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Relationship Between Asset Quality and Liquidity- Evidence From Microfinance Banks in Kenya

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Abstract
The dynamism of the microfinance sector has benefited microfinance banks, resulting in significant transformation in the number of users served as well as the diversity of products and services offered. However, numerous microfinance banks have ended up with a liquidity ratio that is much lower than the required limit. Consequently, MFB deposits are dwindling, loan books are reducing, and profits are declining, all of which have an impact on MFBs' intermediation role. This study therefore sought to assess the relationship between asset quality and liquidity of microfinance banks in Kenya. The Efficient Structure Theory and Preference theory of Liquidity informed the study. This study employed causal research design and adopted the positivism research philosophy. The study population included all the 13 micro finance institutions, which were operations in Kenya between 2012 and 2018. The study adopted a census approach by focusing on all the 13 MFBs in Kenya. The study found that Asset quality had a positive and significant effect on liquidity of microfinance banks in Kenya. The study recommends that the management of Microfinance bank managers should capitalize on periods of high loan demand by offering attractive lending rates to attract more loan clients to maintain a stable liquidity position. However, it is important to ensure that the lending rates are moderate to avoid accumulating microfinance losses if the loan is not repaid in accordance with the agreed-upon contract.
Keywords: Asset Quality, Liquidity, Efficiency Structure Theory, Liquidity Preference Theory and Microfinance Banks
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1.0 Introduction and Background

In any given economy or nation, the banking sector is primarily responsible for allocating capital assets and dispersing risks in order to facilitate investment and consumption (Meshak & Nyamute, 2016). A well-functioning financial framework helps business cycles in every economy, resulting in increased economic and social wellbeing (Waweru, 2013). As a result, banking instructions serve a variety of purposes, making them suitable for monetary policy management (Borio, Gambacorta & Hofmann, 2015).

Bank liquidity has become one of the most exciting topics in banking since the international economic meltdown of 2007-2008 (DeYoung & Jang, 2016). This is because the abundant liquidity in US banks fostered the heightened risk that contributed to the global financial crisis in 2007-2008. For many years, microfinance institutions have been the poster child for governments, legislators, and international organizations in their efforts to lift millions of people out of poverty (International Finance Corporation, 2014).

The idea that microfinance banks could follow and attain the intertwined goals of growth and financial profitability without friction persisted (Bowa, 2015). This twofold potential, along with a high unmet need for financial services at the bottom of the pyramid, drew large quantities of money (Wagner, 2010). The MFBs are also financial institutions with similar concerns, which serves as a useful reminder of the recent financial crisis. For far too long, they have been regarded as materially different from traditional retail financial institutions (Gonzales, 2012). However, as the microfinance industry matures, individual MFBs and the sector as a whole take on features of financial sector notably in terms of expansion strategies and product offerings (Waweru, 2013).

Asset quality relates to financial and operational soundness of microfinance institutions, as well as the financial health of the country (Kenya Bankers Association, 2019). According to Yin (2015), reduction in the value of asset quality pose a serious challenge to most of the financial institutions. Loans and securities are examples of microfinance bank assets, although they come with the most dangers (Bowa, 2015). Furthermore, other assets such as real estates, off statement of financial position items and cash also affect asset quality of a microfinance bank

(Nyaundi, 2015).

Interest on loans is main revenue channel for most banking sector players (Dietrich & Wanzenried, 2009). The bank's liquidity is directly influenced by the quality of its loan portfolio. Losses from defaulted loans are the most serious threat to banks (Dang, 2011). The ratio on NPLs to total loans is a good indicator of assets quality. Low ratio indicates that the bank's assets are in good shape, as the lower ratio enhances bank liquidity (Sangmi & Tabassum, 2010). Microfinance banks' non-performing loan ratio climbed from KES. 1,465 million in 2012 to KES. 8, 084 million in 2017, a 451 percent rise, with Faulu microfinance institutions accounting for 45.3 percent of all NPLs in 2017 (CBK, 2018).

