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Assessing the Impact of Liquidity Ratio Requirements on the Financial Performance of Commercial Banks in Kenya

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Capital Adequacy Ratio Requirement, Cash Reserve Ratio Requirement, Financial Performance, Liquidity Ratio Requirement, and Loan Deposit Ratio Requirement

In practice, some commercial banks in Kenya are presently facing liquidity challenges for instance the National Bank, Consolidated Bank, and Development Bank of Kenya. For instance, as of December 2017, the Development Bank of Kenya posted a negative liquidity position at 21.6% against the required legal threshold of 20%. For the National Bank of Kenya, the close of 2017 saw the total deposit liability standing at negative 5.5%, while core capital to total assets averaged negative 7.9%. As of 2018, NBK registered a drop in profit by 84% to stand at Kshs. 21.97 billion. The findings were that liquidity ratio requirements ($\beta=0.345$, $p<0.05$); cash reserve ratio requirement ($\beta=-0.008$, $p<0.05$); loan deposit ratio requirement ($\beta=-0.020$, $p<0.05$) & capital adequacy ratio requirement ($\beta=0.032$, $p<0.05$) are significant predictors of financial performance of commercial banks in Kenya. The study concludes that liquidity requirements are a significant predictor of the financial performance of commercial banks in Kenya. The study recommends that finance managers of commercial banks in Kenya should strive to balance current assets and current liabilities to ensure they meet their obligations as they arise. The marketing managers of commercial banks in Kenya should invest more efforts in acquiring more customers for increased mobilisation of deposits. The loan officers and credit managers working in the commercial banks in Kenya should speed up the process of credit appraisal of customer loan application process to increase the uptake of loans which are key sources of interest income to these institutions. The shareholders of the commercial banks in Kenya should ensure that their institutions are adequately capitalised so that they are able to withstand inherent shocks occasioned by liquidity constraints likely to negatively impact financial performance. The findings are expected to shed more light on the critical role played by liquidity requirements as far as financial stability and resilience of the banking sector in Kenya are concerned.

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INTRODUCTION

The challenges of increased global competition mean that firms must effectively forecast and manage their cash flows so as to generate more profits and survive. Firms are placing more emphasis on liquidity since it has been shown to allow smooth operations (Daryanto, Samidi & Siregar, 2018). In fact, liquidity has been recognised as one form of short-term source of finances that firms are leveraging on to generate revenues hence financial performance (Armas, Castillo & Vega, 2014). Globally, adequate liquidity has been associated with the effective functioning and operations of the firm. In particular, liquidity requirements are essential for commercial banks that participate in lending and the creation of credit in an economy (Demirgunes & Ucler, 2017). This explains why commercial banks are required to disclose their assets and other securities in their balance sheets at the end of every financial year. However, Almazari and Alamri (2017) noted that strict liquid requirements for commercial banks could have a negative influence on credit creation and lending in general.

One of the factors that determine the resilience of the banking sector around the world is liquidity

requirements. Liquidity requirements ensure that the bank withstands shocks and unforeseen changes in the environment while ensuring the deposits of the customers are properly protected so that it is able to exercise its intermediation role (Bagh, Razzaq, Azad, Liaqat & Khan, 2017). Liquidity requirements also ensure that the bank meets all the outflow commitments as they fall due and remain within the provisions of liquidity established by regulatory bodies in an economy (AlAli, 2019). Liquidity requirements can be well understood in terms of their applicable ratios, which include liquidity ratio, loan deposit ratio, cash reserve ratio, capital adequacy, interest coverage, quick ratio, cash ratio, and current ratio (Madushanka & Jathurika, 2018).

