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Liquidity Adequacy and Financial Performance of Commercial Banks in South Sudan

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Abstract

Commercial banks in South Sudan have shown deteriorating financial performance in the period 2017 to 2021. This has been shown by the substantial number of commercial banks making losses and with the profit-making ones exhibiting fluctuating performance as well as reducing financial performance levels. For example, only 25% of the commercial banks made a profit in the year 2021 with the majority making losses. Further, the sector has made losses for the last five years. For example, Liberty Commercial Bank recorded a decline in ROA from 0.58 in 2018 to 0.53 in 2019 and a further decline to 0.51 in the year 2020. If nothing is done to improve South Sudan's commercial banks' financial performance, then the contribution of the banks to the country's welfare will be watered down. The primary aim of this study was to determine the effect of liquidity adequacy and the financial performance of commercial banks in South Sudan. An explanatory research design was used in the study. The target populace was commercial banks in South Sudan. 29 commercial banks existed in South Sudan between 2017 and 2021. The study used purposive sampling to sample 23 banks that were in operation between 2017 and 2021. Secondary information was used in the study. For analysis, the obtained information was cleaned and imported into STATA 17. Descriptive statistics and regression analysis were conducted. The inferential statistics used were correlation and regression. The outcomes further showed that the mean of liquidity adequacy from 2017 to 2021 for the commercial banks in South Sudan was 3.178, with the least liquidity adequacy being -0.068 and the most being 64.297. Trend outcomes were clear that liquidity adequacy was increasing amongst South Sudan commercial banks. Regression outcomes were clear that operational adequacy was positive and significantly impacted by the performance. The study notes that though liquid assets attract some returns to commercial banks, too much of it depletes the profitability level of banks. Because highly liquid assets are linked to lower returns than riskier assets, the study advises banks to avoid keeping excessive amounts of liquid assets. Therefore, owning too many liquid assets has a greater opportunity cost than benefit. Consequently, it is advised to have the ideal ratio of liquid assets to total assets. Furthermore, during times of weak economic conditions, the report advises banks to keep a greater proportion of liquid assets. Therefore, it is advised that bank management provide liquidity management with the necessary consideration.

Keywords: *Liquidity adequacy, financial performance, commercial bank*

1.0 Introduction

When a bank performs well, its shareholders are guaranteed dividend payments, which in turn encourages them to invest more money. On the other hand, poor financial performance not only causes hardship, as in the case of the monetary crisis of 2007–2008 but also causes bank failures

(Abdul, 2017). Access to financial services for consumers, businesses, and governments becomes difficult when commercial banks are underperforming (Adeyinka et al., 2018). According to Bhati, De Zoysa and Jitaree (2019), the liquidity of commercial banks affects how well they perform.

Liquidity is the process of investing in both current assets and current liabilities that are liquidated at a period of less than one year or a maximum of one year (Nduta, 2018). On the other hand, liquidity risks can also be seen as the likelihood of making payments on debts in a certain specified timeframe (Tursoy, 2018). According to Muturi et al. (2018), the liquidity of banks includes securities such as bonds, treasury bills, overdrafts, placements with other banks, cash reserves et cetera. In the banking sector, liquidity risks are majorly linked with the bank's incapability to meet payment responsibilities in a timely manner without suffering extreme losses (Chowdhury & Zaman, 2018).

The capacity of the liquid cash available to satisfy deposit withdrawal requests after satisfying all commitments of the moment is known as liquidity adequacy. In the study, liquid investments (+), liquid assets (-), and short-term payables/savings deposits were used to determine the level of liquidity. Gweyi (2018) asserted that depositors have the freedom to take their funds at any time for unforeseen reasons to invest elsewhere for higher profits. In addition, the bulk of bank members continue to be net borrowers rather than savers (Njuguna & Jagongo, 2022).

In Kenya, according to the Kenya Bankers Association's (KBA) report (2021), the profits of the banking institutions in Kenya went down by 30.9%. Further, the banking industry's ROA went down by 2% in 2020 from the previous year. A couple of Tier 3 and Tier 2 banking institutions such as Imperial Bank, Chase Bank, and Dubai Bank had to close due to low performance. In addition, a bank like Diamond Trust Bank showed a decline in their profits by 10.1% in the year 2018. In addition, the non-performing loans of the Diamond Trust Bank grew by 97% to Kshs 14.8 billion (CBK, 2017).