1.2 Statement of the Problem

Kenya aspires to build a vibrant financial sector, which will spur growth in investment and contribute to the achievement of middle-income status and a high standard of living for its population (Ongore & Kusa, 2013). In this regard, the GoK through the Central Bank have launched and implemented a number of reforms (KNBS, 2018). The Banking Amendment Act of 2012, the CRB Regulations of 2009, the Interest Rate Cap of 2015, and the implementation of IFRS 9 in 2018 are just a few examples. Despite the government's efforts, certain microfinance banks have recently had liquidity issues, with liquidity levels falling below the statutory threshold of 20%. (Central Bank of Kenya, 2016).

Due to lower liquidity, MFB's deposits are dissipating, loans books are shrinking and profits are declining which in turn affect the intermediation role of MFBs (Kiambati, 2018). The liquidity concerns have led to three commercial banks been placed under receivership in 2015 and 2016, which affected liquidity allocation (CBK, 2017). Microfinance banks with proper liquidity management will be able to pay their financial obligations while also benefiting from advantageous investments anticipated providing bigger returns in the future (Graham & Bordeleau, 2016).

Most of the previous studies on the effect of asset quality on liquidity have concentrated on commercial banks and none of them focused on the microfinance-banking sector hence, creating a contextual gap. The results of these studies cannot be applied to MFBs due to the unique contextual variations between commercial banks and MFBs. Given the importance of liquidity and the role played by microfinance banks and the existing empirical gaps, this study aimed at enriching the existing related literature by studying the effect of asset quality on liquidity of microfinance banks in Kenya.

1.3 Objective of the Study

The study sought to establish the effect of asset quality on the liquidity of microfinance banks in Kenya.

1.4 Research Hypothesis

The study tested the hypothesis, which stated that:

H_0: Asset quality does not have a significant effect on the liquidity of microfinance banks in Kenya.

1.5 Scope of the Study

The research focused on asset quality and liquidity of Microfinance banks in Kenya. The study predominately relied on secondary data that was gathered for a period of 7 years between 2012 and 2018; this period is considered because it coincided with the Microfinance Banks Act implementation and the period in which most of these MFBs have been registered in Kenya. The study gathered panel data for the 13 institutions, which was justified, on the basis that it takes into consideration both time series and cross-sectional attributes. In this period, Kenya witnessed a rapid technological change in the finance sector, leading to the growth of financial systems, new products and new forms of payment that changed the liquidity landscape of Kenya's financial institutions. Several guidelines amendments by the CBK, as it moved to save the public confidence on the banking industry, which was necessitated by the many pyramid schemes that led to lose of finances by the public.

2.0 Theoretical Review

2.1 Efficiency Structure Theory

Demesetz (1973) was the origin proponents of the efficiency structure theory. According to the proponent, increased effectiveness in the managerial scale leads to greater concentration and greater liquidity thereafter. The theory of efficiency structure states that the company's liquidity is positively linked to its effectiveness. It is assumed that increased profits will increase to more efficient firms (Ayano, 2016). There are also two hypotheses in the efficient-structure theory: the hypotheses of X-efficiency and scale effectiveness. Therefore, the theory posits that the actual management efficiency will only differ from the expected in the event of an "information shock" which is usually linked to unforeseeable information at the time expectations were framed or made (Estes & Polnick, 2012). Lower costs for efficient banks contribute to greater profit and faster growth (Kamande, 2017). Therefore, the better the efficiency of management in handling bank assets, the better the liquidity of the

Microfinance banks.

2.2 Liquidity Preference Theory

Keynes (1936) is the proponent of liquidity preference theory. The theorist is of the view, short-term securities interest rates are lower because investors sacrifice less liquidity than they do by making investments in medium or long-term securities. Liquidity Preference Theory as enshrined by Keynes explains the changes or movements in the cash resources held by individuals, which are based on demand and supply (Delechat, Henao, Muthoora & Vtyurina, 2012). The movements in the liquidity preference of banks, which result in renunciation/resignation of or an increase in liquid cash holdings, serves as a major determinant of the supply of cash (Schwab, 2018). Banks that prefer to hold more cash for future consumption contribute to depletion in the supply of money and conversely, banks that renounce such a possibility contribute to increase in the supply of money (Kajuju, 2016).