There are 39 fully operational commercial banks in Kenya. However, some of these banks are currently facing challenges with their financial performance. Some of these banks include the National Bank of Kenya, Consolidated Bank as well as Development Bank of Kenya. For instance, as of December 2017, the Development Bank of Kenya posted a negative liquidity position at 21.6% against the required legal threshold of 20%. For the National Bank of Kenya, the close of 2017 saw the total deposit liability

standing at negative 5.5%, while core capital to total assets averaged negative 7.9%. As of 2018, NBK registered a drop in profit by 84 percent to stand at Kshs. 21.97 billion (Hashi, 2019). Therefore, it is against this background that the current study seeks to analyse whether liquidity requirements have contributed to the financial performance of commercial banks in Kenya.

LITERATURE REVIEW

Globally, Kisman and Sawitri (2019) did a study on liquidity ratio, growth in assets, and solvability on stock returns. The study had the intervening variable as profitability and it was conducted in Indonesia among construction-listed firms. The study gathered information from auxiliary sources covering a period from 2014 to 2018. Specifically, the study looked at the role played by micro as well as macroeconomic factors on the returns of stocks by carrying out a theoretical and empirical review. From this review, the study noted that variables like profitability, growth of assets, solvability, and liquidity have an effect on the returns of stock of the entity. However, this study was conducted in Indonesia among construction firms and not in the banking sector.

Using the automobile sector, Noor & Lodhi (2015) looked at the liquidity ratio and how it impacts the profitability of an entity. In this study, the current ratio was used to operationalise the liquidity ratio and information was gathered from secondary sources. The study noted that liquidity problems in the firm are characterised by the poor financial performance of the entity. The study focused on profitability which is only a component of financial performance. In the United Kingdom, a study was conducted by Banerjee and Mio (2018) to determine the role that liquidity regulations play as far as the stability of the banking sector is concerned. The study noted that in order for commercial banks to meet their tighter liquidity requirements, they are forced to adjust their liability and asset structures in place. The study failed to get evidence on whether tighter liquidity requirements overall affect the size

of the balance sheet of the bank as well as the lending role of the institution.

Madushanka and Jathurika (2018) focused on listed manufacturing entities operating in Sri Lanka to determine the interaction between liquidity ratios and profitability. The study covered a total of 15 firms and it covered a five-year period stretching from 2012 through to 2016. The study operationalised liquidity ratio in terms of quick ratio, which was found to have significant interaction with the profitability of the entity. Megaladevi (2018) conducted a study on liquidity ratios and their interaction with profitability using evidence from selected firms in the context of India. The study noted that the quick ratio and current ratio significantly influence the profitability of the firm. However, the study was conducted in India and not in Kenya creating a contextual gap.

Locally in Kenya, Vaita (2017) conducted an analysis of liquidity and its role as far as the financial performance of tier-I banking entities is concerned. The variables of the study included liquidity coverage ratio, management efficiency, and gross domestic product. The adopted design was descriptive, and a total of 6 tiers I banking entities in Kenya was targeted and covered by the study. Information about the study was obtained from auxiliary sources, and the analysis indicated that while liquidity coverage and ROE were insignificantly linked, the interaction with ROA was positive and significant. On the other hand, management efficiency had a direct and significant link with ROA and ROE. Muthoga (2019) concentrated on banking entities that have listed shares on the NSE to bring out the link between liquidity risk and their profitable nature. The variables covered by the study included liquid asset holding, asset quality, and net loan holding. A total of 11 banking entities were covered by the study. The methodology adopted was panel regression, and the results showed mixed results of positive and negative interaction between the identified components of liquidity and profitability.

Mutinda and Ombati (2018) did an analysis of the standard of managing liquidity and the ability of deposit-taking SACCOs to perform in financial terms. In total, 175 SACCOs licensed to engage in the acceptance of deposits were targeted by the study. The study was able to randomly select 30 of these targeted firms and included them in data collection. The adopted design was a comparative methodology. Information gathering was done relying on evidence from auxiliary sources. It was shown that the liquidity ratio positively and significantly predicts the ability of SACCO to perform in financial terms. Mutinda (2016) looked at the prudential framework of regulation and its link with the ability of SACCOs to perform financially using evidence from the Kenyan context. The study covered those SACCOs that are involved in accepting deposits from their customers. The design adopted in this study was a descriptive survey. It was shown that liquidity requirement has the least interaction with the ability of the banking entity to perform in an economic system.