According to the IMF's 2018 report, commercial banks in South Sudan are dealing with a variety of internal problems as well as internal factors that have restricted the sector's growth. Out of this, it was clear that banks in South Sudan were failing based on the stability of the operational efficiency and other financial indicators as indicated by the Bank of South Sudan. Non-performing loans have also been on the rise in South Sudan's commercial banks which has led to low performance (Bank of South Sudan, 2018). According to Chol et al. (2019), one of the key issues underlying the commercial banks' low performance in South Sudan has been inadequate liquidity.

1.2 Problem Statement

Commercial banks in South Sudan have shown deteriorating financial performance in the period 2017 to 2021. This has been shown by the substantial number of commercial banks making losses and with the profit-making ones exhibiting fluctuating performance as well as reducing financial performance levels. For example, only 25% of the commercial banks made a profit in the year 2021 with the majority making losses (BSS, 2021). Further, the sector has made losses for the last five years. For example, Liberty Commercial Bank recorded a decline in ROA from 0.58 in 2018 to 0.53 in 2019 and a further decline to 0.51 in the year 2020. If nothing is done to improve South Sudan's commercial banks' financial performance, then the contribution of the banks to the country's welfare will be watered down.

Chowdhury and Zaman (2018) focused on the relationship between liquidity on Kenyan small business performance. Since the study was conducted in Bangladesh, a contextual gap is

evident. Muthoga (2019) concentrated on the profitability and liquidity risks of banks registered on Kenya's Nairobi Securities Exchange. According to the study, holdings of liquid assets were significantly and negatively correlated with business profitability. The study's narrow focus on net loan holdings, holdings of liquid assets, and asset quality revealed a conceptual gap. The study by Chol et al. (2019) research revealed that financial success was significantly impacted by asset quality, managerial effectiveness, and liquidity. Therefore, the goal of the current study was to ascertain the connection between liquidity adequacy and the financial success of South Sudan's commercial banks.

1.3 Objectives of the Study

This study sought to determine the effect of liquidity adequacy and the financial performance of commercial banks in South Sudan.

2.0 Literature Review

2.1 Theoretical Framework

Liquidity Preference Theory informed this study. Keynes (1936) formulated this notion. According to Keynes (1936), there are three reasons to have money on hand: transactional, speculative, and precautionary. People will keep their money in reserve for use in daily transactions. These funds are used to pay for necessities like food, shelter, and local transportation. Additionally, people will keep money for speculative investments. In case of thought that the prices of stock would rise, stocks would be sold for a profit and the individuals would buy bonds. In addition, people would keep the money for safety reasons like bills to hospitals.

According to the concept of liquidity preference, investors will always choose to take hold of cash instead of liquid assets. The stockholders will always act in favor of the securities that are short-term rather than long-term ones. They will need to be paid more in the form of high-interest returns if they must hold long-term securities. Cash is regarded by banks as being less risky than capital. The regulatory agencies in financial institutions encourage firms to keep a specific amount of cash as a safeguard against liquidity risk.

Since financial institutions will give loans that borrowers might not repay on time or default on, cash is also a safeguard against default risk. According to Keynes' theory, if a bank decides to have high liquidity levels, then the institution's cash can be held as security so it can be easily exchanged for cash by other lenders (Keynes, 1936). Liquidity peril is one of the hazards that commercial banks monitor in South Sudan, hence this theory was pertinent to the study.

2.2 Empirical Review

Adusei (2022) centered on the evidence from hybrid financial institutions regarding the association between liquidity risk and financial success. This study examines the impact of liquidity risk on the success of MFIs and asks whether this impact varies when credit risk is present using a sample of 532 MFIs in 73 countries. The research also notes that credit risk has a favorable impact on MFIs' financial success when liquidity risk is present.

Karim and Rashid (2021) concentrated on corporate investment, financial performance, and equity liquidity. This study investigated how company performance (FPER) and investment (FINV) decisions were impacted by equity liquidity (EQLQ). It also investigates if FSD lessens the significance of EQLQ for organizations' financial performance and investment strategy. The study makes use of an imbalanced panel dataset for 360 Pakistani non-financial enterprises from 2001 to 2018. The findings imply that higher EQLQ has a considerable favourable impact on businesses' financial performance and investment choices. However, the study discovered

that the investment-favoring and performance-enhancing impact of EQLQ is dramatically reduced by increasing FSD.