2.3 Empirical Review

Salike and Ao (2019) sought to establish the determinants of excess liquidity in the banking sector of Asia. The study used fixed effect estimation for the panel data of the sample that consists of 947 banks from 12 Asian economies over the period of 2001- 2015. The study adopted a descriptive research design and found that asset quality (measured as impaired loans over gross loans) had a significant negative impact on banks' liquidity. The study also found that loan increases had a negative impact on surplus liquidity, as banks with the higher share of impaired loans are more cautious about lending.

Junaidi, Sulastri, Isnurhadi, and Adam (2019) examined Liquidity, asset quality, and efficiency to sustainable growth rate for banking at Indonesia Stock Exchange. The study used descriptive research design while the analysis was carried out using multiple regression method. The study found that asset quality disclosures had a significant and negative effect on sustainable growth rate for banking at Indonesia stock exchange. The study focused on listed commercial banks in Indonesia stock exchange for the period 2012 – 2018. This study concentrated on microfinance banks in Kenya, which is a developing economy.

Assfaw (2018) studied the liquidity and determinants of private commercial banks in the Ethiopia The study used the Ethiopian commercial banks and multiple regression analysis was used for the period 2013 to 2017. The study adopted a descriptive research design. The study variables included Asset Quality, interest rates, share of non-performing loans and bank intersection. Descriptive analysis model was used and the collection of secondary data was carried out. The study found that asset quality in Ethiopia had a significant positive impact on commercial bank liquidity. This study was based on explanatory research design and focused on Microfinance Banks in Kenya.

Hasanovica and Latic (2017), sought to establish the determinants of excess liquidity in the banking sector of Bosnia and Herzegovina using GMM estimators. The findings of the study indicate that total loans and non-performing loans significantly affect liquidity of banks. The study found that loan increases had a negative impact on surplus liquidity, as banks with the higher share of non-performing loans are more cautious about lending. This study adopted the ratio of non-performing loan to total loans and established its effect on the liquidity of MFBs in Kenya.

Samail, Zaidi, Mohamed and Kamaruzaman (2017) studied the determinants of the liquidity management of Islamic banking in Malaysia. Liquidity of Islamic Bank measured based on the liquidity ratio, while the independent variables examined were capital adequacy (CA), asset quality (AQ), and Credit Risk (CR). The data for the study was collected from twelve out of sixteen Islamic Banks in Malaysia listed by Bank Negara Malaysia. The annual reports were analyzed for six years, which were from the year 2010 until 2016. The findings revealed that there is a significant relationship between asset quality and liquidity management of Islamic Banking in Malaysia. This study was on liquidity of Microfinance banks in Kenya, which provide a different context all together as compared to Islamic banks in Malaysia, which is a developed economy and Kenya is a developing economy.

In view of the findings of Delechat et *al.* (2012), bank size is an asset quality component that significantly affects liquidity ratio. The study used bank size, profitability, management efficiency as main research independent variable where all the variables, in isolation, were established to have significant effect on liquidity buffers among banks in Central America. This study adopted similar approach; though, the scope was limited to MFBs in Kenya, thus, making this study unique.

Dang (2011) noted that loans are the major asset of commercial banks from which they generate income. The quality of loan portfolio determines the banks liquidity risk. The loan portfolio quality has a direct bearing on bank liquidity since the highest risk facing a bank is the losses derived from delinquent loans. Li (2007) posited that ratio of loan loss provision to total loans is a measure of bank's asset quality that indicates how much of the total portfolio has been provided for but not charged off. The higher the ratio the poorer the quality and hence the higher the liquidity risk of the loan portfolio will be.

Javapan and Tripe (2013) asserted that the proposition that there should be a negative relationship between a banks ratio of capital to assets and its return on equity may seem to be self evident as to not need empirical evidence.

Kim and Santamero (2013) using a mean variance framework to compare the bank portfolio choice with and without solvency regulation show that capital requirements will introduce changes in the composition of the risky part of the banks' portfolio in such a way that risk is increased and the profitability of failure may be higher.

Bank managers are concerned with the quality of their loans since that provides earnings for the bank (Bowa, 2015). Regulators require banks to reassess the loan or other assets and may require additional loss reserves to be set. Adequacy of internal controls and the loan policy are also evaluated. Ngugi (2011) found out that over concentrations of credits in certain loans or investment types or concentrations in geographic areas can lead to lower evaluations of asset quality. Reserve ratio was used to measure the quality of assets held by financial institutions.

