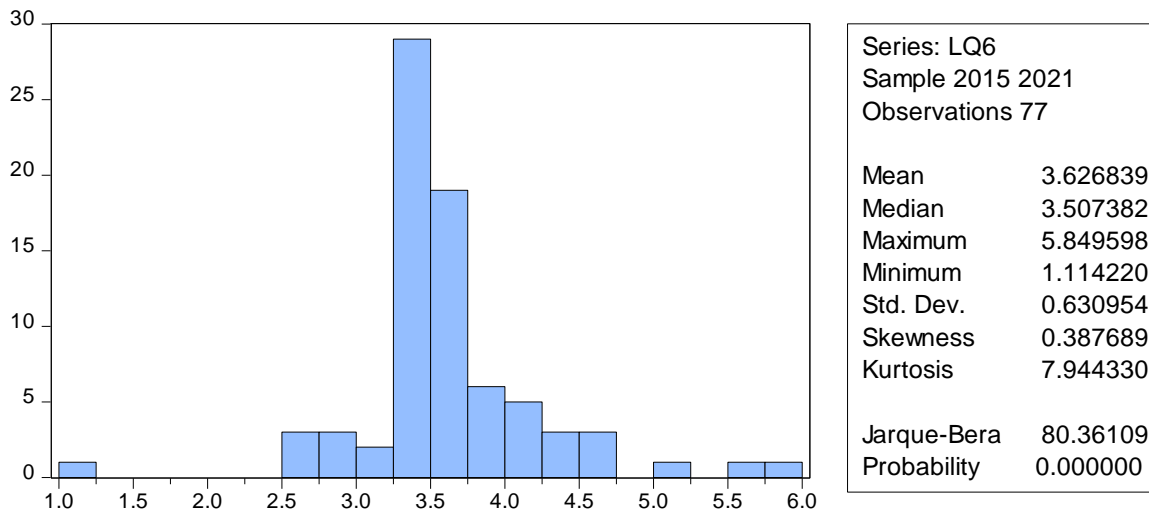
Figure 1: ROA series Descriptive Statistics



The LQ conventional bank data was found to be not-normal with a skewness of -2.333514 and kurtosis of 18.21412. In order to deal with the problem of the high value of kurtosis the data was transformed by use of the exponential equation, to obtain a new variable, $LQ_6 = \exp(LQ)$ that yielded skewness and kurtosis values

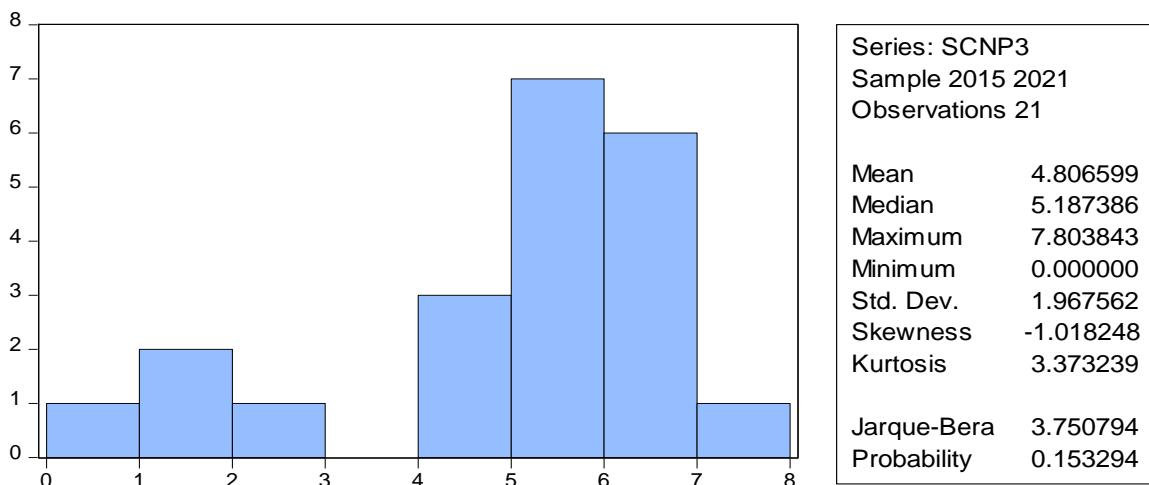
of 0.387689 and 7.94433 respectively which were both less than $|10|$ and therefore indicating that the data had become approximately normal and suitable for parametric testing (Ooko, Githui & Omurwa, 2018).