La Rocca and Cambrea (2019) focused on the effect of cash assets on firm performance in large Italian companies. Specifically, the importance of moderating factors that can affect the degree of this association is examined considering the existence of contradicting data regarding the valuation of cash stock, which could result in a positive effect rather than a negative one. The findings demonstrated that firm-specific traits as well as institutional context-related elements had an impact on the value of cash holdings.

Waswa et al. (2018) concentrated on the impact of liquidity on the financial results of the Kenyan sugar industry. Given the prominence of liquidity management in the sugar business, the goal of this study was to investigate how it affects firm performance. The results of the study's estimation of a random effects regression model point to the survival of a detrimental association between liquidity administration and company performance. The following policy proposals are made in light of the outcomes discoveries, and if they are put into practice, they will ideally help sugar industry manufacturers revive their overall success. The investigation was clear unequivocally that liquidity improved financial performance.

In their study, Ejike and Agha (2018) focused on how operating liquidity affects pharmaceutical companies' profitability in Nigeria. The study looked at how operating liquidity affected the success of pharmaceutical businesses listed on the Nigerian Stock Exchange. An expost facto research design and correlation analysis were used on a sample of 5 pharmaceutical companies. According to the study, operating liquidity (collection of accounts receivable and management of accounts payable) significantly affects the profitability of listed pharmaceutical enterprises in Nigeria.

Charmler, Musah, Akomeah, and Gakpetor (2018) concentrated on how Ghana's commercial banks performed in relation to liquidity. The study looked at bank liquidity levels, trends, and the effect of bank liquidity on Ghanaian commercial banks' profitability. According to the data, commercial banks' average liquid asset to total asset ratio is 20%, and their liquid asset coverage of interest-bearing liabilities is 1.19. Using both bank liquidity metrics, the results demonstrate a positive relationship between liquidity and return on assets. The ratios of liquid assets to total assets (LIDQ1) show a weak positive association with respect to return on equity. The correlation between return on equity (ROE) and liquid assets to total assets was found to be negligible.

Musembi (2018) concentrated on how the financial performance of commercial banks listed on Kenya's Nairobi Securities Exchange was affected by liquidity risk drivers. A descriptive survey research design was employed in the study. The study discovered that, although not statistically significant, liquidity level had a favorable impact on listed commercial banks' return on assets. Multiple regression analysis was used to analyze the data in accordance with the study's goals. The association between liquidity risk determinants and financial performance was ascertained through correlation analysis.

According to the Musembi (2018) study, return on assets for commercial banks listed on the Nairobi Securities Exchange was significantly positively impacted by capital sufficiency. It was discovered that asset quality significantly improved the return on assets for commercial banks registered on the Nairobi Securities Exchange. The study also discovered that for commercial banks registered on the Nairobi Securities Exchange, inflation significantly reduced return on assets. The study found that, although not statistically significant, liquidity levels had a favourable impact on the financial performance of listed commercial banks. It also

concluded that listed commercial banks' financial performance was positively and significantly impacted by capital sufficiency.

Cucinelli (2018) assessed bank liquidity risk factors in the framework of the European Union. This study aimed to examine the nature of the link between a few key bank structure elements (size, capitalization, assets quality, and specialization) and liquidity risk as assessed by the liquidity coverage ratio and the net stable funding ratio. Ten hundred eighty listed and non-listed Eurozone banks make up the sample. Ordinary least square regression with panel data analysis was employed in the study. According to the study, banks with higher capitalization exhibit superior liquidity over the long term, although larger banks are more exposed to liquidity risk. The only metric affected by the quality of the assets is the short-term liquidity risk. The more specialised the bank's lending operation,

2.3 Conceptual Framework

The connection between dependent and independent variables serves as the basis for figuring out predicted results.