According to Marozva, (2015) when a bank has deprived liquidity management it possess a major liquidity constrain which negatively affects their capital formation and earnings. Hence, if liquidity management is not appropriately managed it may lead to harsh liquidity costs in financial institutions. Hence, banks face the dilemma on how to classify the level which it can maintain its assets in order to optimize profit maximization and meeting financial needs of depositors because every liquidity has a diverse impact on the profitability level. The challenge is there when banks tend to concentrate on profit maximization neglecting liquidity management whereas liquidity can lead to both technical and legal insolvency.

3.0 Research Methodology

This study adopted the positivism philosophy. The philosophy follows a well-defined structure, which ensures that the study findings are objective and accurate. Creswell (2006) agrees that positivism philosophy is adopted when using observable social reality and because of the structured nature of the research and scientific approach, the results are independent of the researcher's views and are widely generalizable. The study adopted a census approach on focusing on all the 13 MFBs in Kenya that have been in existence from 2012 to 2018. Explanatory research design was adopted in this study. Kerlinger and Lee (2014) stipulated that an explanatory non-experimental research design can be applied in a situation where, a study attempts to understand how diverse phenomena behaves, by establishing the contributing variables that usher in the change in it without applying any further analysis on the variable. The study further applied panel regression technique in assessing the statistical relationship between the study variables.

$LR_{it} = \beta_0 + \beta_1 AQ_{it} + \varepsilon_{it}$

Where:

AQ_{it} = Asset Quality of firm $_i$ at time t
β_0 = Constant term
β_1 = Coefficients
ε_{it} = Error term

4.0 Research Findings and Discussions

4.1 Descriptive Statistics

The descriptive analysis provided statistics, which include the minimum and maximum values, mean and standard deviation of the study variables for the period 2012 – 2018 as presented in Table 4.1.

Table 4.1 Descriptive Statistics

Variable	Obs	Mean	Std. Dev.	Min	Max
Asset Quality	68	0.175275	0.157078	-0.09434	0.724569
Liquidity Ratio	75	40.98667	31.28473	3.00	217

Source: Study Data (2022)

The descriptive statistics in Table 4.1 indicate that liquidity had a mean of 40.98667. Asset quality had a mean of 0.175275 and standard deviation of 0.157078. Asset quality further had minimum and maximum values of -0.09434 and 0.724569 respectively. This therefore indicated that asset quality slightly fluctuated within the period 2012 – 2018. Liquidity Ratio during the period of the study was 40.98667 and a standard deviation of 31.28473. Liquidity Ratio further had a minimum and maximum values of 3.00 and 217 respectively indicating that the microfinance sector had a highly liquidity fluctuation in the period 2012–2018. The observations implied that majority of the microfinance banks liquidity ratio was nearly optimal to maintain efficiency and operations excellence. However, some firms recorded very low liquidity ratio of 3.00 while on the hand others had very liquidity ratio of 217.

4.2 Panel Regression Analysis

The study fitted a panel regression model to test the relationship between asset quality and microfinance liquidity (measured by liquidity ratio). Hypothesis was tested at a 5 per cent significance level. Table 4.2 below presents the results.

Table 4.2: Regression Analysis

Liquidity Ratio	Coef.	Std. Err.	Z	P>|z|	[95% Conf.	Interval]
Asset Quality	68.65525	24.4069	2.81	0.005	20.81861	116.4919
_cons	86.80856	29.2051	2.97	0.003	29.56761	144.0495
Wald chi2(4) = 13.82						
Prob > chi2 = 0.0079						
Pseudo R-sq = 0.6792						

Source: Study Data (2022)

Since the study used random effect regression modelling, the model significance was determined by Wald Chi-Square as recommended by (*Gujarati*, 2004). The results indicate that the model fitted to test the effect of asset quality on microfinance liquidity was statistically significant (Wald chi^2 (3) = 13.82, Prob > chi2 =0.0079). The finding indicates that the model had a goodness of fit further implying that asset quality significantly predicted microfinance liquidity in Kenya.