Figure 2: LQ Conventional Series Descriptive Statistics



The SCNP Islamic banks data was found to be non-normal with a skewness of 2.856171 and kurtosis of 11.18635. A logarithmic transformation, $SCNP3 = \text{Log}(SCNP)$, was used to obtain a new variable that yielded a Jarque–Bera test statistic of 3.75794 with a probability value of 0.153294 indicating that the transformation had yielded a normally distributed data suitable for use in parametric testing. The LQ Islamic bank data was found to be non-normal with a skewness of -3.358047 and kurtosis of 14.23288. An exponential transformation, $LQ1 = \exp(LQ)$, was used to yield lower values of skewness and kurtosis at -2.591798 and 10.41949 respectively that were less than $|10|$ indicating that the data series became approximately normal and therefore suitable for parametric testing (Ooko et al., 2018).

Figure 3: SCNP Islamic Series Descriptive Statistics



Diagnostic and Specification Tests for Conventional Banks

The Hausman’s test was conducted for both conventional and Islamic banks. For conventional banks, the test resulted in a significant chi-square statistic (34.732135), indicating that the null hypothesis of a random effect model was rejected in favor of the fixed effect model. Stationarity tests were performed on liquidity series data for conventional banks using the Levin, Lin, and Chu test. The test statistic was -4.59909, with a p-value of 0.0000, suggesting that the data was stationary at the level.

Normality testing for conventional banks, conducted through the Jarque – Bera test statistic, yielded a statistic of 1.380638 with a probability of 0.501416, indicating a lack of evidence for dismissing the null hypothesis of normality.

Similarly, for Islamic banks, the Hausman’s test favored the adoption of the fixed effect model. Stationarity tests on the SCNP series data showed a Levin, Lin, and Chu test statistic of 0.95178 with a p-value of 0.8294, indicating insignificance and non-stationarity at the level. The liquidity series data for Islamic banks displayed a Levin, Lin, and Chu test statistic of 8.43745 with a p-value of 1.0000, suggesting non-stationarity at the level. Normality testing using the Jarque – Bera test statistic yielded a statistic of 0.042613 with a probability of 0.978919, indicating that the panel regression residuals in Islamic banks data were normally distributed.

FINDINGS

Based on the two analytical models, separate findings on the effect of liquidity on performance of conventional banks and Islamic banks, are respectively discussed below.

Findings on Conventional Banks

Table 1: Findings – Conventional Banks

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.0415	0.0092	4.5374	0.0000
LQ6(-1)	-0.0047	0.0021	-2.2353	0.0298
R-squared	0.7340	Durbin-Watson stat		2.3280
F-statistic	10.0512	Prob(F-statistic)		0.0000

Table 1 demonstrates that the regression constant, C, for conventional banks was 0.041544 with a probability of 0, indicating that it was substantial at all levels of significance in explaining the changes in ROA. The findings indicated that liquidity had a statistically negative and significant impact on financial performance (= -0.004656, p=0.0298 >.05). This indicates that a unit increase in liquidity in conventional banks is anticipated to result in a reduction in the financial performance (ROA) of the bank by a value of -5.37%. In light of this, with regard to the null hypothesis, namely;

H_{01} : *Liquidity has no statistically significant effect on the financial performance of conventional banking Institutions in Kenya.*

Since the p-value of 0.0298 is less the 0.05 significance level, the null hypothesis was rejected in favour of the alternative. Thus liquidity had a significant negative effect on performance of conventional banks in Kenya. The findings of this study are in agreement with those of Majakusi (2016) and Salim and Mohamed (2016), who discovered that there were variations in financial performance, although both liquidity management and capital adequacy reported a consistent rise. This relationship was also statistically significant, but it is in contrast to the findings of Sathyamoorthi, Mapharing, and Dzimiri (2020), and Majakusi (2016), who discovered that individual liquidity management drivers had an overall beneficial effect on the financial performance of commercial banks in Mogadishu, Somalia. These researchers found that liquidity management drivers had a positive influence on the financial efficiency of commercial banks.