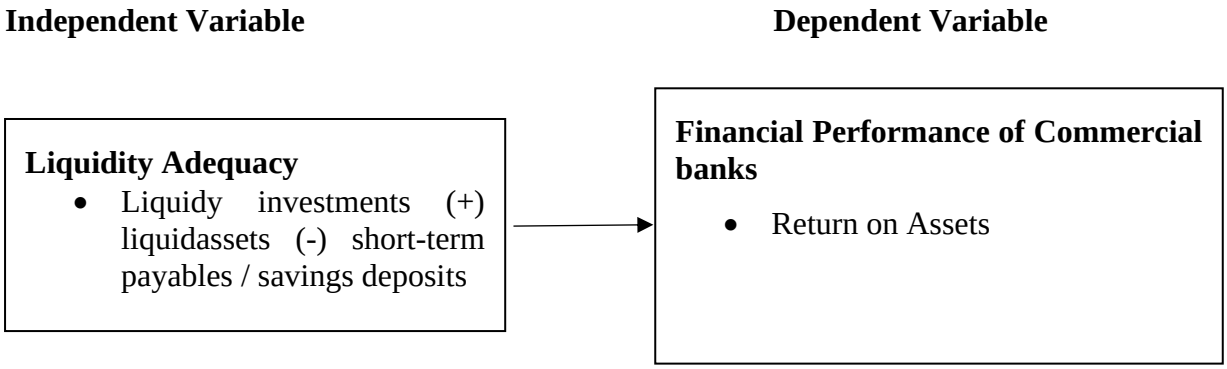

Figure 1: The Conceptual Framework

3.0 Methodology

An explanatory research design was used in the study. The target populace was commercial banks in South Sudan. There were 29 commercial banks that existed in South Sudan between 2017 and 2021. The study used purposive sampling to sample 23 banks that were in operation between 2017 and 2021. Secondary information was used in the study. For analysis, the obtained information was cleaned and imported into STATA 17. Descriptive statistics and regression analysis were conducted. The inferential statistics used were correlation and regression. The ratios for financial performance and the percentages for the predictor factors served as the basis for the analysis.

4.0 Results and Discussion

4.1 Descriptive Analysis

The study used the four common measures of descriptive statistics; minimum, maximum, mean, and standard deviation to present the data patterns. Table 1 shows descriptive data, followed by interpretations.

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Table 1: Outcomes for Descriptive Statistics

Variable	Obs	Mean	Std.Dev	Min	Max
ROA	115	0.587	0.867	-0.420	7.010
Liquidity Adequacy	115	3.178	11.040	-0.068	64.297

According to the descriptive findings, the mean return on assets from 2017 to 2021 for the commercial banks in South Sudan was 0.587, with the least ROA being -0.420 and the most being 7.010. Standard Deviation fluctuation was 0.867.

The outcomes further showed that the mean of liquidity adequacy from 2017 to 2021 for the commercial banks in South Sudan was 3.178, with the least liquidity adequacy being -0.068 and the most being 64.297. The standard Deviation fluctuation was 11.040.

4.2Trend Analysis

Trend results were outlined for the independent and dependent variables.

4.2.1 Trend Analysis for Liquidity Adequacy

The outcomes of the trends of the liquidity adequacy ratio are shown in Figure 1.