4.3 Hypothesis Testing

The objective of the study was to establish the effect of asset quality on liquidity of microfinance banks in Kenya. In line with this objective, the null hypothesis above was formulated and tested at 0.05 significance level. The findings in Table 4.2 show that the coefficient for Asset quality was β = 68.65525, P-value= 0.005 which is less than 0.05. The findings show that Asset quality had a positive and significant effect on liquidity of microfinance banks in Kenya. The results show that increase in Asset quality would result to increase in liquidity by 68.65525 units. Based on these findings, the study rejected the null hypothesis, which states that asset quality does not have a significance effect on liquidity of microfinance banks in Kenya. Asset quality was therefore found to have significant positive effect on liquidity of microfinance banks in Kenya.

The finding concurs with those of Hasanovica and Latic (2017) who found that total loans and non-performing loans significantly affect liquidity of banks. The study found that loan increases had a negative impact on surplus liquidity, as banks with the higher share of non-performing loans are more cautious about lending. The study findings support those of Sangmi and Tabassum (2010) who found that low non-performing loans to total loans show good health of the quality of bank assets as the lower ratio increases bank liquidity. The findings of this study also support Dang (2011) who argued that the quality of the loan portfolio directly affects the liquidity of the bank.

Nyabaga and Wephukulu (2020) found a significant negative effect of asset quality on ROE but an insignificant negative effect on return on assets. In reference to shareholders, being the main stakeholders of an entity, this study concludes that non-performing has a significant negative effect on performance. Non-performing loan reduce interest income, which is a banks' main income, and this reduces the net returns attributable to shareholder. Asset quality relates to the performance of the loan assets of a financial institution as earlier defined. As advanced by Dietrich (2016), a high rate of mortgage default indicates a low or poor asset quality, while low default rate indicates a high, strong, or sound asset quality. To maintain an improved liquidity levels, a strong asset quality is recommended always, as this will indicate a high level of loan performance with very minimal impairment charges.

5.0 Conclusion and Recommendations

Hypotheses tested in this study was found that asset quality has a significant impact on the liquidity of microfinance banks in Kenya, and this result was consistent across all liquidity ratio measurements. These findings are supported by both theoretical and empirical research, leading to the conclusion that asset quality is a crucial predictor of the liquidity of microfinance banks in Kenya.

The study's findings highlight the importance of asset quality as a key factor that impacts the liquidity of microfinance banks in Kenya. The Central Bank of Kenya should promote the adoption of robust credit risk management practices among microfinance banks. This includes establishing guidelines and regulations for loan origination, appraisal, and monitoring to ensure that microfinance banks adhere to prudent lending practices. Microfinance banks should conduct thorough credit assessments, verify borrower information, assess repayment capacity, and manage credit risk through proper documentation and loan monitoring.

The Central Bank of Kenya and other relevant stakeholders should provide capacity building and technical assistance to microfinance banks to enhance their credit risk management capabilities. This could include training programs, workshops, and mentoring to improve the skills and knowledge of microfinance bank staff in credit risk assessment, loan monitoring, and recovery strategies. Strong credit risk management practices would help microfinance banks identify and mitigate potential asset quality issues, thereby preserving their liquidity position.

The Central Bank of Kenya should establish clear loan classification and provisioning standards for microfinance banks. These standards should be in line with international best practices, such as the International Financial Reporting Standards (IFRS) and the guidelines of the Basel Committee on Banking Supervision. Proper loan classification and provisioning practices ensure that microfinance banks accurately assess the credit quality

of their loan portfolio and set aside adequate provisions to cover potential loan losses. This would enhance their liquidity position by maintaining a realistic and accurate valuation of their assets.

The Central Bank of Kenya should strengthen its risk-based supervision of microfinance banks, with a focus on asset quality. Regular on-site examinations, audits, and off-site monitoring should be conducted to assess the quality of microfinance banks' loan portfolio and other assets. Early identification and resolution of asset quality issues would help prevent further deterioration of the loan portfolio and preserve the liquidity position of microfinance banks. The Central Bank of Kenya and microfinance banks should jointly promote borrower financial literacy and education programs. Educated and informed borrowers are more likely to understand their financial responsibilities, make informed borrowing decisions, and manage their loan obligations effectively. This would result in lower default rates and better asset quality for microfinance banks, ultimately enhancing their liquidity position.

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