RESEARCH METHODOLOGY

The study adopted a casual descriptive research design in testing the formulated hypotheses. Through a descriptive design, respondents are able to freely offer their views and opinions as it regards a given subject under investigation by the study. The study targeted 39 commercial banks in Kenya. This study used a census of all commercial banks in Kenya. The rationale for the use of census was that it allowed the study to generalise the findings on all the commercial banks. The secondary data was collected on net income, current assets, current liabilities, cash balances, total deposits, equities, total assets, and total loans of the commercial banks. The study collected data on a five-year period (2017-2021) and it was collected on an annual basis.

The study used secondary data to analyse and test the formulated hypotheses. Secondary data was collected with the help of a data collection sheet. The study collected secondary data from CBK’s Annual Supervisory reports and published financial statements of the respective banks. Secondary data were collected covering ten years period, which was selected since it generated enough data points to help in the analysis since the sample size was adequate given the high number of data points.

Once data had been collected from the field, it was cleaned before being entered into the Statistical Package for Social Sciences (SPSS). Descriptive statistics like means and standard deviations were used to describe the variables of the study. Graphs were used with the help of an Excel tool to explore the trend in the movement of the variables of the study. In order to go further and test the formulated hypotheses, the study used correlation and regression analysis. The study used ordinary least square (OLS) regression analysis, and the model adopted was specified below:

$$Y = \beta_0 + \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + \beta_4X_4 + \epsilon$$

Whereby Y = Financial Performance (ROA), X₁ = Liquidity Ratio Requirement (LRR), X₂= Cash Reserve Ratio Requirement (LRRR), X₃= Loan Deposit Ratio Requirement (LDRR), X₄= Capital Adequacy Ratio Requirement (CARR), ε = Error Term, β₀= Constant, β₁... β_n= beta coefficients

RESULTS AND DISCUSSION

Regression Results and Hypotheses Testing

Regression analysis was conducted to predict liquidity requirements and financial performance. *Table 1* is an overview of the model summary.

Table 1: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.639 ^a	.409	.395	.03595

The findings in the table above indicate the value of R square as 0.409; this means that a 40.9% change in the financial performance of commercial banks in Kenya is explained by liquidity requirements. This means that aside from liquidity requirements, there

are still some other factors that have an effect on the financial performance of these institutions that future studies should seek to establish. The ANOVA results were determined and presented as shown in *Table 2*.

Table 2: ANOVA Results

	Sum of Squares	df	Mean Square	F	Sig.
Regression	.156	4	.039	30.264	.000 ^b
Residual	.226	175	.001		
Total	.383	179			

The findings in *Table 2* show that overall, the regression model utilised in this study was significant (F=30.264, p<0.05). As such, it was suitable for being utilised in the present study. The

findings of the beta coefficients and significance were determined and summarised as shown in *Table 3*.

Table 3: Coefficients and Significance

	Unstandardised Coefficients		Standardised Coefficients	t	Sig.
	β	Std. Error	Beta		
(Constant)	.034	.007		4.543	.000
Liquidity Ratio Requirements	.345	.103	.092	3.350	.003
Cash Reserve Ratio Requirement	-.008	.002	-.295	-4.864	.000
Loan Deposit Ratio Requirement	-.020	.008	-.146	-2.409	.017
Capital Adequacy Ratio Requirement	.032	.004	.505	8.662	.000

The predicted equation between liquidity requirement and financial performance becomes:

$$Y = .034 + .345X_1 - 0.008X_2 - 0.020X_3 + .032X_4$$

Where Y = Financial Performance (ROA), X₁ = Liquidity Ratio Requirement (LRR), X₂ = Cash Reserve Ratio Requirement (LRRR), X₃ = Loan Deposit Ratio Requirement (LDRR), X₄ = Capital Adequacy Ratio Requirement (CARR)

H₀₁: Liquidity ratio requirements have a significant effect on the financial performance of commercial banks in Kenya.