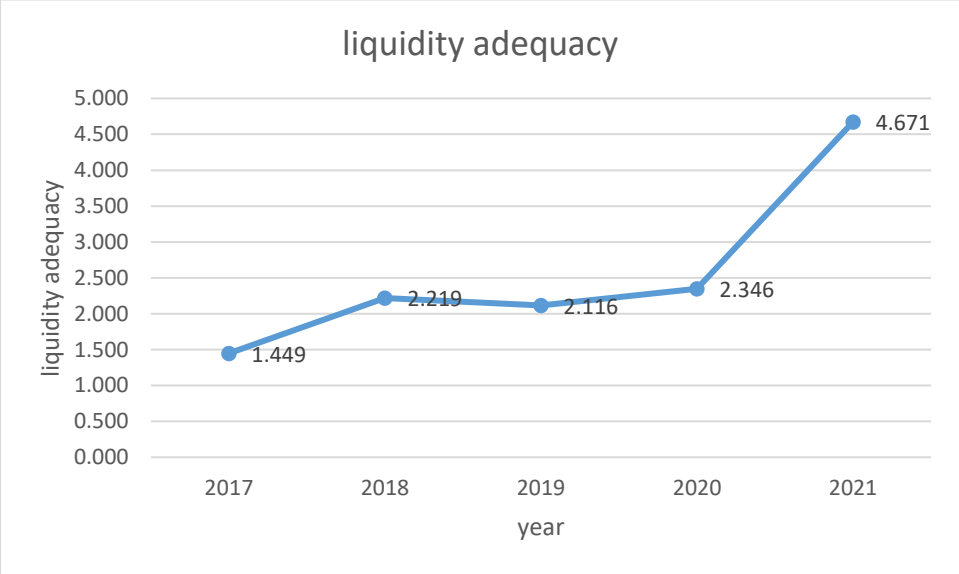

Figure 1: Trends for the Liquidity Adequacy

The outcomes showed that the mean for the liquidity adequacy ratio was 1.449 in the year 2017 but increased to 2.219 in the year 2018 but declined to 2.116 in the year 2019. The mean for the liquidity adequacy ratio further increased to 2.346 in the year 2020 and further increased to 4.671 in the year 2021. This infers that liquidity adequacy was on the rise between 2017 and 2021. This agrees with Karim and Rashid (2021) who found that liquidity adequacy was on the rise for most banking institutions.

4.2.2 Trend Analysis for ROA

The outcomes of the trends of return on asset ratio are shown in Figure 2.

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Email: info@edinburgjournals.org||ISSN: 2789-0201

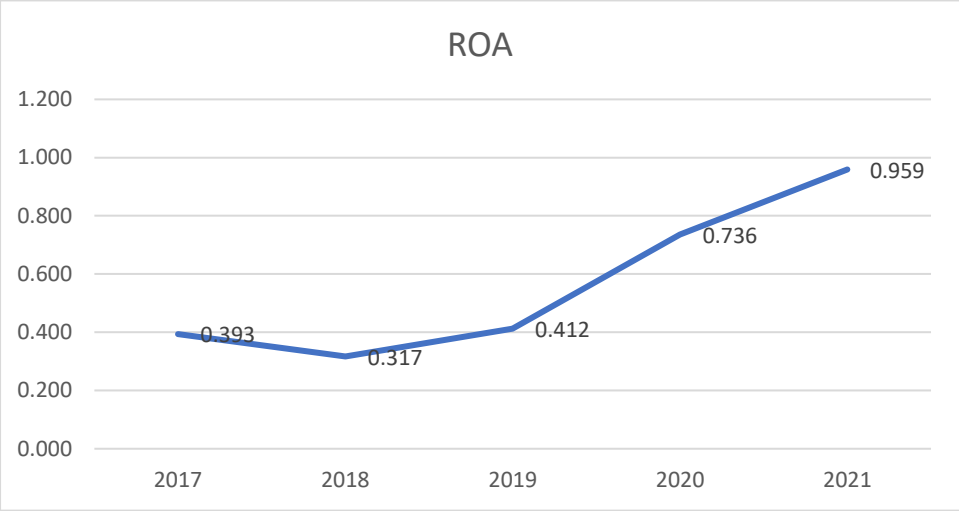

Figure 2: Trends for the ROA

The outcomes showed that the mean for the return on assets ratio was 0.393 in the year 2017 but decreased to 0.317 in the year 2018. The mean return on assets ratio increased to 0.412 in the year 2019 and further increased to 0.736 in the year 2020 and further increased to 0.959 in the year 2021. This infers that ROA of most commercial banks in South Sudan was inconsistent.

4.3 Correlation Analysis

The correlation ranges from perfect negative correlation (-1) to perfect positive correlation (+1). A correlation value close to zero (0) indicates a weak correlation between variables. The investigation used Pearson Correlation to conduct the correlation between liquidity adequacy and financial performance of commercial banks.

Table 2: Outcomes for Correlation

	ROA	liquidity adequacy
ROA	1	
liquidity adequacy	0.6135	1
	0.000	

The study result in Table 2 indicated there was a positive and significant correlation (r=-0.877, P=0.000) between liquidity adequacy and financial success of commercial banks. The study agreed with Ejike and Agha (2018) who indicated that operating liquidity (collection of accounts receivable and management of accounts payable) significantly affects the profitability of listed pharmaceutical enterprises in Nigeria.