Findings on Islamic Banks

Table 2: Findings – Islamic Banks

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-5.5636	2.3205	-2.3976	0.0310
LIQ3	0.9508	0.4279	2.2219	0.0433
R-squared	0.8906	Durbin-Watson stat		1.9954
F-statistic	18.9870	Prob (F-statistic)		0.0000

Based on the findings shown in Table 2, it can be seen that the regression constant, denoted as C, for Islamic banks was calculated to be -5.563610. The associated probability value of 0.0310 suggests that this coefficient is statistically significant at the 5% significance level, showing its capacity to effectively explain variations in SCnP. The results of the regression analysis indicated that liquidity had a statistically significant positive effect on the financial performance of Islamic banks ($\beta = 0.950757$, $p = 0.0433.05$). This implies that a marginal increase in liquidity inside Islamic banks is associated with a corresponding gain of 0.950757 units in financial performance, as measured by SCnP. Regarding the equivalent null hypothesis, specifically;

H_{01} : *Liquidity does not have a significant impact on the financial performance of Islamic banking institutions in Kenya.*

The findings in Table 2 exhibits a higher explanatory power with an R-squared value of 0.8906, compared to 0.7340 in Table 1. This suggests that the variables in Table 2 explain a larger proportion of the variance in the dependent variable, indicating a better fit.

Both Tables have statistically significant coefficients, but the signs differ for the intercept term (C). In Table 1, the intercept is positive (0.0415), while in Table 2, it is negative (-5.5636). Additionally, both models show

that their primary predictor variables (LQ6(-1) in Table 1 and LIQ3 in Table 2) are significant, with p-values less than 0.05.

The Durbin-Watson statistics for both models are close to 2 (2.3280 for Table 1 and 1.9954 for Table 2), indicating no significant autocorrelation in the residuals. This enhances the credibility of the models' results.

Both models are highly significant overall, as evidenced by the F-statistics and their associated p-values (10.0512, $p=0.0000$ for Table 1 and 18.9870, $p=0.0000$ for Table 2). However, the higher F-statistic in Table 2 suggests a stronger overall model.

In conclusion, while both models are statistically significant and reliable, the model in Table 2 demonstrates superior explanatory power and overall fit. The difference in the signs of the intercept coefficients between the two models suggests different underlying dynamics captured by each model. Therefore, depending on the context and specific variables involved, the model in Table 2 may provide a more robust framework for understanding the relationship between the variables analyzed. These results contrast that Nourrein and Mennawi (2020) who found no significant effect of liquidity on financial performance of Islamic banks in Sudan.

CONCLUSIONS

Based on the research findings, it can be concluded that liquidity had a statistically significant negative effect on the performance of conventional banks in Kenya. Conversely, it had a statistically significant positive effect on the performance of Islamic banks in Kenya during the period under study. These contrasting effects suggest that the effect of liquidity management on performance differs between conventional and Islamic banking sectors in Kenya.

It can thus be recommended that; conventional banks should review and adjust their liquidity management strategies to mitigate the negative impact observed on their performance. This may involve more efficient cash flow management, diversification of liquid assets, and closer monitoring of liquidity ratios. Additionally, they should prioritize robust risk management practices, stress testing liquidity positions under various scenarios, and implementing contingency plans to address potential liquidity shortages.

Islamic banks, which experienced a positive impact of liquidity on performance, should capitalize on this advantage by actively seeking profitable investment opportunities that align with Sharia principles. This could involve expanding financing activities in sectors with high demand for Sharia-compliant products, such as Islamic finance instruments. Furthermore, both sectors can benefit from collaborating and sharing best practices in liquidity management to optimize their strategies. Establishing forums for knowledge exchange and collaboration can facilitate mutual learning and help both sectors enhance their liquidity management practices.

Continuous monitoring and evaluation of liquidity management practices are essential for both conventional and Islamic banks. Regular reviews of liquidity metrics and performance indicators can provide valuable insights for making timely adjustments to liquidity management strategies as market conditions evolve. By implementing these recommendations, banks in Kenya can better navigate the challenges and opportunities associated with liquidity management, ultimately enhancing their overall financial performance and resilience in the banking sector.

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