From the findings in *Table 3*, the key findings on liquidity ratio requirements were: (β=.345, p<0.05). This means that the variable was positive and statistically significant. Thus, the study accepts hypothesis H₀₁ deducing that liquidity ratio requirement is a significant predictor of the

financial performance of Kenya's commercial banks. This finding is consistent with Madushanka and Jathurika's (2018) operationalised liquidity ratio in terms of quick ratio, which was found to have significant interaction with the profitability of the entity. Megaladevi (2018) noted that the quick ratio and current ratio significantly influence the profitability of the firm. However, the study was conducted in India and not in Kenya creating a contextual gap.

Kontuš and Mihanović (2019) showed that liquidity management is an important aspect of a firm that wishes to generate profits and survive. Setiyono, B., & Naufa, A. M. (2020) noted that in the macroeconomic stress circumstance, commercial banks find it hard to comply with the requirements of liquidity ratio as compared to other scenarios. Panigrahi, Raul, and Gijare (2017) observed that the

liquidity level of Cipla is sound when the key concern is on quick as well as current ratios. Adnan and Kamran (2019) shared that liquidity ratio and ROA are positively linked. However, the current and cash ratio had a negative interaction with ROA. Indra (2013) looked at liquidity ratio, profitability ratio, and leverage ratios and their interaction with the price of stocks, and current and debt-equity ratios do not significantly predict the price of stocks. Charmler, Musah, Akomeah and Gakpetor (2018) said that liquidity and ROA were positively related to each other. On the other hand, liquidity was seen to have an inverse but insignificant link with ROE. Limodio and Strobbe (2017) shared that an increase in the branch network, loans, and deposits do not necessarily improve the profits generated by a banking entity.

Kigabo and Gichondo (2018) observed that reserve requirements, changes in cash demand and the value of excess liquidity predict precautionary excess liquidity in the Rwandan context. Qin and Pastory (2012) established that the banking entities under reference had a sound level of liquidity. Vaita (2017) indicated that while liquidity coverage and ROE were insignificantly linked, the interaction with ROA was positive and significant. On the other hand, management efficiency had a direct and significant link with ROA and ROE. Muthoga (2019) showed mixed results of positive and negative interaction between the identified components of liquidity and profitability. Mutinda and Ombati (2018) showed that the liquidity ratio positively and significantly predicts the ability of SACCO to perform in financial terms. Mutinda (2016) noted that liquidity requirement has the least interaction with the ability of the banking entity to perform in an economic system.

Summary of the Findings

Based on descriptive statistics, the liquidity ratio requirement among commercial banks in Kenya stood at 0.824. From correlation, the nexus between liquidity ratio requirement and the financial performance of Kenya's commercial banks was

weak but positive ($r=0.026$). From regression results, hypothesis Ho1 was accepted and the study inferred that liquidity ratio requirement is a significant predictor of the financial performance of Kenya's commercial banks ($p<0.05$).

CONCLUSION

In as much as some of the commercial banks like KCB, Equity, and Cooperative banks were doing well in terms of liquidity, other institutions were facing liquidity constraints. The nexus between the liquidity ratio requirement and the financial performance of Kenya's commercial banks was weak but positive. The study accepted hypothesis Ho1, concluding that the liquidity ratio requirement is a key driver of the financial performance of commercial banks in Kenya.

Recommendations

The finance managers of commercial banks in Kenya should strive to balance current assets and current liabilities to ensure they meet their obligations as they arise. Too much investment in current assets may increase the opportunity costs from tied-up capital that could otherwise have been used elsewhere which is more productive.

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