4.4 Diagnostic Tests

These assumptions are varied based on the study. The current study tested assumptions of normality, heteroscedasticity, multicollinearity

4.4.1 Test for Normality

The Shapiro-Wilk test, which examines the relationship between facts and conforming normal scores, was used to determine whether the study's results were normal. Table 3 presents the results.

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Table 3: Outcomes for Normality

Variable	Obs	Statistic of Shapiro-Wilk	P-value
Liquidity adequacy	115	0.7890	0.567
ROA	115	0.8836	0.098

The outcomes were clear that the p-values were all less than 0.05 implying that the variables were normally distributed.

4.4.2 Test for Heteroscedasticity

When residual variance varies differently along the regression line, it is said to be heteroscedastic. According to Osborne and Waters (2002), this can skew the findings and undermine the analysis. It is the systematic alteration in the residuals spread across the complete spectrum of observed variables. The standard error component term for the panel data is based on homoscedastic variance with constant serial correlation in disturbances. This examination used the test of Breusch-Pagan.

Table 4: Outcomes for Heteroscedasticity

Ho: Constant variance
Variables: fitted values of ROA
chi2(1) = 1.89
Prob>chi2 = 0.889

The outcomes stated that the variances of the error components are constant homoscedastic and that the prob > Chi2 of 0.889 shows significance above 0.05, suggesting that the null hypothesis of constant variance is not excluded.

4.4.3 Test for Multicollinearity Test

Multi-collinearity outcomes were displayed.

Table 5: Multi-collinearity Outcomes

	VIF	1/VIF
Liquidity adequacy	1.04	0.960

The outcomes in Table 5 show that multicollinearity was absent; all variables had VIFs of less than 10. Similar to this, liquidity adequacy under consideration had tolerance levels above 0.1, indicating that multicollinearity was not an issue.

4.5 Panel Regression Analysis Results

Regression analysis outcomes were displayed.

4.5.1 Panel Regression between Liquidity Adequacy and Bank Performance

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Vol. 3||Issue 4||pp 22-31||December||2023
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Table 6: Effect of Liquidity Adequacy on Bank Performance

ROA	Coef	std. Err	Z	P>|z|	{95%Conf.Interval}	
Liquidity adequacy	0.048	0.006	8.260	0.000	0.037	0.060
_cons	0.434	0.067	6.500	0.000	0.303	0.565
R squared=0.3764						
Wald chi2(1) =68.22						
p=0.000						

The results showed that liquidity adequacy accounts for 0.3764 of the variances in financial performance. This indicates that operational efficiency was responsible for 37.64% of the differences in financial performance. Outcomes (β=0.048, p=0.000), were clear that liquidity adequacy positively but significantly impacted the bank's performance. The outcomes disagreed with Waswa et al. (2018) who indicated a detrimental association between liquidity administration and company performance.

4.6 Hypothesis Testing Results

H_0 is the initial hypothesis. Liquidity adequacy did not significantly affect the success of the banks in South Sudan. With a P value of 0.000 which was less than 0.05, the discoveries demonstrate that liquidity adequacy has a significant effect on the financial performance of commercial banks in South Sudan. As a result, the investigation disproved null hypothesis $H_0$4. The study agreed with Ejike and Agha (2018) who indicated that operating liquidity (collection of accounts receivable and management of accounts payable) significantly affects the profitability of listed pharmaceutical enterprises in Nigeria. Outcomes were in agreement with Sporta et al. (2017) who found a noteworthy association between effectiveness of the operations of the business and the success of the banks operating in Kenya.

5.0 Conclusions

The outcomes also showed that liquidity adequacy was seen to have a positive and noteworthy impression on financial success. This infers that an upsurge in liquidity adequacy would lead to an upsurge in financial success of banks in South Sudan.

6.0 Recommendations

The study notes that though liquid assets attract some returns to commercial banks, too much of it depletes the profitability level of banks. Because highly liquid assets are linked to lower returns than riskier assets, the study advises banks to avoid keeping excessive amounts of liquid assets. Therefore, owning too many liquid assets has a greater opportunity cost than benefit. Consequently, it is advised to have the ideal ratio of liquid assets to total assets. Furthermore, during times of weak economic conditions, the report advises banks to keep a greater proportion of liquid assets. Therefore, it is advised that bank management provide liquidity management with the necessary consideration.

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